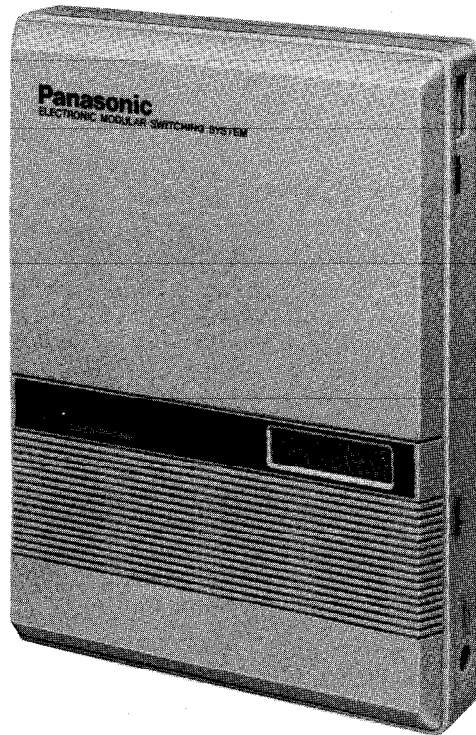


# Service Manual

EASA-PHONE

ELECTRONIC MODULAR SWITCHING SYSTEM

## KX-T61610-1



SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ  
NAME AND LOCATION\НАИМЕНОВАНИЕ И РАСПОЛОЖЕНИЕ  
CONNECTION\СОЕДИНЕНИЯ  
PROGRAMMING\ПРОГРАММИРОВАНИЕ  
IC I/O DATA\ИНФОРМАЦИЯ О МИКРОСХЕМАХ ВВОДА/ВЫВОДА  
BLOCK DIAGRAM\БЛОК - СХЕМА  
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES\ЦОКОЛЕВКА ИНТЕГРАЛЬНЫХ СХЕМ,  
ТРАНЗИСТОРОВ И ДИОДОВ  
SCHEMATIC DIAGRAM\ПРИНЦИПИАЛЬНЫЕ СХЕМЫ  
WIRING CONNECTION DIAGRAM\СХЕМА СОЕДИНЕНИЙ  
IC BLOCK DIAGRAM\БЛОК - СХЕМЫ ИНТЕГРАЛЬНЫХ СХЕМ  
EXTENSION CORD CONNECTING METHOD\ПОДСОЕДИНЕНИЕ СЕРВИСНЫХ КАБЕЛЕЙ  
ADJUSTMENTS\РЕГУЛИРОВКИ  
EXPLODED VIEW\СБОРОЧНЫЙ ЧЕРТЕЖ  
ACCESSORIES AND PACKING MATERIALS\ПРИНАДЛЕЖНОСТИ И УПАКОВОЧНЫЕ МАТЕРИАЛЫ  
REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

# Panasonic

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of Puerto Rico, Inc.  
Ave. 65 De Infanteria, KM 9.7  
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Carolina, Puerto Rico 00630



# NAME AND LOCATION

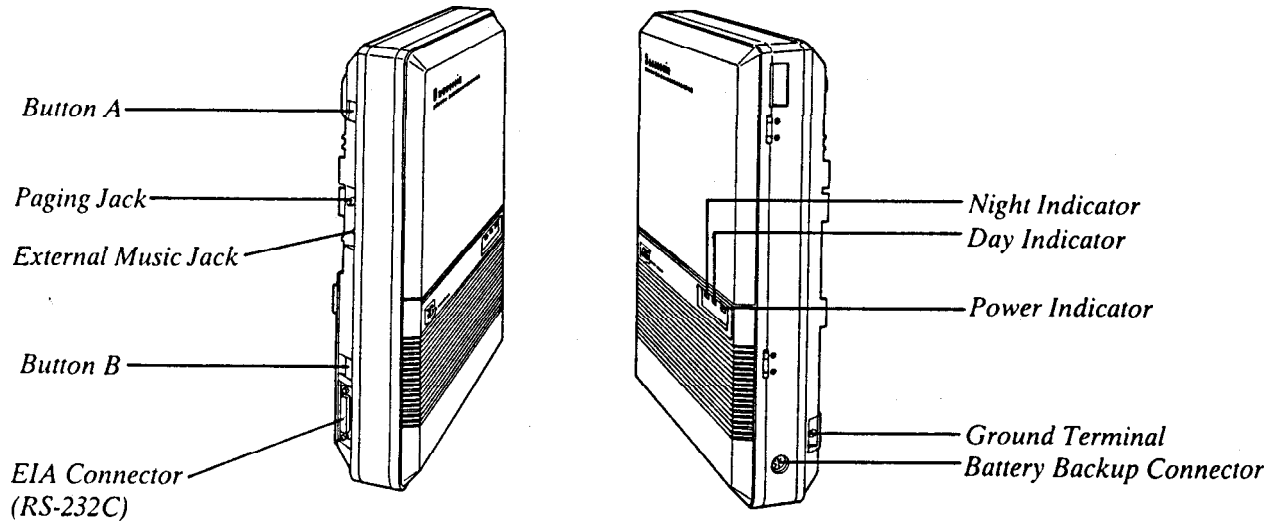


Fig. 3

*Push Buttons A and B simultaneously to open Front Cover.*

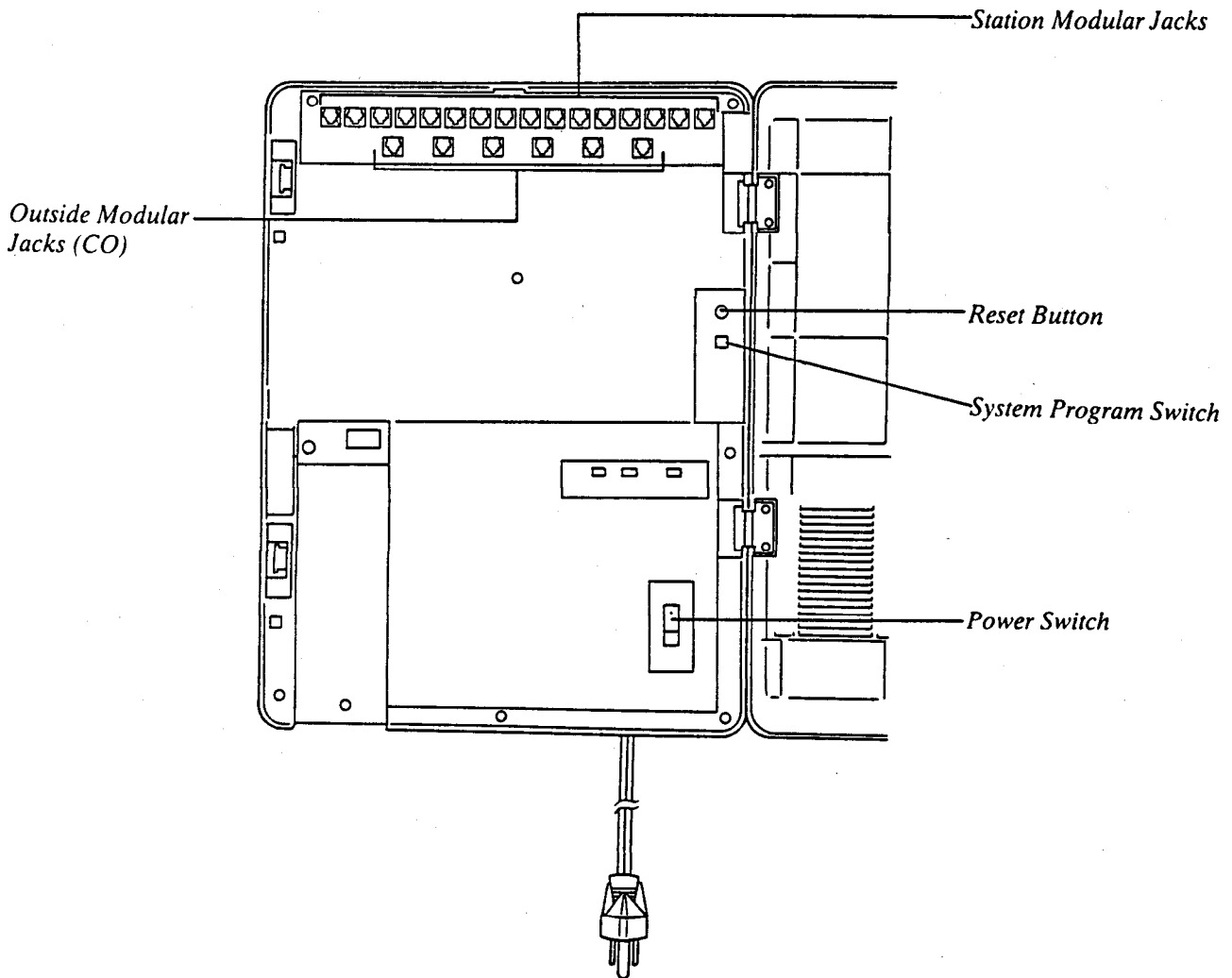


Fig. 4

# CONNECTION

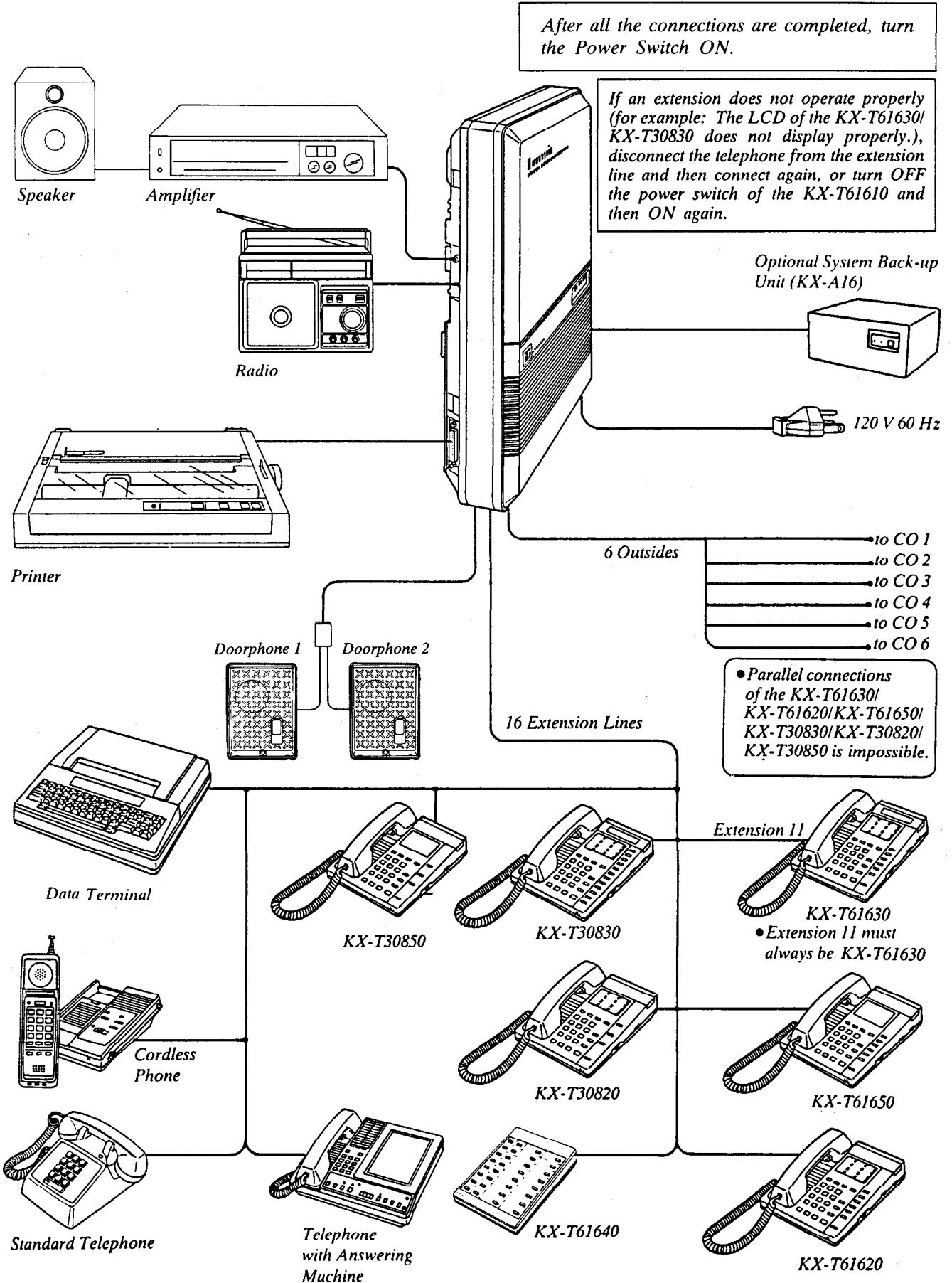


Fig. 5

# PROGRAMMING

## Programming Instructions

### 1. At extension 11:

All system programming changes (example: system clear, station program clear, toll restriction, hookswitch flash timing...) are done through extension 11.

• **Extension 11 must always be a Panasonic model, KX-T61630.**

### 2. System Program Switch setting:

The System Program Switch located on the KX-T61610 must be set to the PROGRAM position while making program changes. After all programming changes are completed, return the program switch to the SET position.

### 3. Overlay:

This overlay is used for programming the system and the program function names are inscribed on this card.

### 4. Before system programming, operate the system clear and station program clear to set to the default data of the programming.

#### A. System Clear:

##### 1 Dial (99).

• "SYSTEM CLEAR" will be displayed.

##### 2 Press the NEXT button.

• "ALL CLEAR?" will be displayed.

##### 3 Press the MEMORY button to clear system.

##### 4 To exit from system clear, press the END button.

The following features are preset as the default data.

Date and Time Setting

System Speed Dialing

CO Connection Assignment

Dial Mode (Tone/Pulse) Selection

Switching Mode (Day/Night Service)

Starting Time (Day/Night Service)

Flexible Day Outward Dialing Assignment

Flexible Night Outward Dialing Assignment

Flexible Day Ringing Assignment

Flexible Night Ringing Assignment

Toll Restriction—Class Assignment

Toll Restriction—Area Code Selection

Programmable Operator Call

Host PBX Access Codes Assignment

Automatic Answering (Automatic/Manual) Selection

Preferred CO Line Assignment

Programmable Call Waiting

Duration Time Count Start Mode

SMDR Communication Parameters

System Data Dump

SMDR Incoming/Outgoing Selection

Hookswitch Flash Timing

Disconnect Time

Calling Party Control (CPC) Signal

Intercom Alerting Mode

Programmable Doorphone

Dial Call Pickup Group Assignment

Account Code Input Mode

Delayed Ringing Assignment

Delayed Ringing Count Selection

DSS Console Assignment

Hold Time Reminder

Hold Recall Time Set

Programmable External Paging Access Tone

DTMF Receiver

Programmable Toll Prefix

Programmable Secret Speed Dial

Programmable Directory Assistance

DSS Button Mode

Transfer Recall Time

M3/FWD Selection

#### B. Station Program Clear:

##### 1 Dial (98).

• "EXT CLEAR" will be displayed.

##### 2 Press the NEXT button.

• "ALL CLEAR?" will be displayed.

##### 3 Press the MEMORY button to clear the system.

##### 4 To exit from station clear, press the END button.

The following features are preset as the default data.

One Touch Dialing

Background Music

Call Forwarding

Data Line Security

Dial Call Pickup Deny

Do not Disturb

Auto CO Hunting

Pickup dial

Flexible CO Button

Flexible DSS Button

## Example of Programming

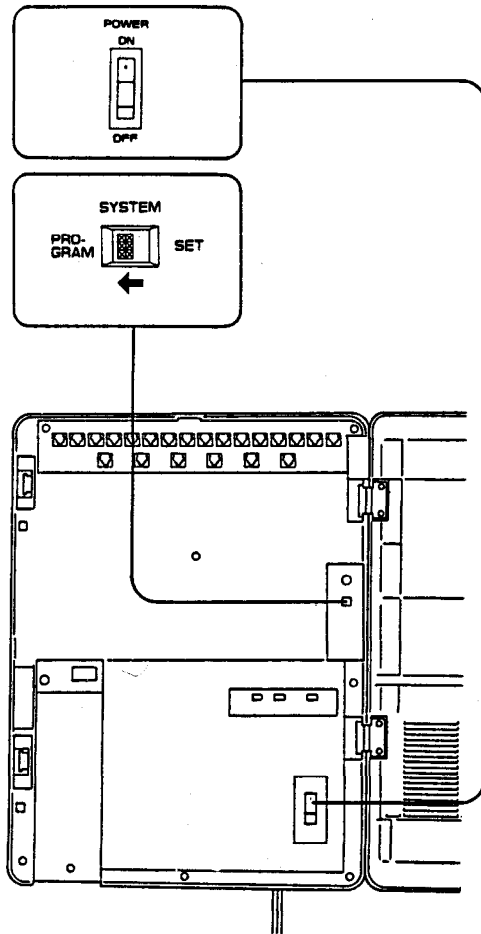
1. Turn the Power Switch to ON .....

2. Set the System Program Switch to PROGRAM .....

The LCD on the KX-T61630 will show "ENTER PGM CODE".

• Be sure the handset of extension 11 is in the cradle and the speakerphone button off.

3. To program automatic line access number 9 and the phone number 987-654-3210 speed access code 00.



| <i>KX-T61630 at extension 11<br/>(Extension 11 must be a KX-T61630.)</i> |  |
|--|--|
| 1.   | <p>Dial (01) or press the AUTO button.</p> <p style="text-align: right;">Display<br/><b>SPEED DIALING</b></p>  |
| 2.   | <p>Press the NEXT button.</p> <p style="text-align: right;"><b>ENTER SPEED CODE</b></p>  |
| 3.   | <p>Dial (00) or press the NEXT button.</p> <ul style="list-style-type: none"> <li>• If nothing is stored in access code "00",<br/><b>00: NOT STORED</b></li> <li>• If already stored the automatic line access number 9 and the phone number 123-456-7890,<br/><b>00: -123-456-7890</b></li> </ul> |
| 4.   | <p>① Dial "9".<br/>② Press "-" button.<br/>③ Dial "987".<br/>④ Press "-" button.<br/>⑤ Dial "654".<br/>⑥ Press "-" button.<br/>⑦ Dial "3210".</p> <p style="text-align: right;"><b>00: -987-654-3210</b></p>   |
| 5.   | <p>Press the MEMORY button.</p> <p style="text-align: right;"><b>00: -987-654-3210</b></p>   |
| 6.   | <ul style="list-style-type: none"> <li>• To program the next access code, press the NEXT button.</li> <li>• To program a desired access code, press the SELECT button and then dial the number.</li> </ul>   |
| 7.   | <p>Repeat step 4 to 6.</p>   |
| 8.   | <p>To return to the initial program mode, press the END button.</p> <p style="text-align: right;"><b>ENTER PGM CODE</b></p>  |

*While programming if a mistake is made,*

1. Press the "END" button.
2. Start programming procedure from the beginning.

• You will hear a beep after pressing the MEMORY button.

• The MEMORY indicator light will go on when the MEMORY button is pressed, and then the Indicator light will go out when the NEXT or PREV button is pressed.

4. Return the System Program Switch to SET

■ To make program change, start from the beginning.





| TO SET  | PROGRAM ADDRESS                      | STEPS REQUIRED TO CHANGE PROGRAM   |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--------------------------------------|--|----|--------------------------------------|------------------------|-------------|----|----|-----------|----|----|----|----|----|----|----|----|----|----|----|------------|----------------|----|----|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Toll Restriction—<br>Area Code Selection                | [12]                                 | <p>[NEXT] <u>[SELECT]</u> [MEMORY] [END]<br/>           [AB] [C] — area code with 3 digits<br/>           — Memory location number</p> <table border="1" data-bbox="437 338 1453 454"> <thead> <tr> <th></th> <th colspan="10">Memory location number</th> </tr> <tr> <th></th> <th>00</th> <th>01</th> <th>02</th> <th>03</th> <th>04</th> <th>05</th> <th>06</th> <th>07</th> <th>08</th> <th>09</th> </tr> </thead> <tbody> <tr> <td>Area code entry</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   |    | Memory location number               |                        |             |    |    |           |    |    |    |    |    | 00 | 01 | 02 | 03 | 04 | 05 | 06         | 07             | 08 | 09 | Area code entry |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Memory location number               |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | 00                                   | 01   | 02 | 03                                   | 04                     | 05          | 06 | 07 | 08        | 09 |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Area code entry   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Programmable<br>Toll Prefix                             | [13]                                 | <p>[NEXT] <u>[SELECT]</u> [MEMORY] [END]<br/>           ----- WITH 1/ WITHOUT 1</p> <table border="1" data-bbox="437 533 1169 616"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>With 1</td> <td>x</td> <td></td> </tr> <tr> <td>Without 1</td> <td></td> <td></td> </tr> </tbody> </table>   |    | Default                              | To make program change | With 1      | x  |    | Without 1 |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Default                              | To make program change   |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With 1  | x                                    |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Without 1   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Programmable<br>Operator Call                           | [14]                                 | <p>[NEXT] [NEXT] <u>[SELECT]</u> [MEMORY] [END]<br/>           ----- ENABLE/DISABLE<br/>           ----- until the desired extension number appears</p> <table border="1" data-bbox="437 734 1453 848"> <thead> <tr> <th></th> <th>Default</th> <th colspan="16">To make program change</th> </tr> <tr> <th>Extensions</th> <th>all extensions</th> <th>11</th> <th>12</th> <th>13</th> <th>14</th> <th>15</th> <th>16</th> <th>17</th> <th>18</th> <th>19</th> <th>20</th> <th>21</th> <th>22</th> <th>23</th> <th>24</th> <th>25</th> <th>26</th> </tr> </thead> <tbody> <tr> <td>Enable</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Disable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>             |    | Default                              | To make program change |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    | Extensions | all extensions | 11 | 12 | 13              | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Enable    | x |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Disable |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Default                              | To make program change   |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Enable  | x                                    |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Disable   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Programmable<br>Directory Assistance                    | [15]                                 | <p>[NEXT] <u>[SELECT]</u> [MEMORY] [END]<br/>           ----- NO RESTRICT/RESTRICT</p> <table border="1" data-bbox="437 981 1169 1064"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>No restrict</td> <td>x</td> <td></td> </tr> <tr> <td>Restrict</td> <td></td> <td></td> </tr> </tbody> </table>   |    | Default                              | To make program change | No restrict | x  |    | Restrict  |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| No restrict   | x                                    |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Restrict  |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Automatic Answering<br>(Automatic/<br>Manual) Selection | [16]                                 | <p>[NEXT] [NEXT] <u>[SELECT]</u> [MEMORY] [END]<br/>           ----- AUTO ANSWER/MAN ANSWER<br/>           ----- until the desired extension number appears</p> <table border="1" data-bbox="437 1216 1453 1330"> <thead> <tr> <th></th> <th>Default</th> <th colspan="16">To make program change</th> </tr> <tr> <th>Extensions</th> <th>all extensions</th> <th>11</th> <th>12</th> <th>13</th> <th>14</th> <th>15</th> <th>16</th> <th>17</th> <th>18</th> <th>19</th> <th>20</th> <th>21</th> <th>22</th> <th>23</th> <th>24</th> <th>25</th> <th>26</th> </tr> </thead> <tbody> <tr> <td>Automatic</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Manual</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |    | Default                              | To make program change |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    | Extensions | all extensions | 11 | 12 | 13              | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Automatic | x |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Manual  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Default                              | To make program change   |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensions  | all extensions                       | 11   | 12 | 13                                   | 14                     | 15          | 16 | 17 | 18        | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Automatic   | x                                    |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Manual  |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Host PBX Access<br>Codes Assignment                     | [17]                                 | <p>[NEXT] [NEXT] <u>[A...D]</u> [MEMORY] [END]<br/>           ----- up to four outside access codes each with a maximum of 2 digits<br/>           ----- until the desired CO numbers appears</p> <table border="1" data-bbox="437 1462 1169 1653"> <thead> <tr> <th>CO</th> <th colspan="4">Outside access codes of the host PBX</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  | CO | Outside access codes of the host PBX |                        |             |    | 1  |           |    |    |    | 2  |    |    |    |    | 3  |    |    |            |                | 4  |    |                 |    |    | 5  |    |    |    |    | 6  |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CO  | Outside access codes of the host PBX |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6   |                                      |  |    |                                      |                        |             |    |    |           |    |    |    |    |    |    |    |    |    |    |    |            |                |    |    |                 |    |    |    |    |    |    |    |    |    |    |    |    |    |           |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



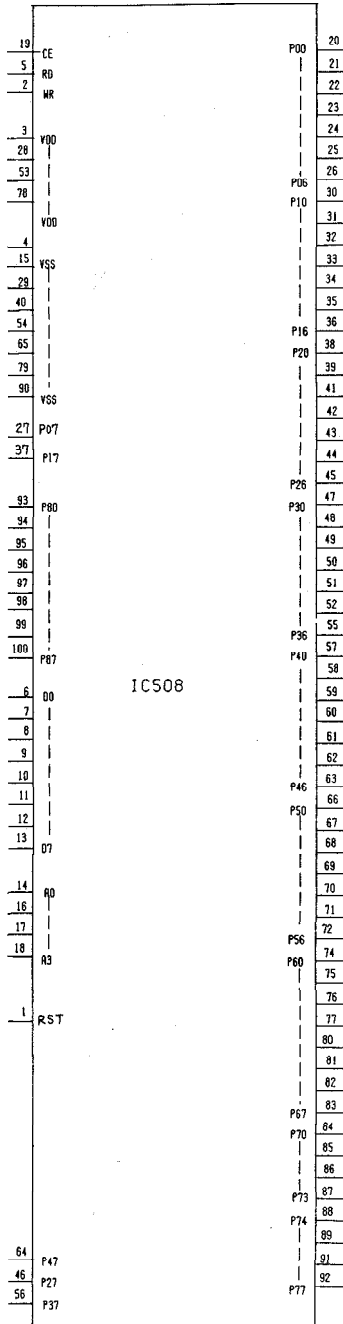
| TO SET                            | PROGRAM ADDRESS | STEPS REQUIRED TO CHANGE PROGRAM   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------|--|-------|---------|------------------------|-----------|-------|-------|---------------|----|----|----------------|------|------|------|------|-------|-------|-------|-------|------------|----------------|----|----|----|----|----|----|----|------------------------|----|----|----|----|----|----|----|----|----------------|---------|------------------------|--------|---|--|--------|--|--|--|------|------|-------|------|-----|---------|--|---|----------------|--|--|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Dial Call Pickup Group Assignment | [24]            | <p>[NEXT] [NEXT] [A...D] [MEMORY] [END]<br/>           ----- dial the pickup group number<br/>           ----- until the desired extension number appears</p> <table border="1" data-bbox="422 320 1442 566"> <thead> <tr> <th></th> <th>Default</th> <th colspan="16">To make program change</th> </tr> <tr> <th>Extensions</th> <th>all extensions</th> <th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th><th>25</th><th>26</th> </tr> </thead> <tbody> <tr> <td>Pickup Group 1</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Pickup Group 2</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Pickup Group 3</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Pickup Group 4</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>   |       | Default | To make program change |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       | Extensions | all extensions | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18                     | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Pickup Group 1 | x       |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   | Pickup Group 2 |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Pickup Group 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Pickup Group 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | Default         | To make program change   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensions                        | all extensions  | 11   | 12    | 13      | 14                     | 15        | 16    | 17    | 18            | 19 | 20 | 21             | 22   | 23   | 24   | 25   | 26    |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pickup Group 1                    | x               |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pickup Group 2                    |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pickup Group 3                    |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pickup Group 4                    |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Account Code Input Mode           | [25]            | <p>[NEXT] [NEXT] [SELECT] [MEMORY] [END]<br/>           ----- OPTION/FORCED<br/>           ----- until the desired extension number appears</p> <table border="1" data-bbox="422 701 1442 808"> <thead> <tr> <th></th> <th>Default</th> <th colspan="16">To make program change</th> </tr> <tr> <th>Extensions</th> <th>all extensions</th> <th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th><th>25</th><th>26</th> </tr> </thead> <tbody> <tr> <td>Option</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Forced</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>   |       | Default | To make program change |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       | Extensions | all extensions | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18                     | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Option         | x       |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   | Forced         |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | Default         | To make program change   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensions                        | all extensions  | 11   | 12    | 13      | 14                     | 15        | 16    | 17    | 18            | 19 | 20 | 21             | 22   | 23   | 24   | 25   | 26    |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Option                            | x               |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Forced                            |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration Time Count Start Mode    | [26]            | <p>[NEXT] [SELECT] [MEMORY] [END]<br/>           ----- INSTANTLY/5S AFTER DIAL/10S AFTER DIAL</p> <table border="1" data-bbox="422 898 1155 1005"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>Instantly</td> <td></td> <td></td> </tr> <tr> <td>5S after dial</td> <td>x</td> <td></td> </tr> <tr> <td>10S after dial</td> <td></td> <td></td> </tr> </tbody> </table>  |       | Default | To make program change | Instantly |       |       | 5S after dial | x  |    | 10S after dial |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | Default         | To make program change   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Instantly                         |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5S after dial                     | x               |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10S after dial                    |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SMDR Communication Parameters     | [27]            | <p>(Carriage return for a new line)<br/>           [NEXT][SELECT][MEMORY]<br/>           ----- CR+LF/CR</p> <table border="1" data-bbox="422 1122 1155 1205"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>CR+LF</td> <td>x</td> <td></td> </tr> <tr> <td>CR</td> <td></td> <td></td> </tr> </tbody> </table> <p>(Baud rate)<br/>           [NEXT][SELECT][MEMORY]<br/>           ----- 110B/150B/300B/600B/1200B/2400B/4800B/9600B</p> <table border="1" data-bbox="422 1350 1442 1433"> <thead> <tr> <th></th> <th>110B</th> <th>150B</th> <th>300B</th> <th>600B</th> <th>1200B</th> <th>2400B</th> <th>4800B</th> <th>9600B</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td></td><td></td><td></td><td></td><td>x</td><td></td><td></td><td></td> </tr> <tr> <td>To make program change</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> <p>(Word length)<br/>           [NEXT][SELECT][MEMORY]<br/>           ----- 7 BITS/8 BITS</p> <table border="1" data-bbox="422 1592 1155 1675"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>7 BITS</td> <td>x</td> <td></td> </tr> <tr> <td>8 BITS</td> <td></td> <td></td> </tr> </tbody> </table> <p>(Parity)<br/>           [NEXT][SELECT][MEMORY]<br/>           ----- NONE/MARK/SPACE/EVEN/ODD</p> <table border="1" data-bbox="422 1821 1155 1904"> <thead> <tr> <th></th> <th>None</th> <th>Mark</th> <th>Space</th> <th>Even</th> <th>Odd</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td></td><td>x</td><td></td><td></td><td></td> </tr> <tr> <td>To make program change</td> <td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> |       | Default | To make program change | CR+LF     | x     |       | CR            |    |    |                | 110B | 150B | 300B | 600B | 1200B | 2400B | 4800B | 9600B | Default    |                |    |    |    | x  |    |    |    | To make program change |    |    |    |    |    |    |    |    |                | Default | To make program change | 7 BITS | x |  | 8 BITS |  |  |  | None | Mark | Space | Even | Odd | Default |  | x |                |  |  | To make program change |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | Default         | To make program change   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CR+LF                             | x               |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CR                                |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | 110B            | 150B   | 300B  | 600B    | 1200B                  | 2400B     | 4800B | 9600B |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Default                           |                 |  |       |         | x                      |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To make program change            |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | Default         | To make program change   |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 BITS                            | x               |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 BITS                            |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                   | None            | Mark   | Space | Even    | Odd                    |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Default                           |                 | x  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| To make program change            |                 |  |       |         |                        |           |       |       |               |    |    |                |      |      |      |      |       |       |       |       |            |                |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |                |         |                        |        |   |  |        |  |  |  |      |      |       |      |     |         |  |   |                |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| TO SET                               | PROGRAM ADDRESS | STEPS REQUIRED TO CHANGE PROGRAM  |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
|--------------------------------------|-----------------|---|----|----------|------------------------|----------|---|----|--------|----|-----|---------|---------|------------------------|----------------|----|------------------------|--|---------|------------------------|----------------|---|--|
| SMDR<br>Communication<br>Parameters  |                 | <p>(Stop bit length)<br/>[NEXT][SELECT][MEMORY]<br/>└----- 1 BIT/2 BITS</p> <table border="1" data-bbox="467 365 1201 450"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>1 BIT</td> <td>x</td> <td></td> </tr> <tr> <td>2 BITS</td> <td></td> <td></td> </tr> </tbody> </table> <p>(Page length)<br/>[NEXT][AB][MEMORY]<br/>└----- 4 through 99 lines</p> <table border="1" data-bbox="467 600 1201 656"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>Lines per page</td> <td>66</td> <td></td> </tr> </tbody> </table> <p>(Skip perforation)<br/>[NEXT][AB][MEMORY][END]<br/>└----- 0 through 95 lines</p> <table border="1" data-bbox="467 801 1201 864"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>Skipping lines</td> <td>0</td> <td></td> </tr> </tbody> </table> |    | Default  | To make program change | 1 BIT    | x |    | 2 BITS |    |     |         | Default | To make program change | Lines per page | 66 |                        |  | Default | To make program change | Skipping lines | 0 |  |
|                                      | Default         | To make program change  |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| 1 BIT                                | x               |   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| 2 BITS                               |                 |   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
|                                      | Default         | To make program change  |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| Lines per page                       | 66              |   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
|                                      | Default         | To make program change  |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| Skipping lines                       | 0               |   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| System Data<br>Dump                  | [28]            | <ul style="list-style-type: none"> <li>• SYSTEM PARA</li> <li>• SPEED DIAL</li> <li>• ALL PARA</li> <li>• STOP OUTPUT</li> </ul> <p>[NEXT][SELECT][MEMORY][END]<br/>└----- SYSTEM PARA/CO PARA/EXT PARA/SPEED DIAL<br/>ALL PARA/STOP OUTPUT</p> <ul style="list-style-type: none"> <li>• CO PARA</li> </ul> <p>[NEXT][SELECT][MEMORY][A][END]<br/>└----- dial CO number<br/>└----- until the CO PARA appears</p> <ul style="list-style-type: none"> <li>• EXT PARA</li> </ul> <p>[NEXT][SELECT][MEMORY][AB][END]<br/>└----- dial extension number<br/>└----- until the EXT PARA appears</p>   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| SMDR Incoming/<br>Outgoing Selection | [29]            | <p>[NEXT][SELECT][MEMORY][NEXT][SELECT][MEMORY][END]<br/>└----- OUTGOING: ON/OFF └----- INCOMING: ON/OFF</p> <table border="1" data-bbox="467 1664 1197 1776"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Outgoing</th> <th colspan="2">Incoming</th> </tr> <tr> <th>ON</th> <th>OFF</th> <th>ON</th> <th>OFF</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td>x</td> <td></td> <td>x</td> <td></td> </tr> <tr> <td>To make program change</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  |    | Outgoing |                        | Incoming |   | ON | OFF    | ON | OFF | Default | x       |                        | x              |    | To make program change |  |         |                        |                |   |  |
|                                      | Outgoing        |   |    | Incoming |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
|                                      | ON              | OFF   | ON | OFF      |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| Default                              | x               |   | x  |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |
| To make program change               |                 |   |    |          |                        |          |   |    |        |    |     |         |         |                        |                |    |                        |  |         |                        |                |   |  |

| TO SET                                   | PROGRAM ADDRESS | STEPS REQUIRED TO CHANGE PROGRAM   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|--|-----------------|--|---------------------|------------|------------------------|---------------------|-----------|---------|---------|---|----------|---|---|---|------------------------|---|---|-------|---|---|---|---------|--|--|---|----------|---|--|--|--|--|------------------------|--|----------|---|--|--|--|--|--|--|----------|--|--|--|--|--|--|--|
| Hold Time Reminder                       | [30]            | <p>[NEXT] [SELECT] [MEMORY] [END]</p> <p>----- 1 MIN/2 MIN.....9 MIN</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="9">minutes</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>To make program change</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   |                     | minutes    |                        |                     |           |         |         |   |          |   | 1 | 2 | 3                      | 4 | 5 | 6     | 7 | 8 | 9 | Default |  |  | x |          |   |  |  |  |  | To make program change |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | minutes         |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | 1               | 2  | 3                   | 4          | 5                      | 6                   | 7         | 8       | 9       |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Default                                  |                 |  | x                   |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| To make program change                   |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Hold Recall Time Set                     | [31]            | <p>[NEXT] [SELECT] [MEMORY] [END]</p> <p>----- 30 SEC/1 MIN/1.5 MIN/2 MIN/DISABLE</p> <table border="1"> <thead> <tr> <th></th> <th>30 seconds</th> <th>1 minute</th> <th>1 minute 30 seconds</th> <th>2 minutes</th> <th>disable</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>To make program change</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  |                     | 30 seconds | 1 minute               | 1 minute 30 seconds | 2 minutes | disable | Default | x |          |   |   |   | To make program change |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | 30 seconds      | 1 minute   | 1 minute 30 seconds | 2 minutes  | disable                |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Default                                  | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| To make program change                   |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Programmable External Paging Access Tone | [32]            | <p>[NEXT] [SELECT] [MEMORY] [END]</p> <p>----- ENABLE/DISABLE</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>Enable</td> <td>x</td> <td></td> </tr> <tr> <td>Disable</td> <td></td> <td></td> </tr> </tbody> </table>  |                     | Default    | To make program change | Enable              | x         |         | Disable |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | Default         | To make program change   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Enable                                   | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Disable                                  |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Programmable secret Speed Dial           | [33]            | <p>[NEXT] [SELECT] [MEMORY] [END]</p> <p>--- NO SECRET/ SECRET</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th>To make program change</th> </tr> </thead> <tbody> <tr> <td>No secret</td> <td>x</td> <td></td> </tr> <tr> <td>Secret</td> <td></td> <td></td> </tr> </tbody> </table>   |                     | Default    | To make program change | No secret           | x         |         | Secret  |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | Default         | To make program change   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| No secret                                | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Secret                                   |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Hookswitch Flash Timing                  | [34]            | <p>[NEXT] [NEXT] [SELECT] [MEMORY] [END]</p> <p>----- 300 MS/600 MS/900 MS</p> <p>--- until the desired CO number appears</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th>Default</th> <th colspan="6">To make program change</th> </tr> <tr> <th>all CO's</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>300 msec</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>600 msec</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>900 msec</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |                     | Default    | To make program change |                     |           |         |         |   | all CO's | 1 | 2 | 3 | 4                      | 5 | 6 | CO(s) |   |   |   |         |  |  |   | 300 msec |   |  |  |  |  |                        |  | 600 msec | x |  |  |  |  |  |  | 900 msec |  |  |  |  |  |  |  |
|  | Default         | To make program change   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | all CO's        | 1  | 2                   | 3          | 4                      | 5                   | 6         |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| CO(s)                                    |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| 300 msec                                 |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| 600 msec                                 | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| 900 msec                                 |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Disconnect Time                          | [35]            | <p>[NEXT] [NEXT] [SELECT] [MEMORY] [END]</p> <p>----- 1.5 SEC/4.0 SEC</p> <p>--- until the desired CO number appears</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th>Default</th> <th colspan="6">To make program change</th> </tr> <tr> <th>all CO's</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1.5 sec</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4.0 sec</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   |                     | Default    | To make program change |                     |           |         |         |   | all CO's | 1 | 2 | 3 | 4                      | 5 | 6 | CO(s) |   |   |   |         |  |  |   | 1.5 sec  | x |  |  |  |  |                        |  | 4.0 sec  |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | Default         | To make program change   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | all CO's        | 1  | 2                   | 3          | 4                      | 5                   | 6         |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| CO(s)                                    |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| 1.5 sec                                  | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| 4.0 sec                                  |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Calling Party Control (CPC) Signal       | [36]            | <p>[NEXT] [NEXT] [SELECT] [MEMORY] [END]</p> <p>----- ENABLE/DISABLE</p> <p>--- until the desired CO number appears</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th>Default</th> <th colspan="6">To make program change</th> </tr> <tr> <th>all CO's</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enable</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Disable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   |                     | Default    | To make program change |                     |           |         |         |   | all CO's | 1 | 2 | 3 | 4                      | 5 | 6 | CO(s) |   |   |   |         |  |  |   | Enable   | x |  |  |  |  |                        |  | Disable  |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | Default         | To make program change   |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
|  | all CO's        | 1  | 2                   | 3          | 4                      | 5                   | 6         |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| CO(s)                                    |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Enable                                   | x               |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |
| Disable                                  |                 |  |                     |            |                        |                     |           |         |         |   |          |   |   |   |                        |   |   |       |   |   |   |         |  |  |   |          |   |  |  |  |  |                        |  |          |   |  |  |  |  |  |  |          |  |  |  |  |  |  |  |

| TO SET                | PROGRAM ADDRESS | STEPS REQUIRED TO CHANGE PROGRAM  |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------|-----------------|---|----|---------|------------------------|----|------------------|------|----|----|---------------|----|----|----|---------|----|----|--|--|--|------------|----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DSS Button Mode       | [37]            | <p>[NEXT] [SELECT] [MEMORY] [END]<br/>           ----- WITHOUT TRANSFER/WITH TRANSFER</p> <table border="1" data-bbox="416 315 1147 398"> <thead> <tr> <th></th> <th>Default</th> <th colspan="2">To make program change</th> </tr> </thead> <tbody> <tr> <td>Without transfer</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>With transfer</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  |    | Default | To make program change |    | Without transfer | x    |    |    | With transfer |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       | Default         | To make program change  |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Without transfer      | x               |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With transfer         |                 |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DTMF Receiver Check   | [38]            | <p>[NEXT] [SELECT] [MEMORY] [END]<br/>           ----- ENABLE/DISABLE<br/>           ---- until the desired DTMF receiver appears</p> <table border="1" data-bbox="405 539 1137 645"> <thead> <tr> <th></th> <th>Default</th> <th colspan="2">To make program change</th> </tr> </thead> <tbody> <tr> <td>DTMF receiver</td> <td>1, 2</td> <td>1</td> <td>2</td> </tr> <tr> <td>Enable</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>Disable</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  |    | Default | To make program change |    | DTMF receiver    | 1, 2 | 1  | 2  | Enable        | x  |    |    | Disable |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       | Default         | To make program change  |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DTMF receiver         | 1, 2            | 1   | 2  |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enable                | x               |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Disable               |                 |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transfer Recall Time  | [39]            | <p>[NEXT] [SELECT] [MEMORY] [END]<br/>           ----- 30 SEC/15 SEC</p> <table border="1" data-bbox="411 752 1144 835"> <thead> <tr> <th></th> <th>Default</th> <th colspan="2">To make program change</th> </tr> </thead> <tbody> <tr> <td>30 sec</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>15 sec</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>  |    | Default | To make program change |    | 30 sec           | x    |    |    | 15 sec        |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       | Default         | To make program change  |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30 sec                | x               |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 sec                |                 |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M3/FWD Selection      | [40]            | <p>[NEXT][NEXT][SELECT][MEMORY][END]<br/>           ----- FEATURE KEY/FWD, DND KEY<br/>           ---- until the desired extension number appears</p> <table border="1" data-bbox="411 958 1431 1064"> <thead> <tr> <th></th> <th>Default</th> <th colspan="16">To make program change</th> </tr> </thead> <tbody> <tr> <td>Extensions</td> <td>all extensions</td> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td> </tr> <tr> <td>Feature key</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>FWD/DND key</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> |    | Default | To make program change |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  | Extensions | all extensions | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Feature key | x |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | FWD/DND key |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                       | Default         | To make program change  |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extensions            | all extensions  | 11  | 12 | 13      | 14                     | 15 | 16               | 17   | 18 | 19 | 20            | 21 | 22 | 23 | 24      | 25 | 26 |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Feature key           | x               |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FWD/DND key           |                 |   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Station Program Clear | [98]            | [NEXT][MEMORY][END]   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| System Clear          | [99]            | [NEXT][MEMORY][END]   |    |         |                        |    |                  |      |    |    |               |    |    |    |         |    |    |  |  |  |            |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |             |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# IC I/O DATA

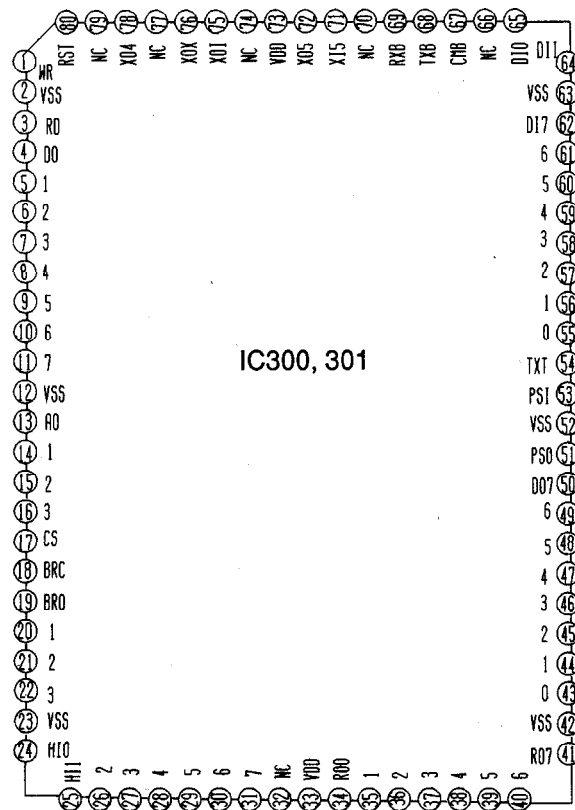


## IC508

| Port | Pin No. | I/O | Signal Name                        | High Imp.        | High Level          | Low Level       | Remarks |
|------|---------|-----|------------------------------------|------------------|---------------------|-----------------|---------|
| P00  | 20      | O   | SH1: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P01  | 21      | O   | MT1: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P02  | 22      | O   | HD1: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P03  | 23      | O   | CF1: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P04  | 24      | O   | DL1: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P05  | 25      | O   | DS1: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P06  | 26      | I   | BELL1: Bell, CPC Input             | ----             | No Bell, Line Break | Bell, Line Make |         |
| P07  | 27      | I   | SID: DTMF Signal Detection 1       | ----             | ----                | ----            |         |
| P10  | 30      | O   | SH2: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P11  | 31      | O   | MT2: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P12  | 32      | O   | HD2: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P13  | 33      | O   | CF2: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P14  | 34      | O   | DL2: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P15  | 35      | O   | DS2: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P16  | 36      | I   | BELL2: Bell, CPC Input             | ----             | No Bell, Line Break | Bell, Line Make |         |
| P17  | 37      | I   | SID: DTMF Signal Detection 2       | ----             | ----                | ----            |         |
| P20  | 38      | O   | SH3: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P21  | 39      | O   | MT3: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P22  | 41      | O   | HD3: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P23  | 42      | O   | CF3: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P24  | 43      | O   | DL3: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P25  | 44      | O   | DS3: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P26  | 45      | I   | BELL3: Bell, CPC Input             | ----             | No Bell, Break      | Bell, Make      |         |
| P27  | 46      | O   | DAY: Day Mode LED Control          | Lights-out       | Lights-out          | Lighting        |         |
| P30  | 47      | O   | SH4: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P31  | 48      | O   | MT4: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P32  | 49      | O   | HD4: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P33  | 50      | O   | CF4: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P34  | 51      | O   | DL4: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P35  | 52      | O   | DS4: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P36  | 55      | I   | BELL4: Bell, CPC Input             | ----             | No Bell, Line Break | Bell, Line Make |         |
| P37  | 56      | O   | NIGHT: Night Mode LED Control      | Lights-out       | Lights-out          | Lighting        |         |
| P40  | 57      | O   | SH5: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P41  | 58      | O   | MT5: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P42  | 59      | O   | HD5: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P43  | 60      | O   | CF5: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P44  | 61      | O   | DL5: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P45  | 62      | O   | DS5: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P46  | 63      | I   | BELL5: Bell, CPC Input             | ----             | No Bell, Line Break | Bell, Line Make |         |
| P47  | 64      | O   | PD RLY: Power Failure Control      | Break            | Break               | Make            |         |
| P50  | 66      | O   | SH6: CO Amp Shunt Control          | Non Shunt        | Non Shunt           | Shunt           |         |
| P51  | 67      | O   | MT6: CO Amp Mute Control           | Mute             | Mute                | Non Mute        |         |
| P52  | 68      | O   | HD6: CO Amp Hold Tone Control      | Non Transmission | Non Transmission    | Transmission    |         |
| P53  | 69      | O   | CF6: CO Amp Conference             | Non Conference   | Non Conference      | Conference      |         |
| P54  | 70      | O   | DL6: Line Close, Dial Transmission | Break            | Break               | Make            |         |
| P55  | 71      | O   | DS6: Spark Erase Relay Control     | Break            | Break               | Make            | (RSVD)  |
| P56  | 72      | I   | BELL6: Bell, CPC Input             | ----             | No Bell, Line Break | Bell, Line Make |         |
| P57  | 73      | —   | Not Used                           | ----             | ----                | ----            |         |
| P60  | 74      | O   | TA0: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P61  | 75      | O   | TA1: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P62  | 76      | O   | TA2: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P63  | 77      | O   | TA3: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P64  | 78      | O   | TA4: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P65  | 81      | O   | TA5: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P66  | 82      | O   | TA6: Cross Point Data              | Data Low         | Data Low            | Data High       |         |
| P67  | 83      | O   | TA7: Cross Point Data              | Data Low         | Data Low            | Data High       |         |

## IC508

| Port | Pin No. | I/O | Signal Name                       | High Imp.   | High Level  | Low Level    | Remarks |
|------|---------|-----|-----------------------------------|-------------|-------------|--------------|---------|
| P70  | 84      | O   | A: Cross Point Address            | Address Low | Address Low | Address High |         |
| P71  | 85      | O   | B: Cross Point Address            | Address Low | Address Low | Address High |         |
| P72  | 86      | O   | C: Cross Point Address            | Address Low | Address Low | Address High |         |
| P73  | 87      | O   | D: Cross Point Address            | Address Low | Address Low | Address High |         |
| P74  | 88      | O   | STB1: Cross Point Strobe          | Strobe Low  | Strobe Low  | Strobe High  |         |
| P75  | 89      | O   | STB2: Cross Point Strobe          | Strobe Low  | Strobe Low  | Strobe High  |         |
| P76  | 91      | O   | STB3: Cross Point Strobe          | Strobe Low  | Strobe Low  | Strobe High  |         |
| P77  | 92      | O   | STB4: Cross Point Strobe          | Strobe Low  | Strobe Low  | Strobe High  |         |
| P80  | 93      | O   | ROW1: PB Signal Generator, 1 Line | Uncertainty | High        | Low          |         |
| P81  | 94      | O   | ROW2: PB Signal Generator, 2 Line | Uncertainty | High        | Low          |         |
| P82  | 95      | O   | ROW3: PB Signal Generator, 3 Line | Uncertainty | High        | Low          |         |
| P83  | 96      | O   | ROW4: PB Signal Generator, 4 Line | Uncertainty | High        | Low          |         |
| P84  | 97      | O   | COL1: PB Signal Generator, 1 Row  | Uncertainty | High        | Low          |         |
| P85  | 98      | O   | COL2: PB Signal Generator, 2 Row  | Uncertainty | High        | Low          |         |
| P86  | 99      | O   | COL3: PB Signal Generator, 3 Row  | Uncertainty | High        | Low          |         |
| P87  | 100     | O   | COL4: PB Signal Generator, 4 Row  | Uncertainty | High        | Low          |         |



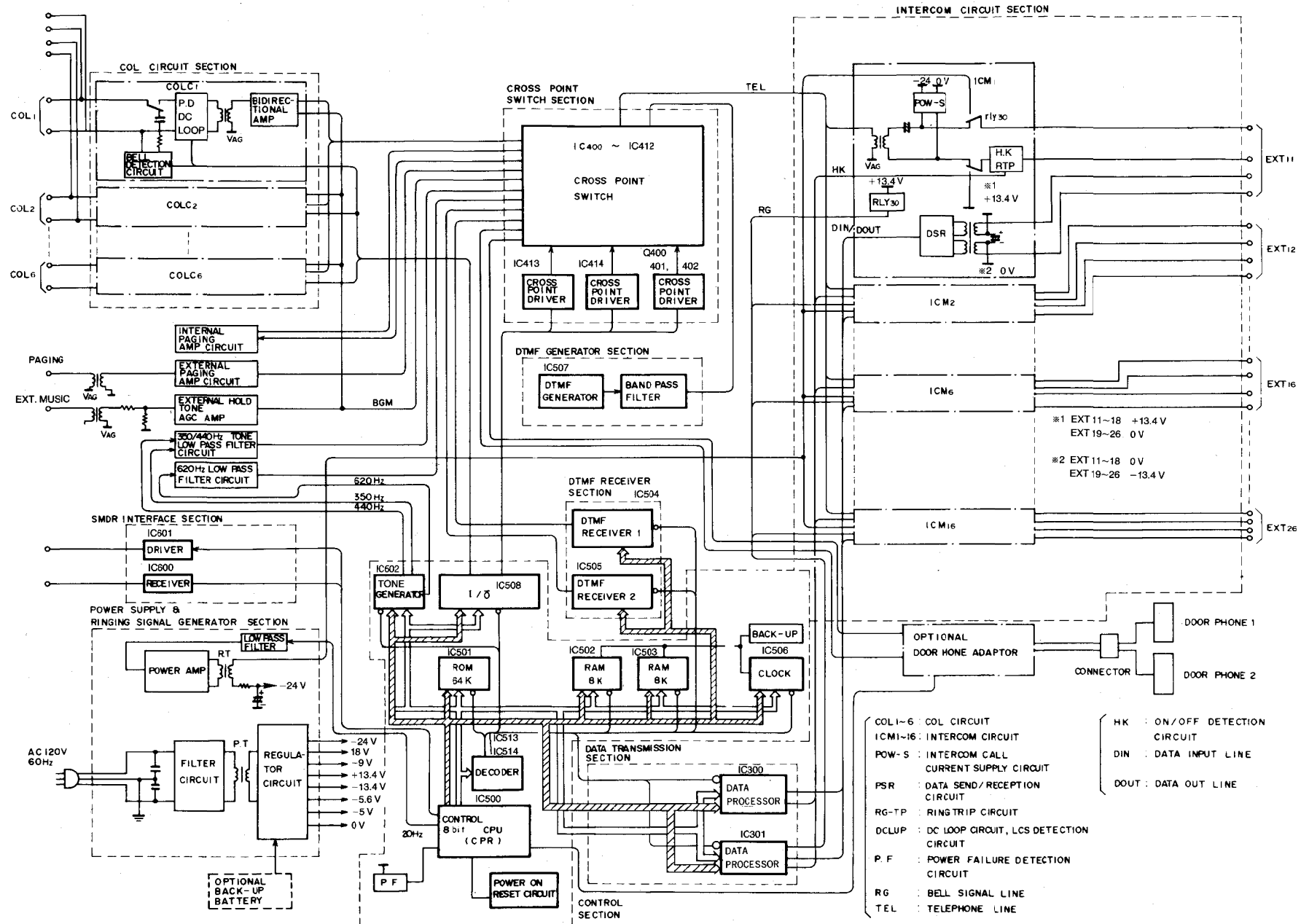


|    |       |     |    |
|----|-------|-----|----|
| 1  | VSS   | E   | 64 |
| 2  | XTAL  | RD  | 63 |
| 3  | EXTAL | WR  | 62 |
| 4  | NP0   | R/W | 61 |
| 5  | PP1   | LIR | 60 |
| 6  | RES   | BA  | 59 |
| 7  | STBY  | DO  | 58 |
| 8  | NMI   | 1   | 57 |
| 9  | P20   | 2   | 56 |
| 10 | P21   | 3   | 55 |
| 11 | P22   | 4   | 54 |
| 12 | RX    | 5   | 53 |
| 13 | TX    | 6   | 52 |
| 14 | P25   | 7   | 51 |
| 15 | P26   | AO  | 50 |
| 16 | P27   | 1   | 49 |
| 17 | P50   | 2   | 48 |
| 18 | IRQ2  | 3   | 47 |
| 19 | P52   | 4   | 46 |
| 20 | HALT  | 5   | 45 |
| 21 | P54   | 6   | 44 |
| 22 | P55   | 7   | 43 |
| 23 | P56   | VSS | 42 |
| 24 | P57   | AB  | 41 |
| 25 | P60   | 9   | 40 |
| 26 | ;     | 10  | 39 |
| 27 | ;     | 11  | 38 |
| 28 | ;     | 12  | 37 |
| 29 | ;     | 13  | 36 |
| 30 | ;     | 14  | 35 |
| 31 | ;     | 15  | 34 |
| 32 | P67   | VCC | 33 |

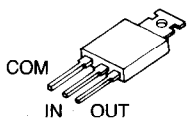
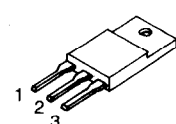
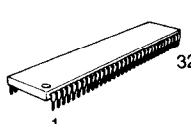
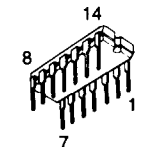
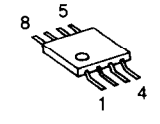
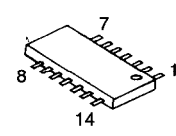
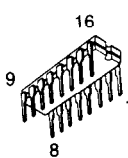
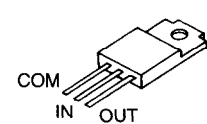
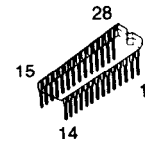
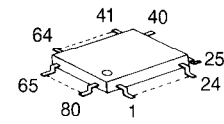
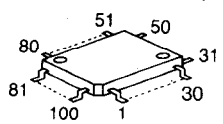
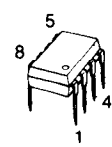
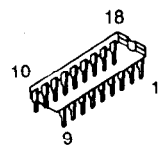
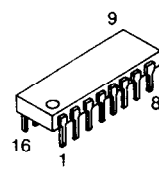
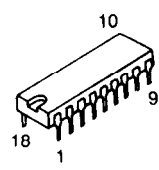
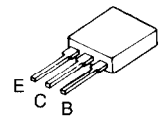
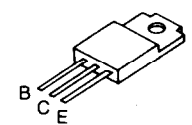
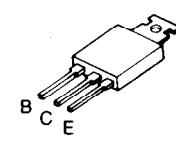
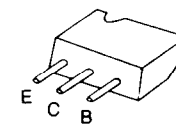
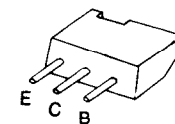
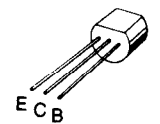
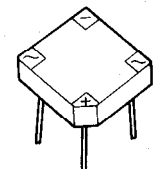
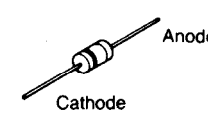
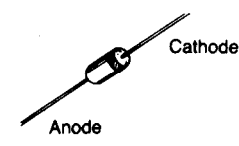
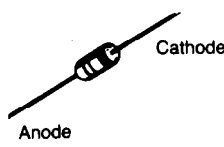
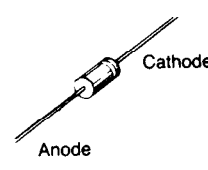
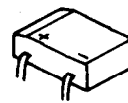
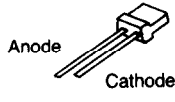
### IC500

| Port | Pin No. | I/O | Signal Name                                | High Imp.   | High Level   | Low Level    | Remarks    |
|------|---------|-----|--|-------------|--------------|--------------|------------|
| NMI  | 8       | I   | CPU Restart                                | ---         | ---          | ---          |            |
| P20  | 9       | I   | OL1: EXT. Over Current Detection (-)       | ---         | Normal       | Over Current | EXT. 19-26 |
| P21  | 10      | I   | OL2: EXT. Over Current Detection (+)       | ---         | Over Current | Normal       | EXT. 11-18 |
| P22  | 11      | O   | BRK1: EXT. Over Current Protection (-)     | Break       | Break        | ON           | EXT. 19-26 |
| RX   | 12      | I   | RXD  | ---         | ---          | ---          |            |
| TX   | 13      | O   | TXD  | ---         | ---          | ---          |            |
| P25  | 14      | O   | BRK2: EXT. Over Current Protection (+)     | Break       | Break        | ON           | EXT. 11-18 |
| P26  | 15      | O   | BUSY1: Doorphone 1 ON/OFF Control          | OFF         | OFF          | ON           |            |
| P27  | 16      | O   | BUSY2: Doorphone 2 ON/OFF Control          | OFF         | OFF          | ON           |            |
| P50  | 17      | --- | ---  | ---         | ---          | ---          |            |
| IRQ2 | 18      | I   | PFD: Power Down Detection                  | ---         | Power Down   | Normal       |            |
| P52  | 19      | I   | DROPT: Doorphone Adaptor Connect Detection | Non-Connect | Connect      |              |            |
| HALT | 20      | I   | HALT: Halt Control Input                   | Normal      | Power Down   |              |            |
| P54  | 21      | I   | DHK1: Doorphone 1 Hook Detection           | On-Hook     | Off-Hook     |              |            |
| P55  | 22      | I   | DHK2: Doorphone 2 Hook Detection           | On-Hook     | Off-Hook     |              |            |
| P56  | 23      | I   | CNCT1: Doorphone 1 Connect Detection       | Connect     | Non-Connect  |              |            |
| P57  | 24      | I   | CNCT2: Doorphone 2 Connect Detection       | Connect     | Non-Connect  |              |            |
| P60  | 25      | --- | ---  | ---         | ---          | ---          |            |
| P61  | 26      | O   | BANK: Bank Select Control                  | ---         | ---          | ---          |            |
| P62  | 27      | I   | CTS  | ---         | ---          | ---          |            |
| P63  | 28      | --- | ---  | ---         | ---          | ---          |            |
| P64  | 29      | I   | DSR  | ---         | ---          | ---          |            |
| P65  | 30      | I   | DTR  | ---         | ---          | ---          |            |
| P66  | 31      | O   | PF: Power Down Control                     | ---         | Power Down   | Normal       |            |
| P67  | 32      | O   | 20Hz: Bell Signal Output                   | ---         | ---          | ---          |            |

# BLOCK DIAGRAM



# TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

|  |   |  |  |  |
|--|---|--|--|--|
|  <p>COM<br/>IN OUT</p> <p>PQVITA7924<br/>PQVITA7812AF</p> |  <p>1 2 3</p> <p>AN7912T</p>   |  <p>32<br/>1</p> <p>PQVIH63B03XP</p>  |  <p>14<br/>8 7 1</p> <p>PQVITC7H04P<br/>PQVITC7H08P<br/>PQVIHD75188P<br/>PQVIHD75189P</p> |  <p>8 5 1 4</p> <p>PQVINJM4558M</p>               |
|  <p>7 14 8 1</p> <p>PQVITC4066BF</p>                      |  <p>16<br/>9 8 1</p> <p>PQVITD62706P<br/>PQVITC7H139P<br/>PQVITC7H138P</p> |  <p>COM<br/>IN OUT</p> <p>PQVIPC79M18F</p>  |  <p>28<br/>15 14 1</p> <p>PQVIHM6264LA<br/>PQWIT61610M2</p>                               |  <p>41 40 25 24 1 80 64 65</p> <p>PQVI671152F</p> |
|  <p>51 50 31 30 1 100 81 80</p> <p>PQVI63HB110</p>        |  <p>5<br/>8 4 1</p> <p>PQVINJM4558D</p>                                    |  |  <p>18<br/>10 1 9</p> <p>PQVIMT8870BC</p>   |  |
|  <p>9<br/>16 1 8</p> <p>PQVILR4089<br/>PQVIBU3140</p>   |  <p>10<br/>18 1 9</p> <p>PQVIMS6242BS</p>                                |  <p>E C B</p> <p>2SA1626</p>  |  <p>B C E</p> <p>2SB1015<br/>2SD1406</p>  |  |
|  <p>B C E</p> <p>2SB834<br/>2SC2590</p>                 |  <p>E C B</p> <p>2SA881, 2SB644<br/>2SC2673, 2SD639</p>                  |  <p>E C B</p> <p>DTA124EA<br/>DTA124XA<br/>DTA143A<br/>DTA144A<br/>2SA937<br/>2SC2021<br/>PQVTDTC114Y</p> |  <p>E C B</p> <p>2SC2878</p>  |  |
|  <p>PQVD2B4B41<br/>PQVD3B4B41</p>                       |  <p>Anode<br/>Cathode</p> <p>MA4110</p>                                  |  <p>Cathode<br/>Anode</p> <p>1SS131<br/>1SR35-200<br/>MA4030<br/>PQVDHZS2B1<br/>PQVD1SV124</p>            |  <p>Cathode<br/>Anode</p> <p>MA1056<br/>MA4036<br/>MA4047<br/>MA4062<br/>MA4091</p>     |  |
|  <p>Anode<br/>Cathode</p> <p>PQVDEK03</p>               |  <p>PQVDS1YB40F1</p>   |  <p>Anode<br/>Cathode</p> <p>LN22ORPH<br/>LN320GPH<br/>LN420YPH</p>                                       |  |  |



# SCHEMATIC DIAGRAM

7

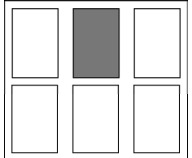
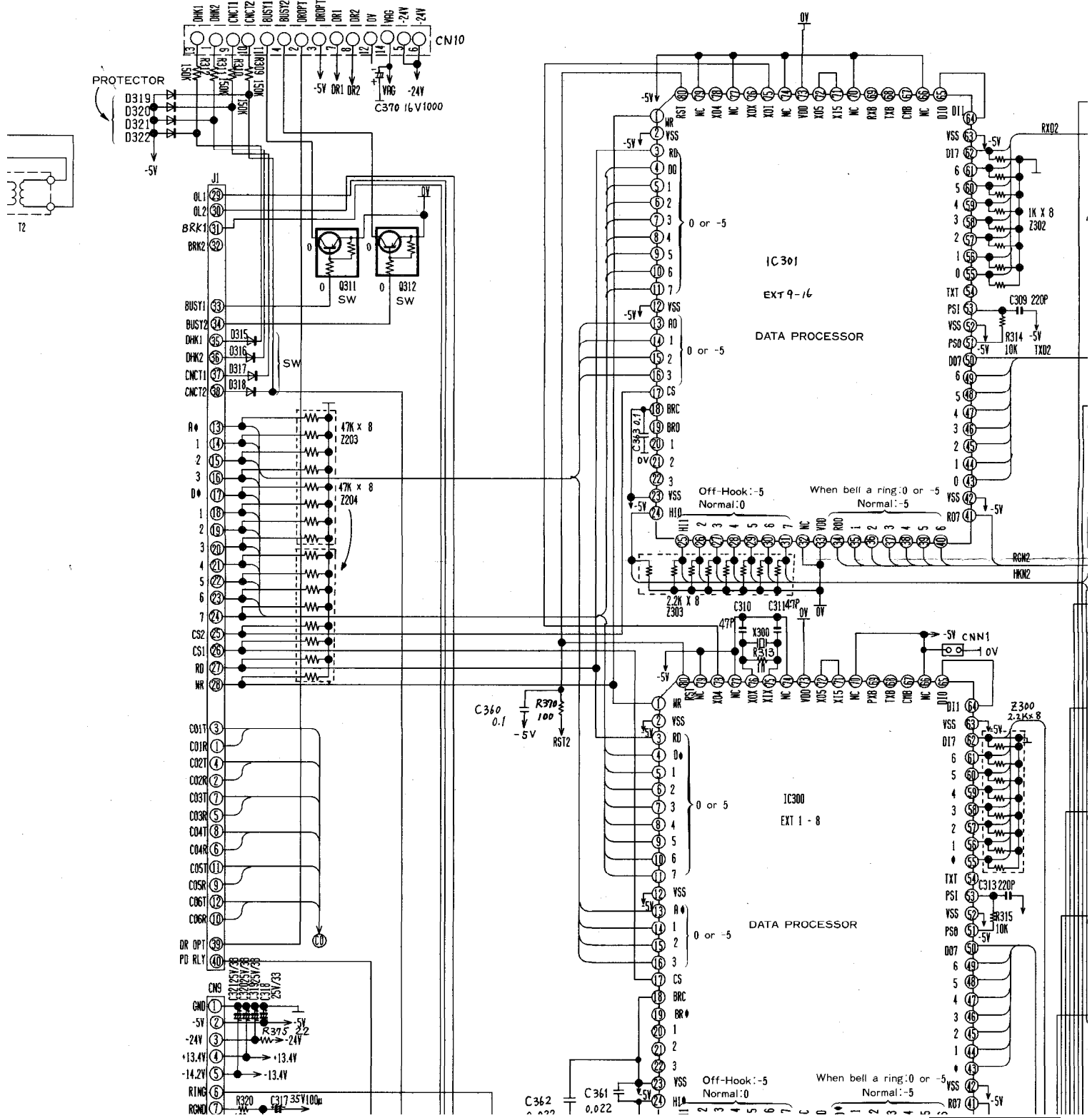
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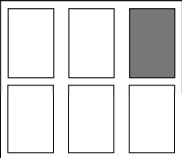
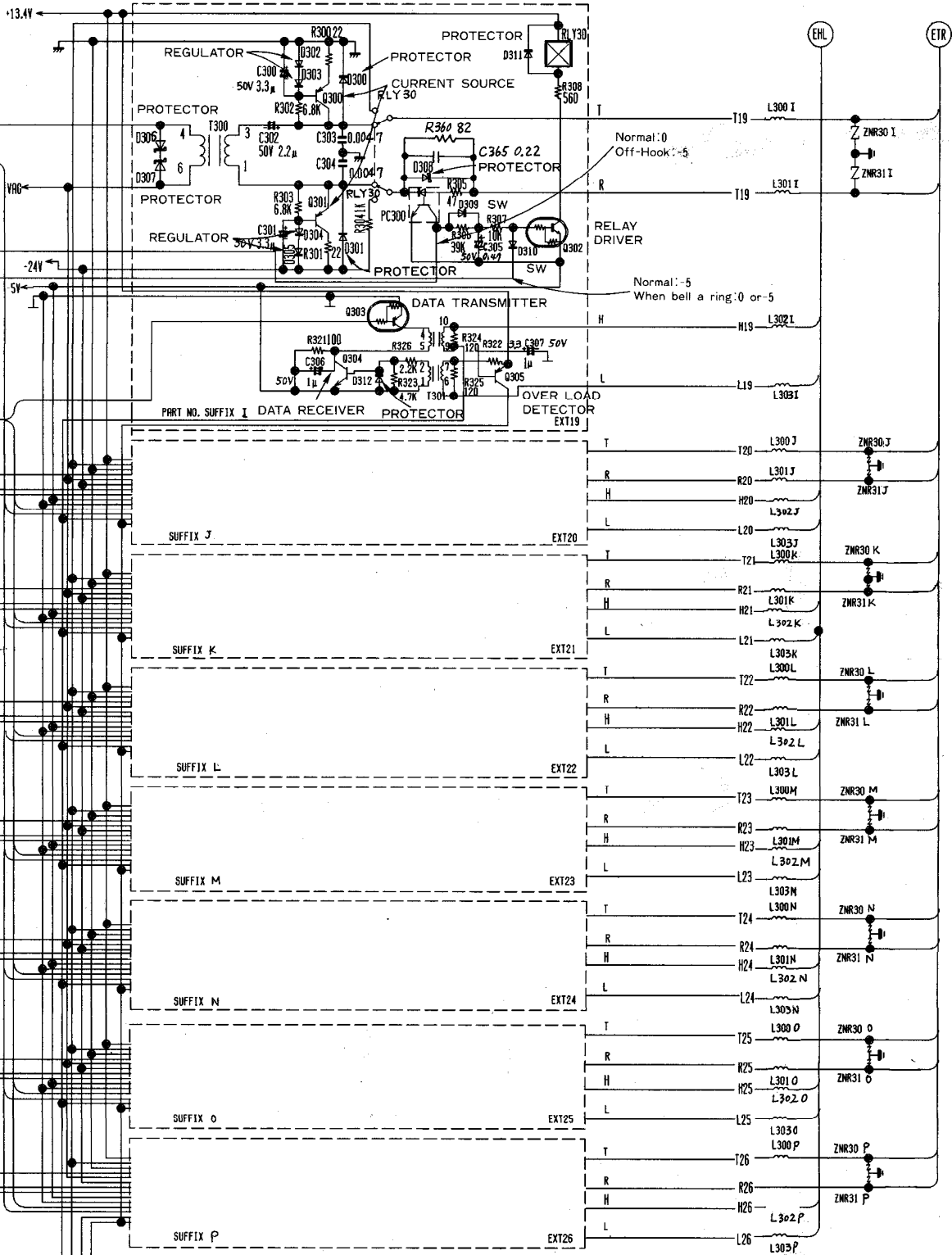
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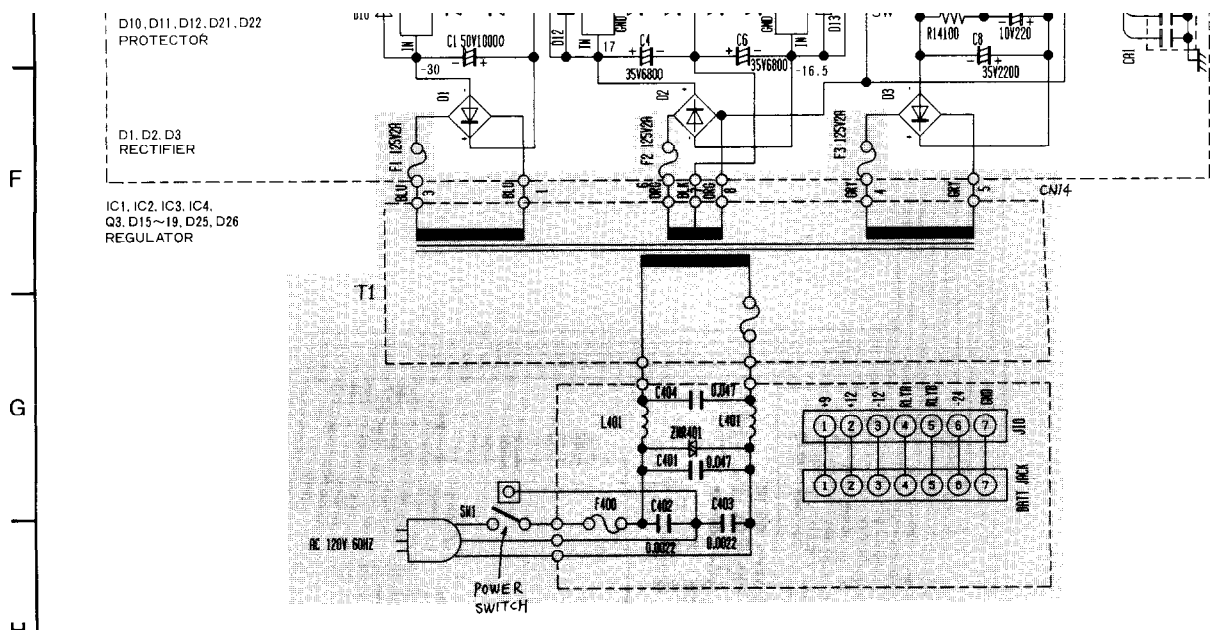
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12



MAIN-A BOARD





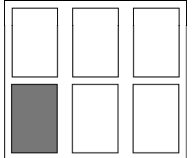
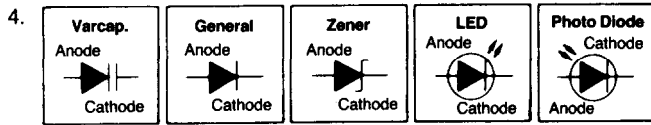
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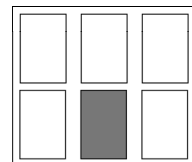
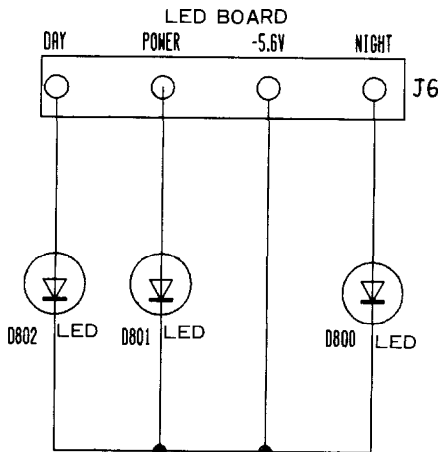
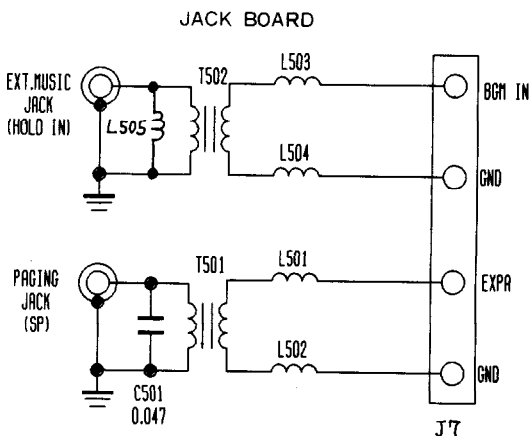
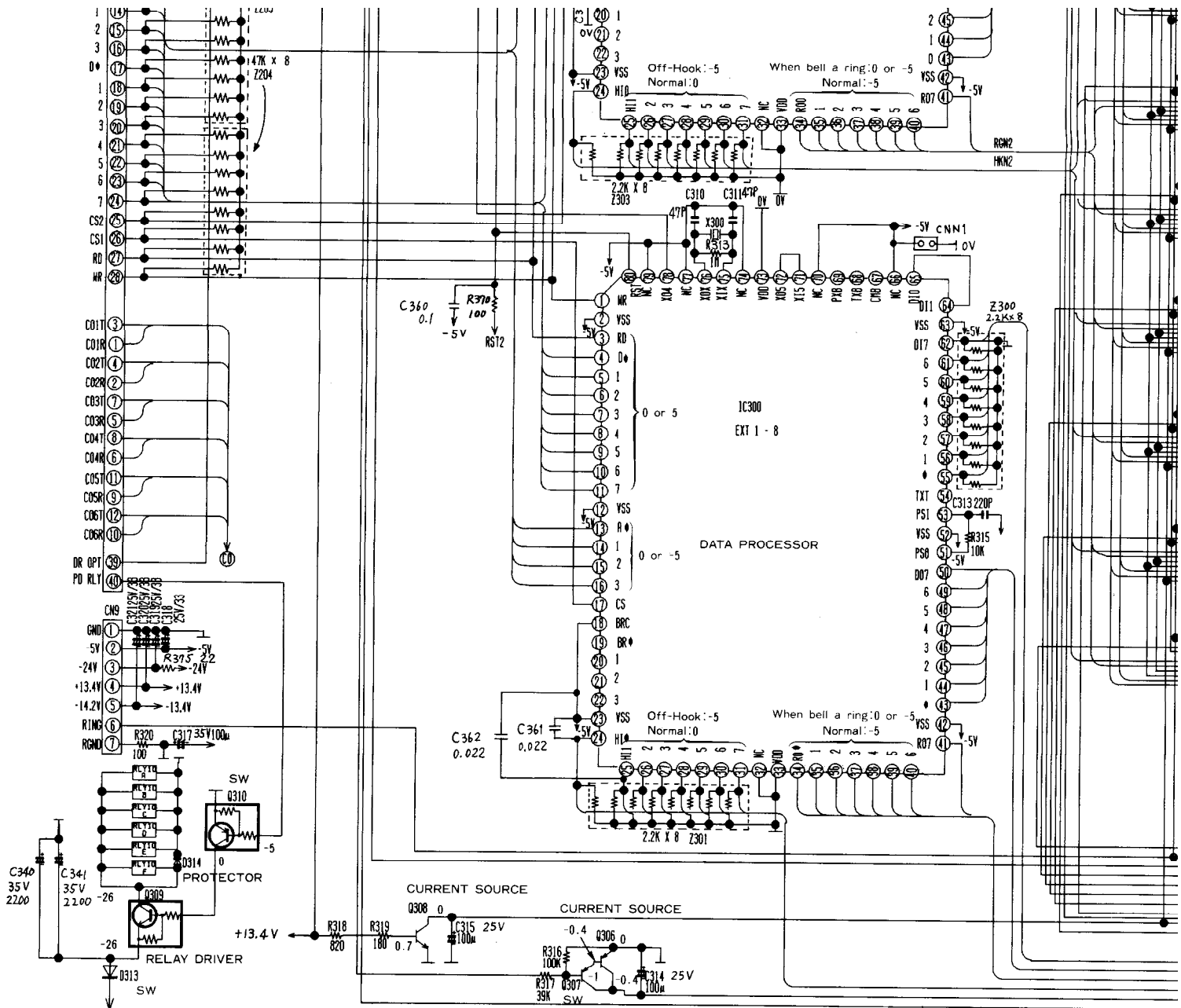
- DC voltage measurements are taken with electronic voltmeter and oscilloscope from ground line.

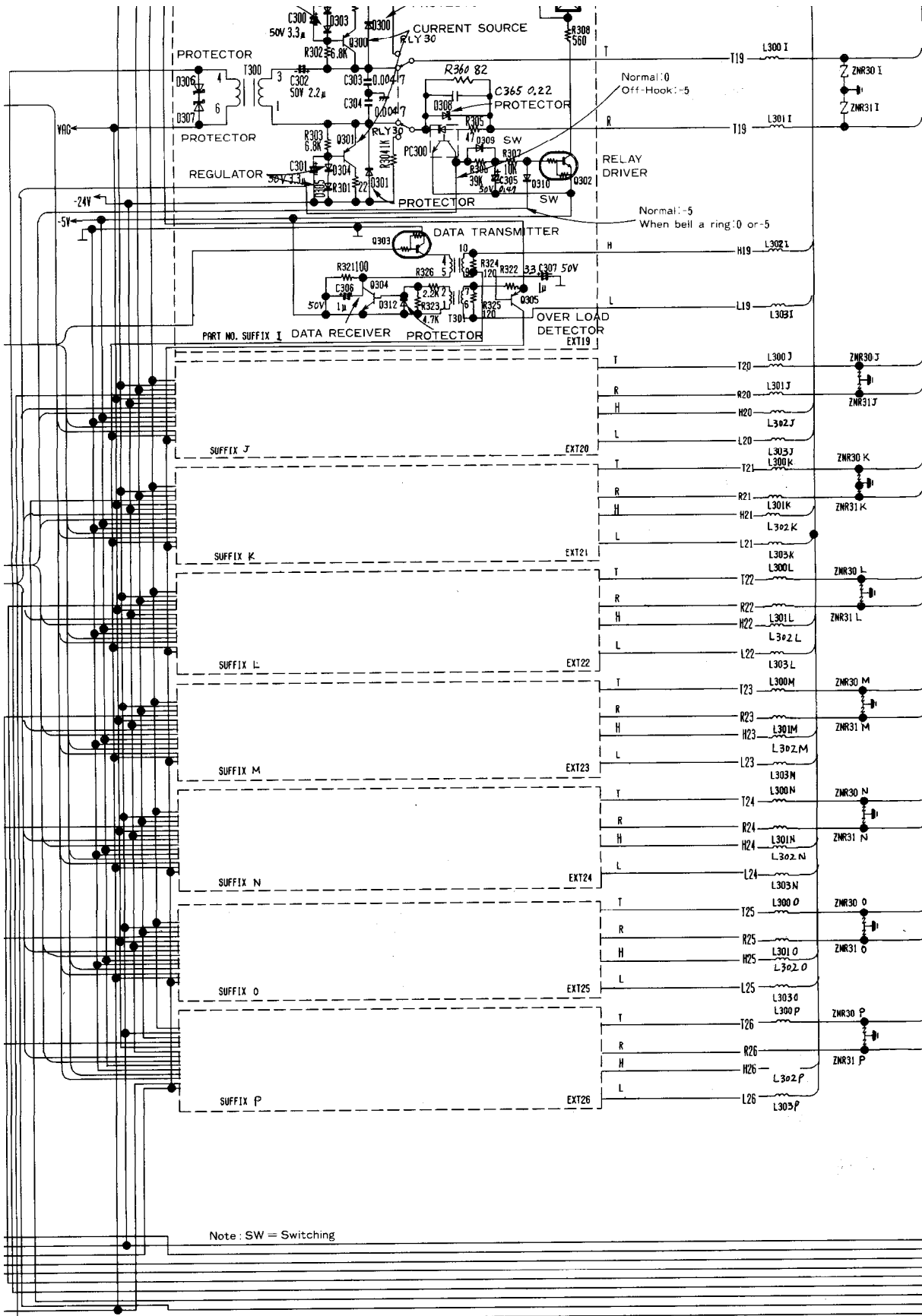
- Power Switch ON condition
- Voltage Value: V

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

3. **Important safety notice**  
 The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.





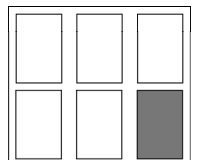


Note: SW = Switching

BELL

EXT 26 - 19

RXD1  
TXD1  
RGN1  
RGN2  
BRK1  
DL1



1

2

3

4

5

6

7

A

B

C

D

E

F

G

H

MAIN-B BOARD

REGULATOR

REGULATOR PROTE

DATA RECEIVER

Note: SW=Switching

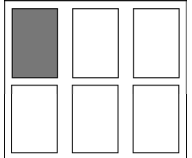
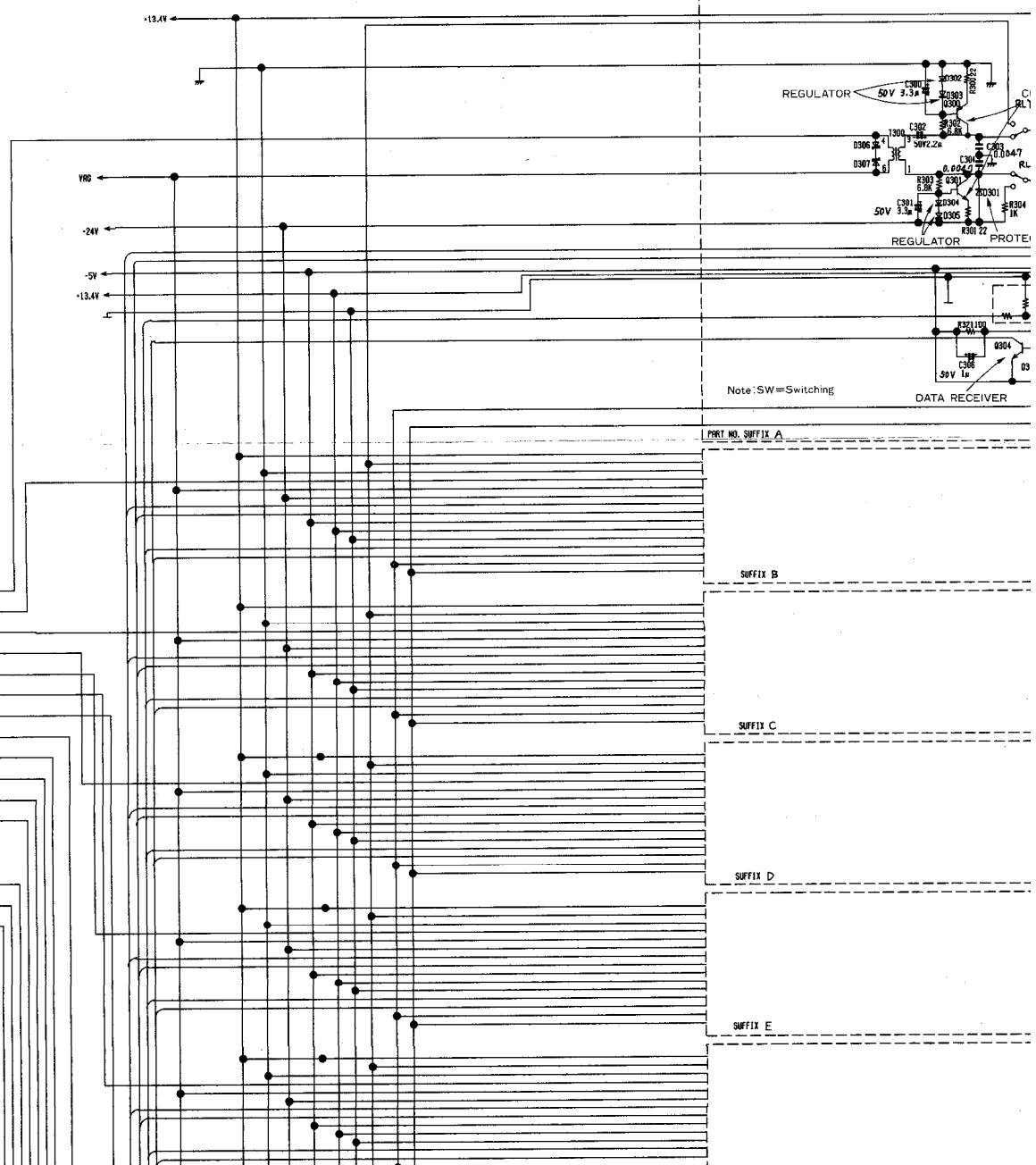
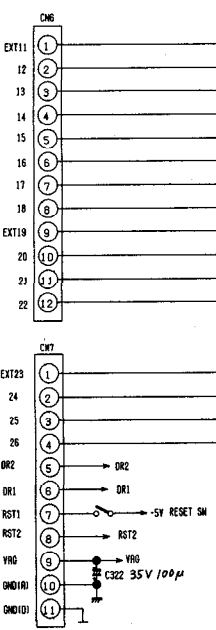
PORT NO. SUFFIX A

SUFFIX B

SUFFIX C

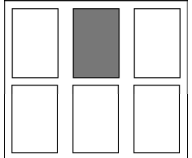
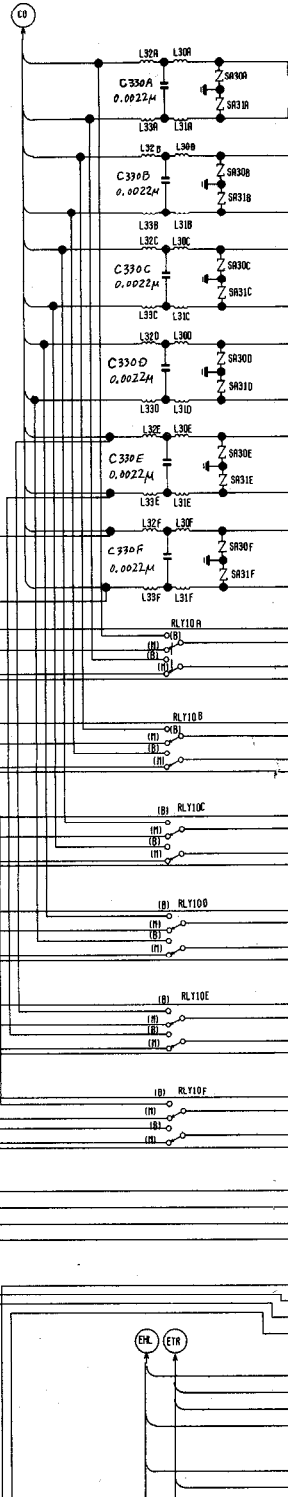
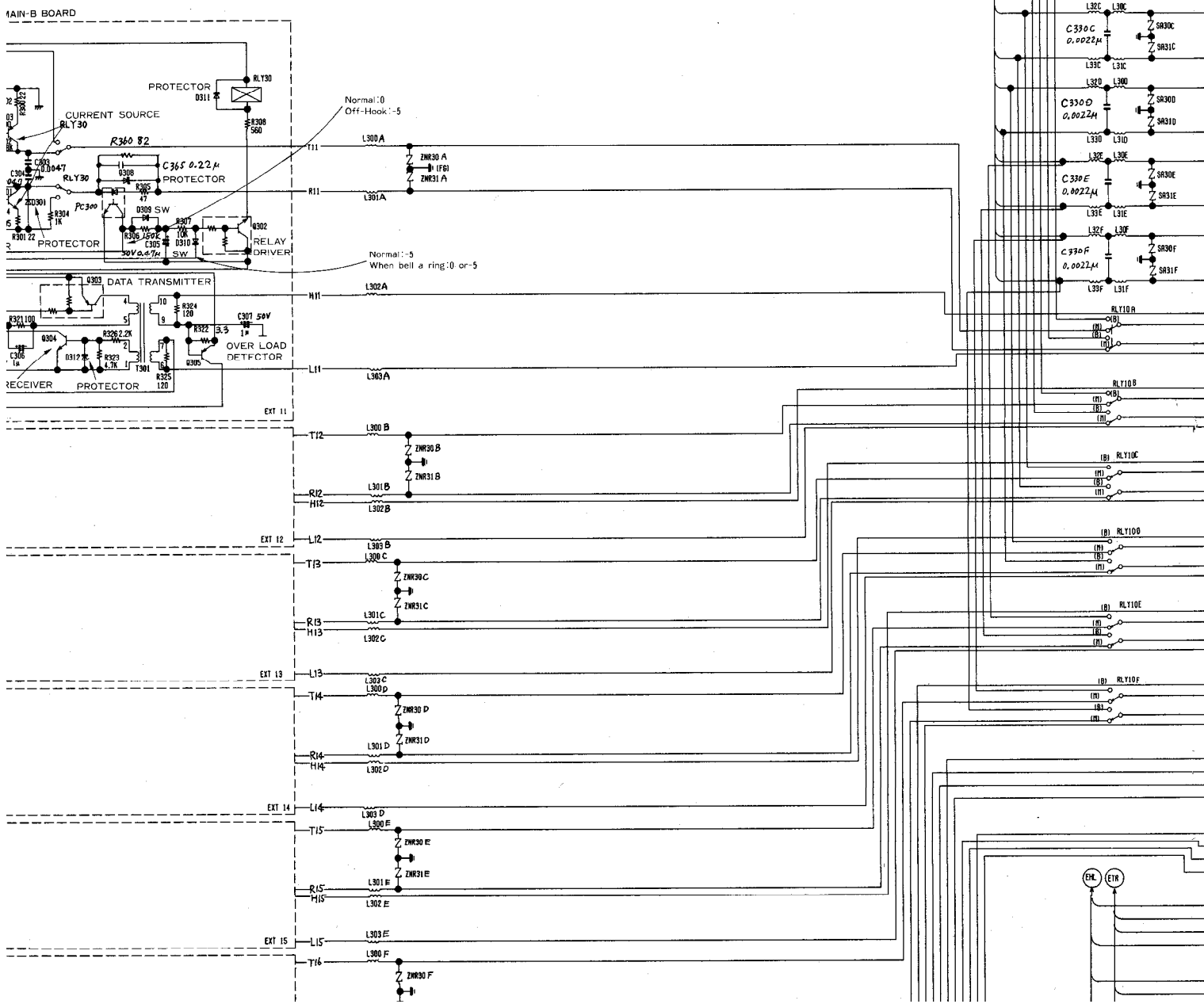
SUFFIX D

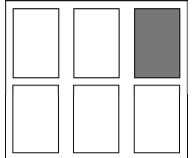
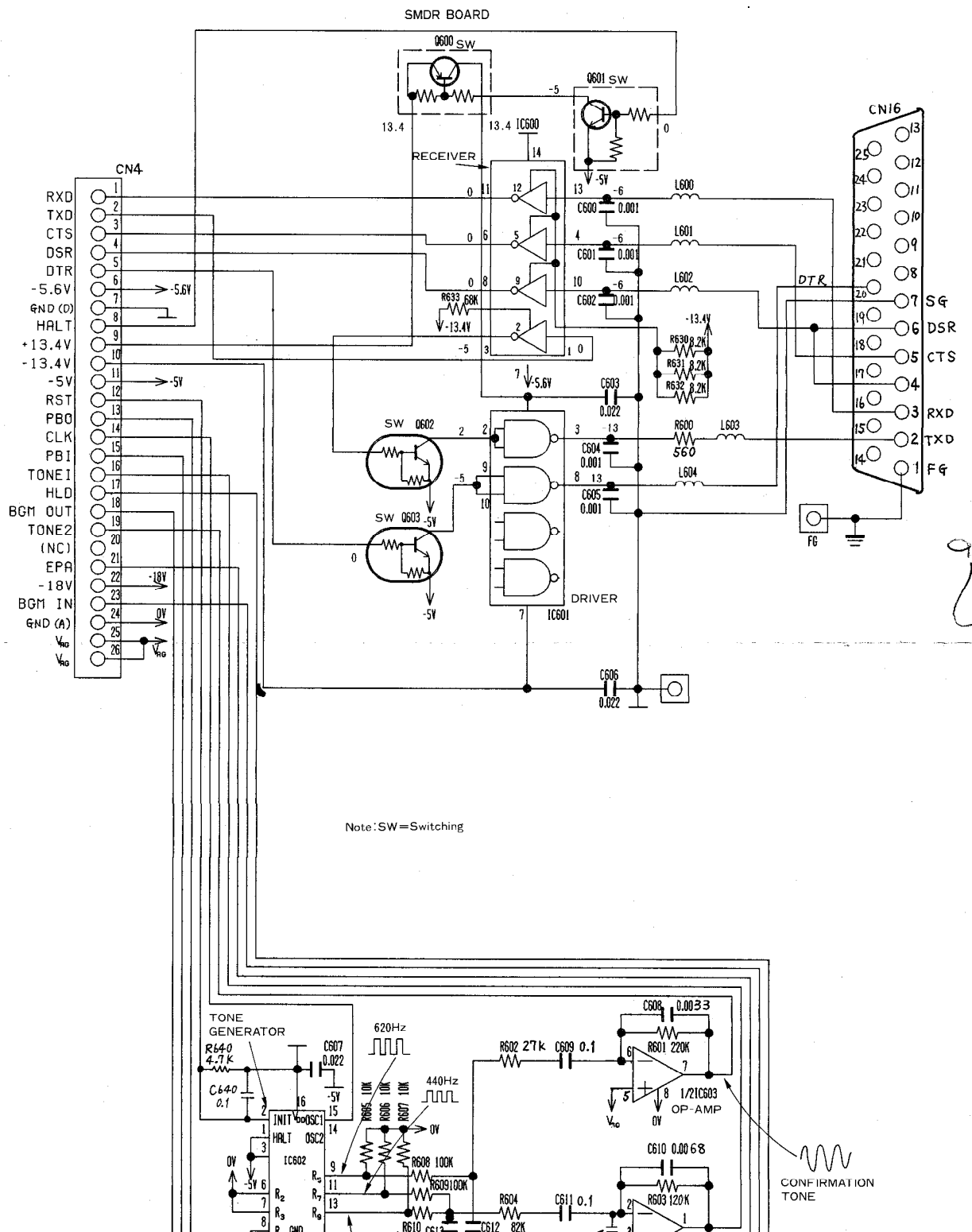
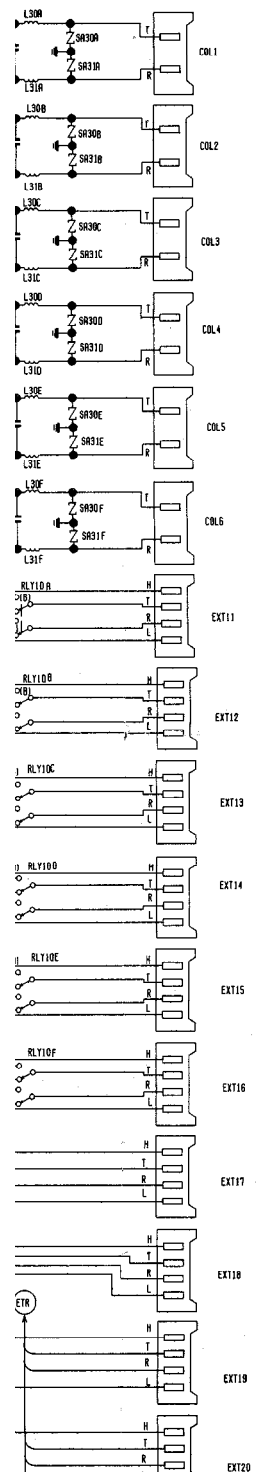
SUFFIX E



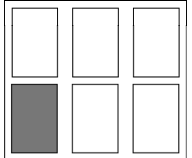
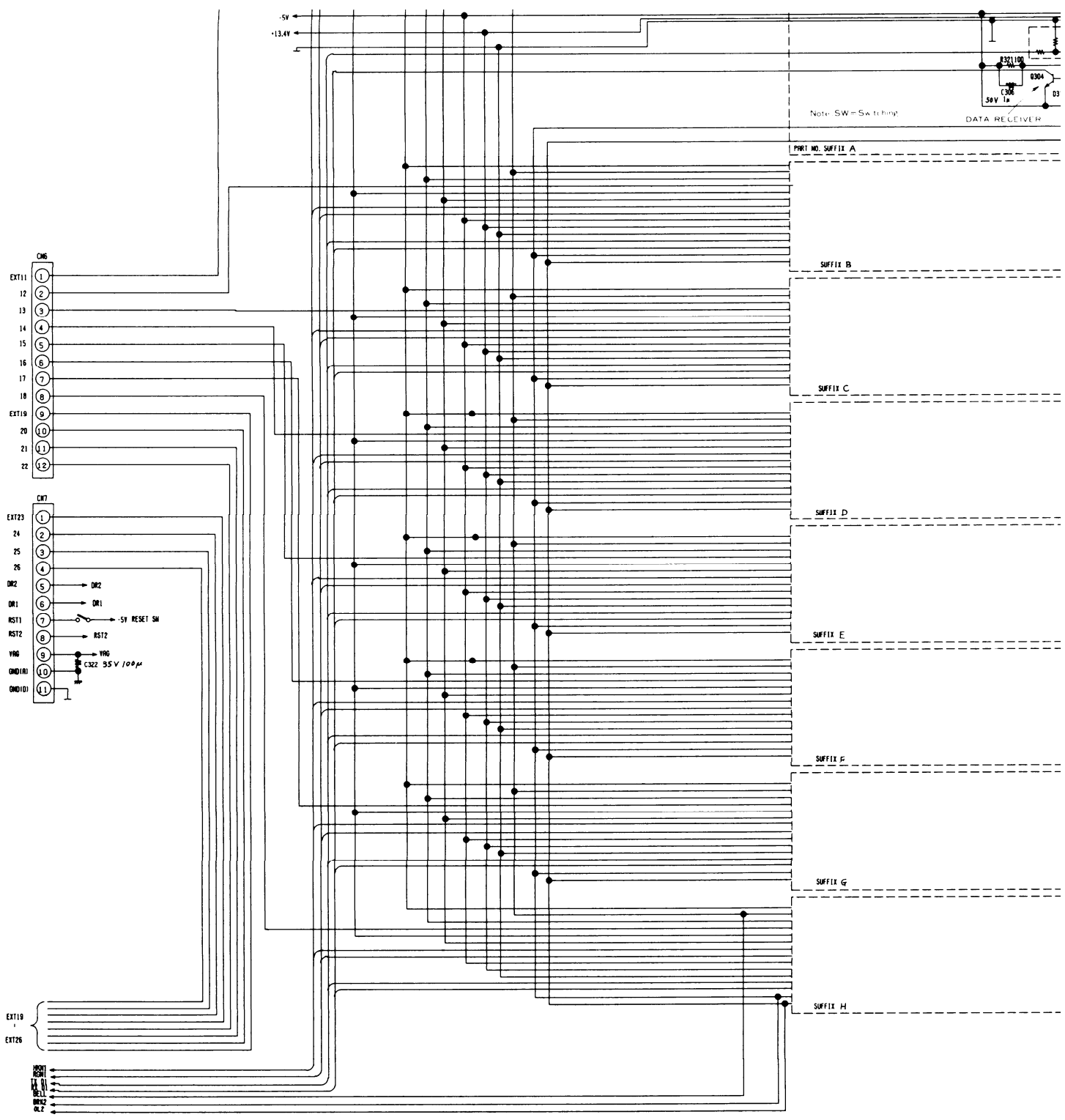
# SCHEMATIC DIAGRAM

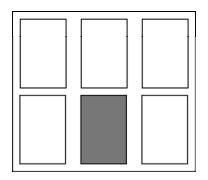
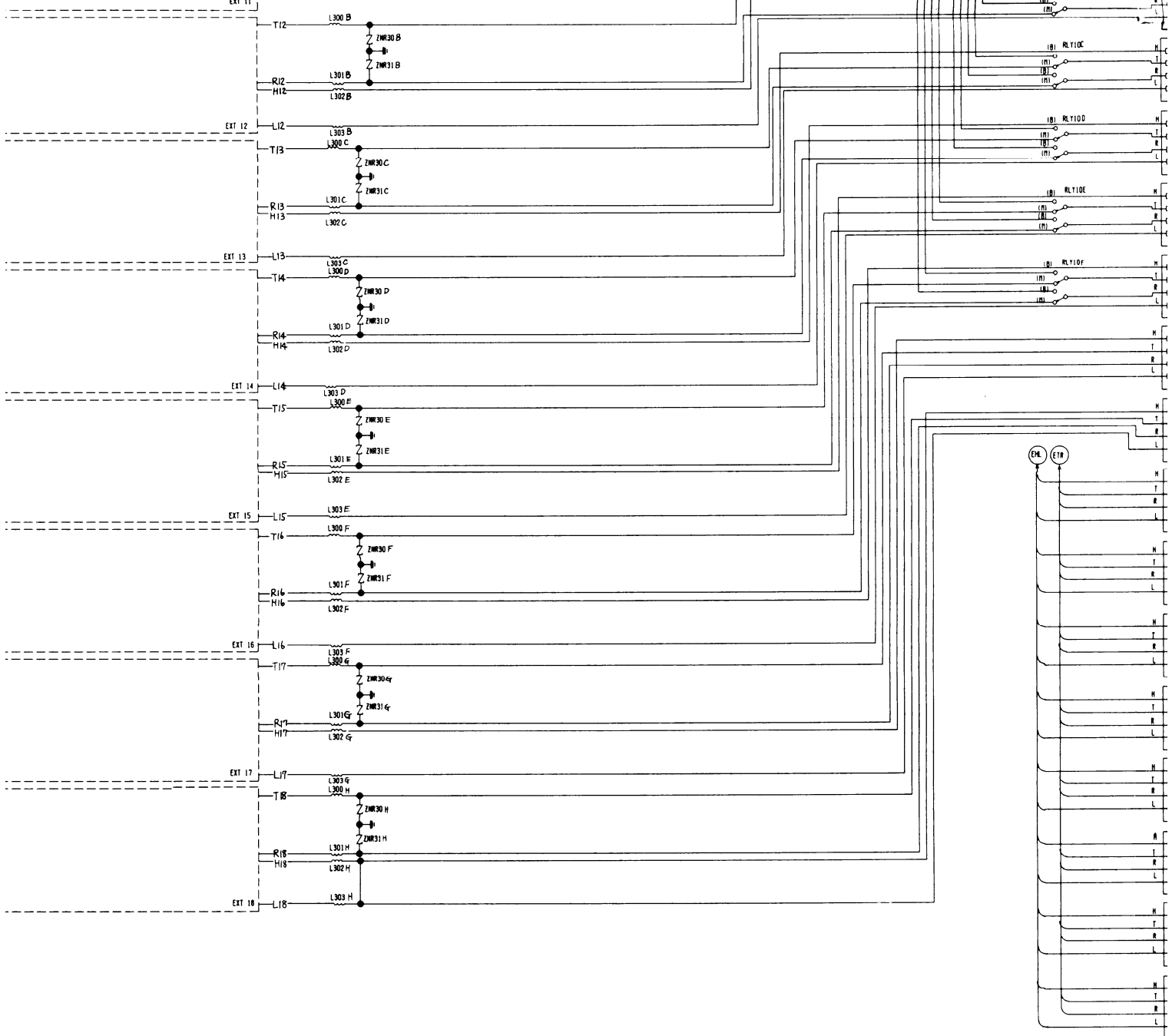
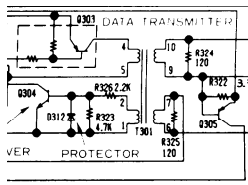
7      8      9      10      11      12      13





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1 2 3 4 5 6

A

B

C

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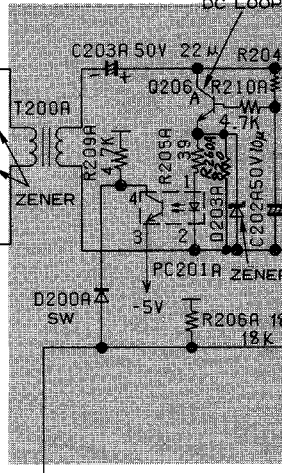
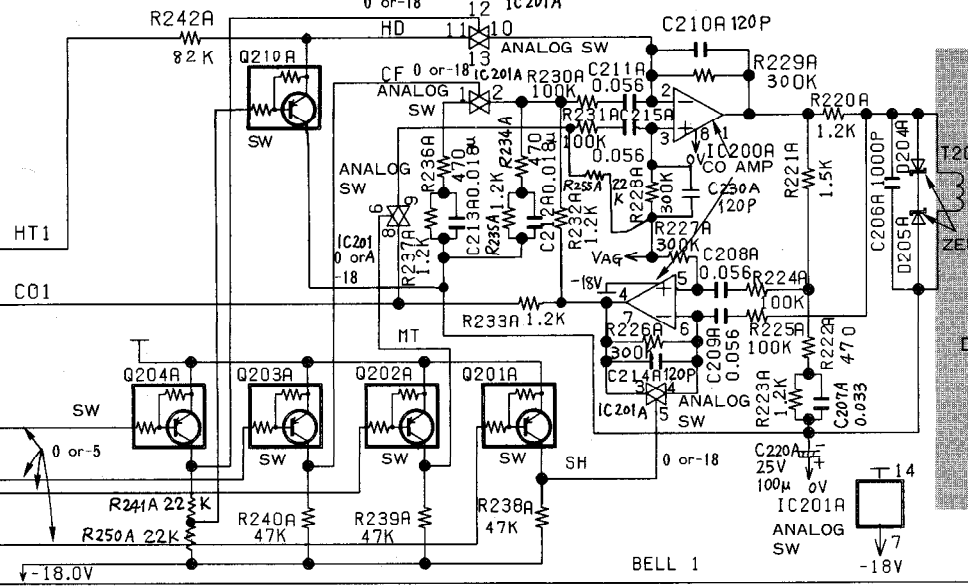
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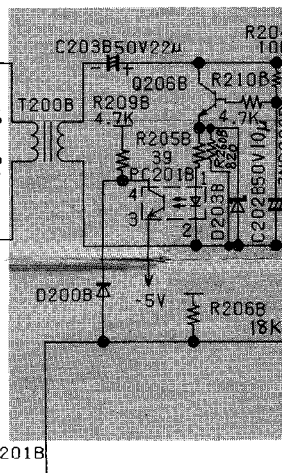
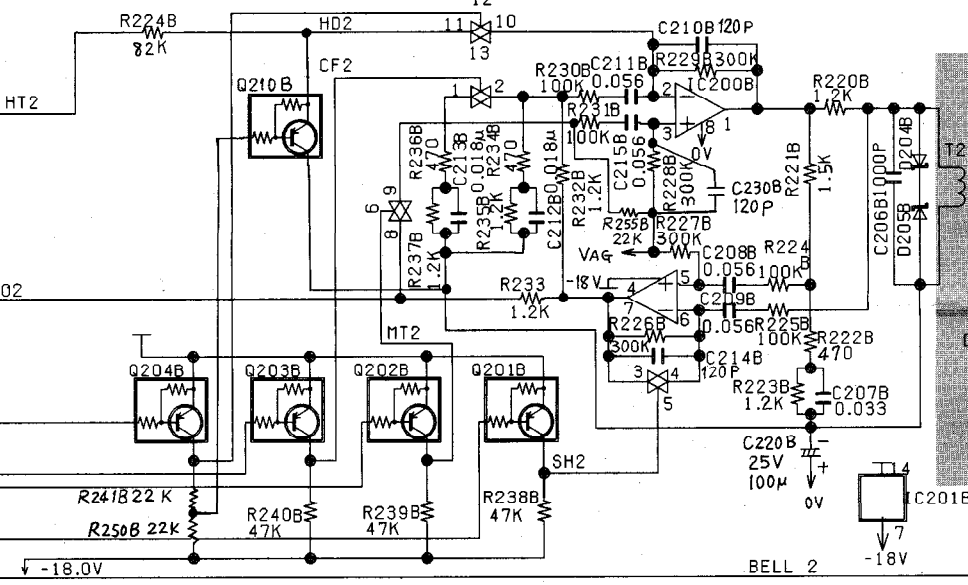
COL 1



BELL 1

DL 1

COL 2

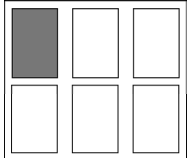
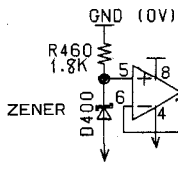
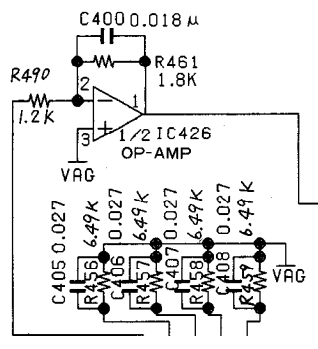
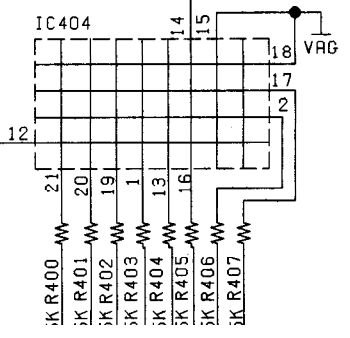


BELL 2

DL 2

IC400~IC412 CROSS POINT SWITCH

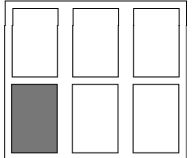
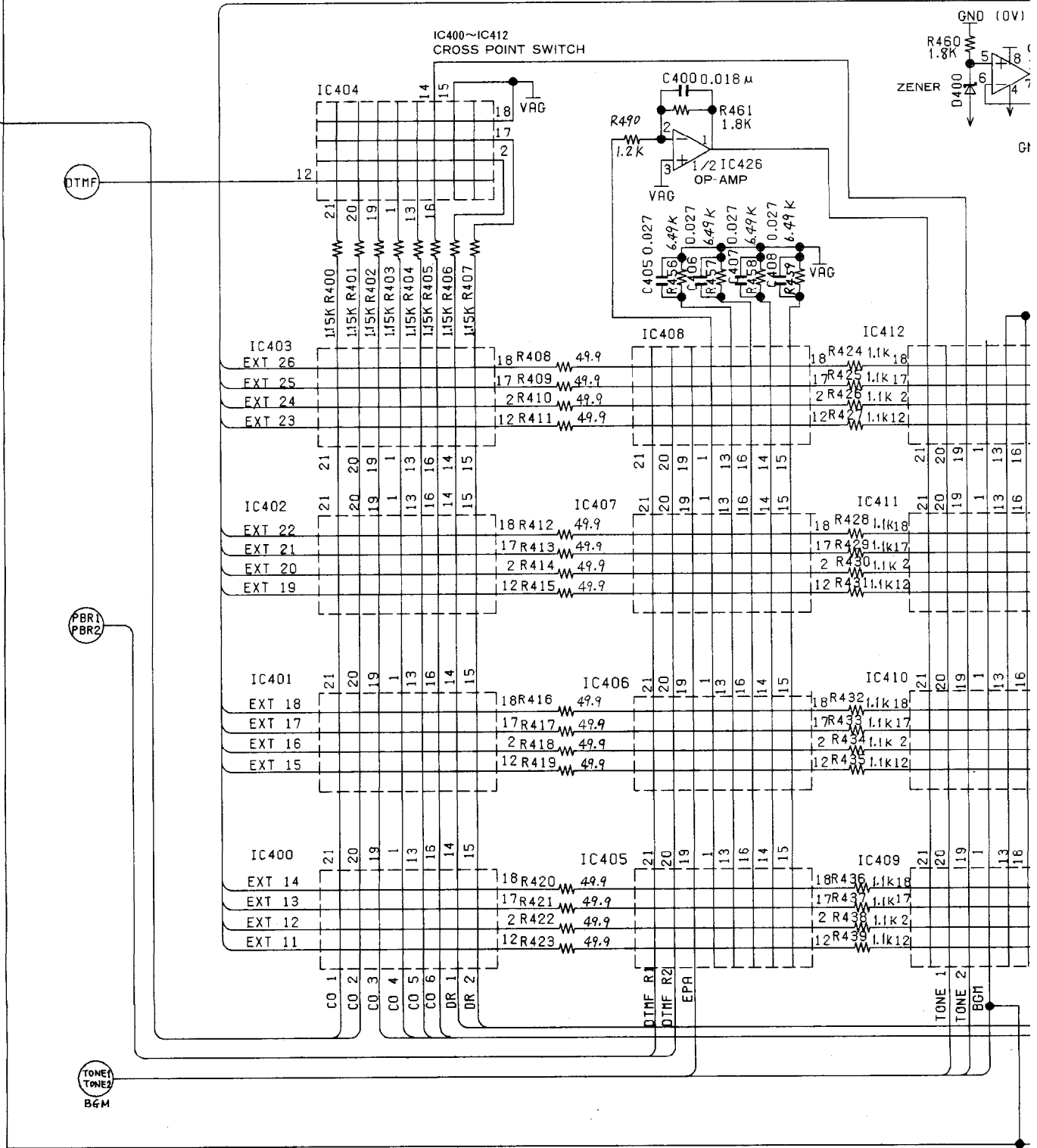
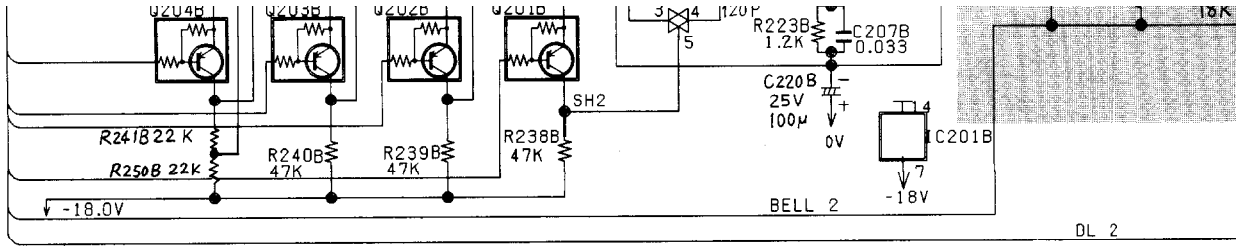
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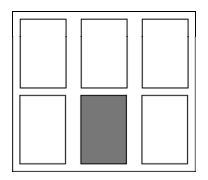
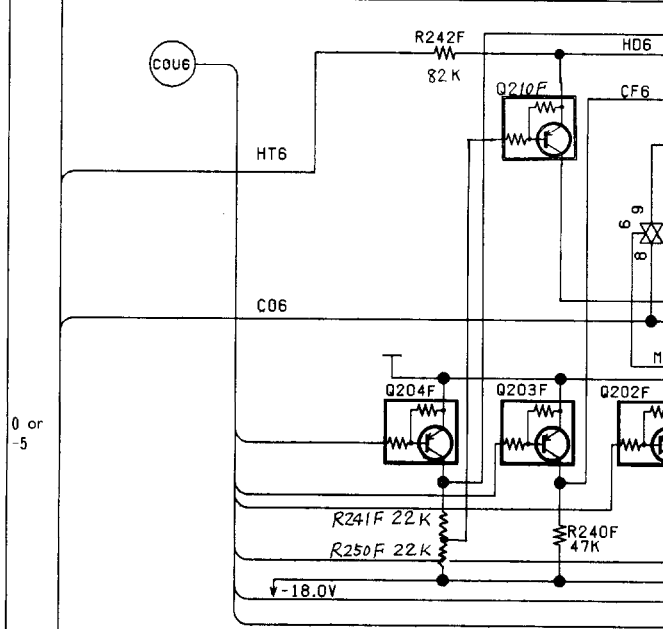
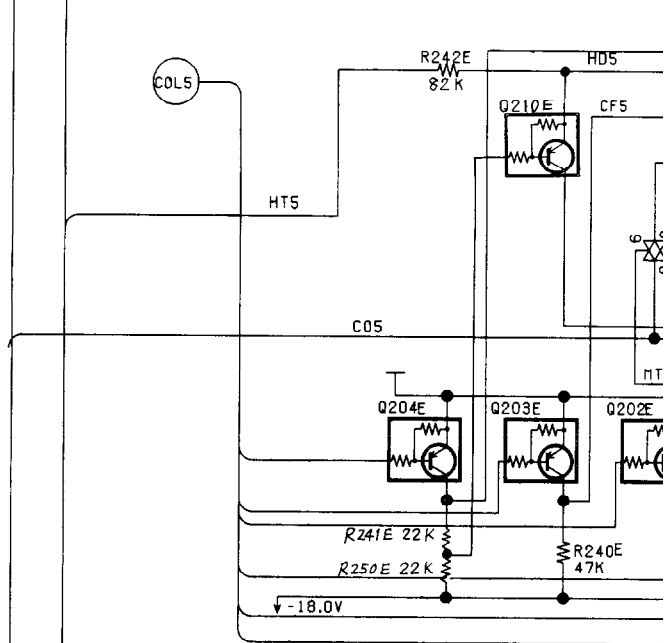
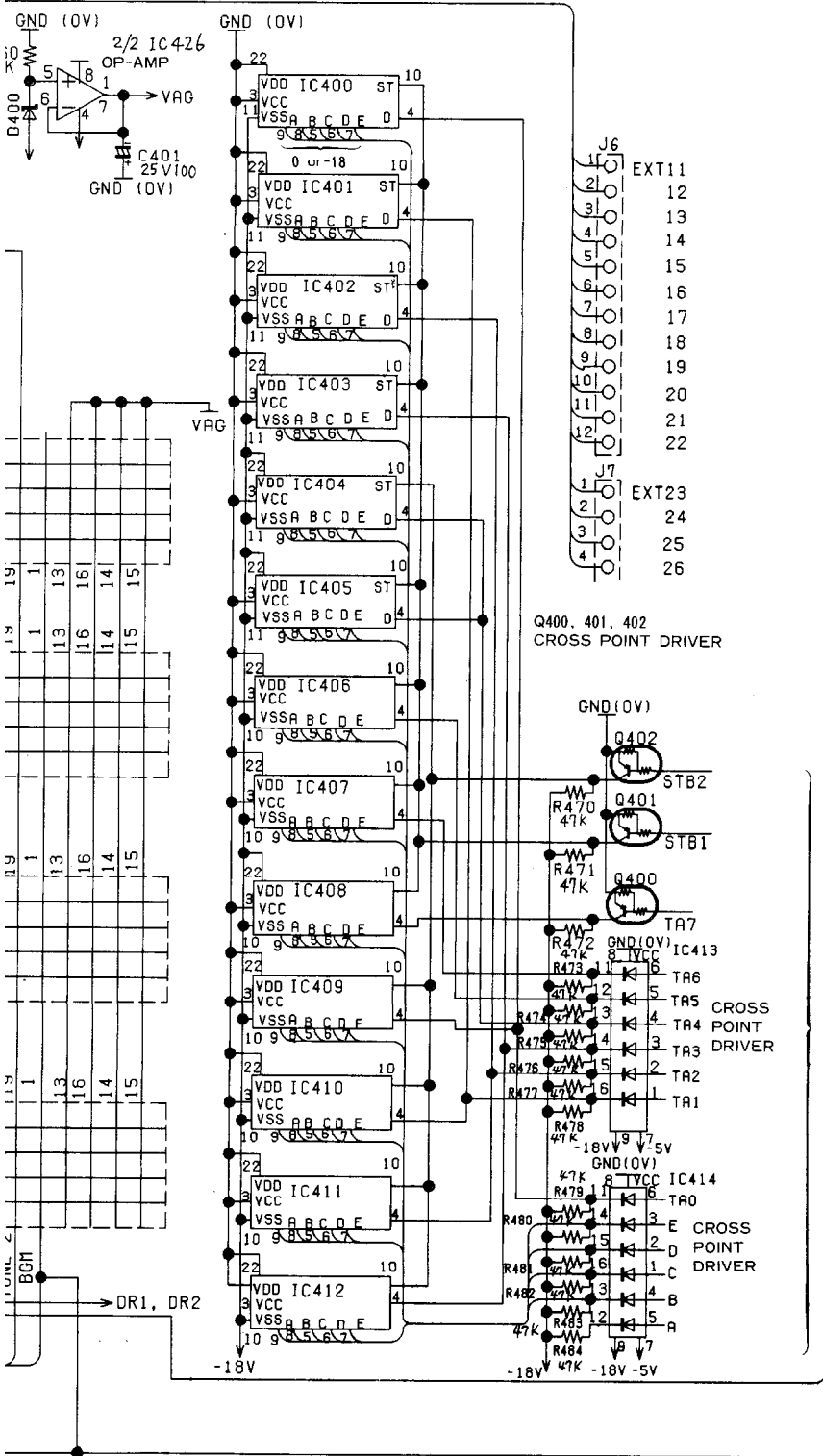
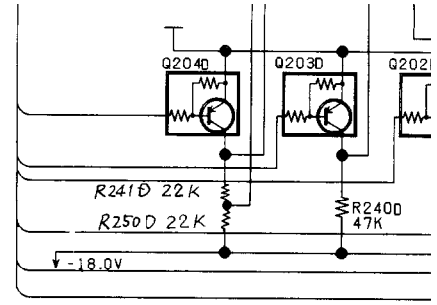
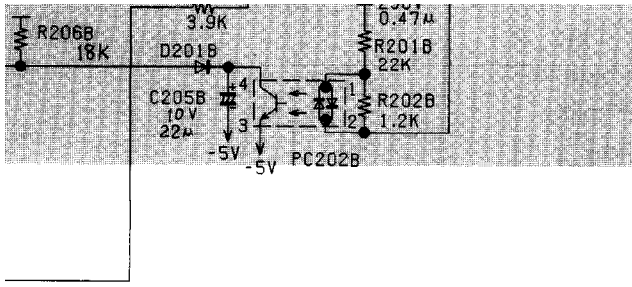


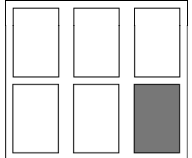
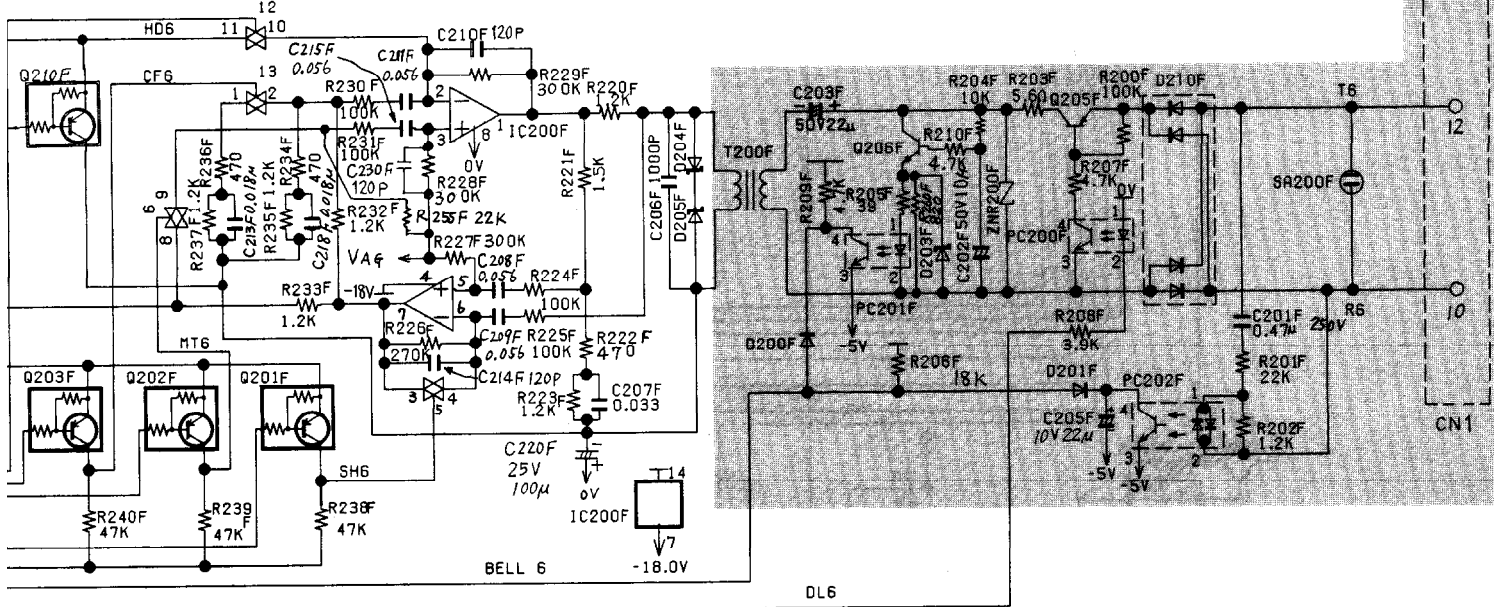
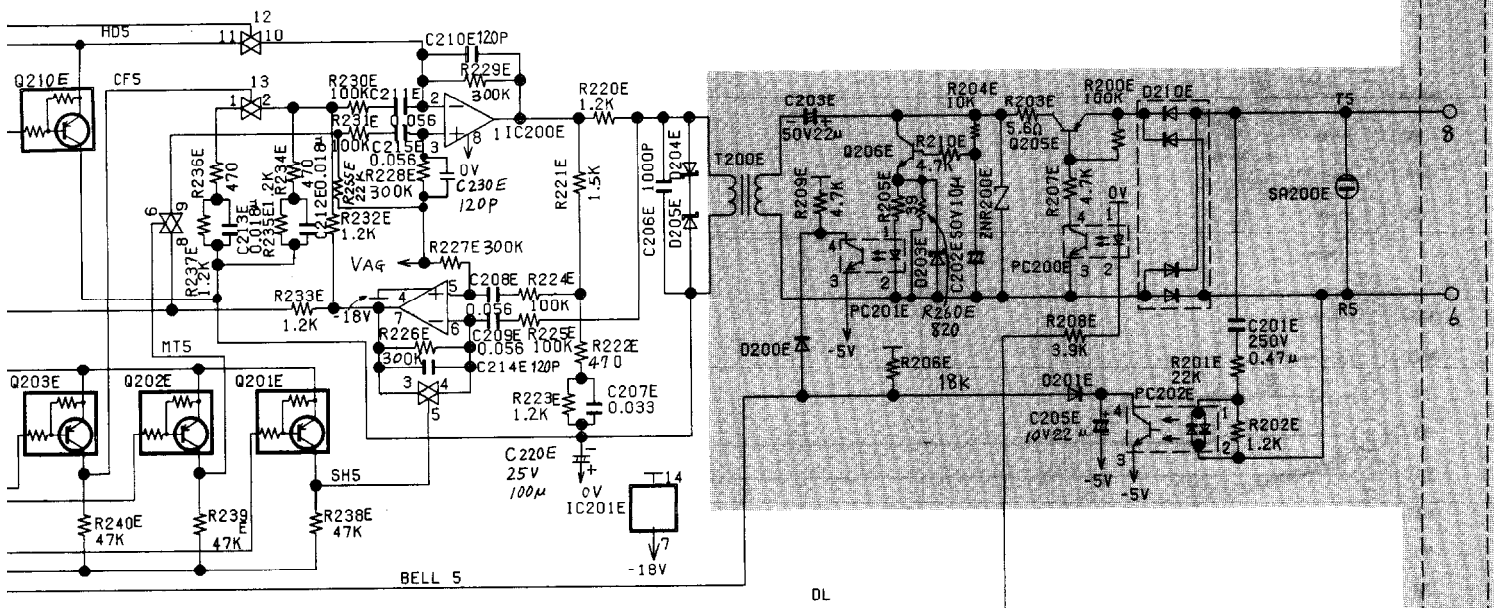
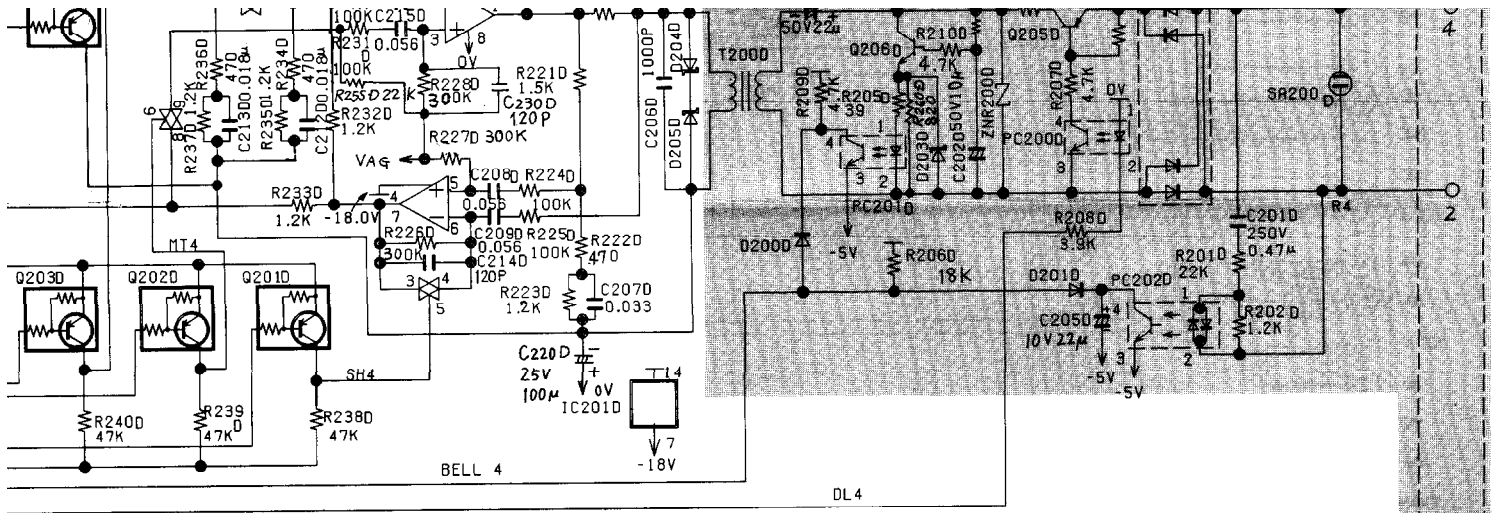


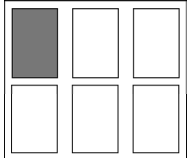
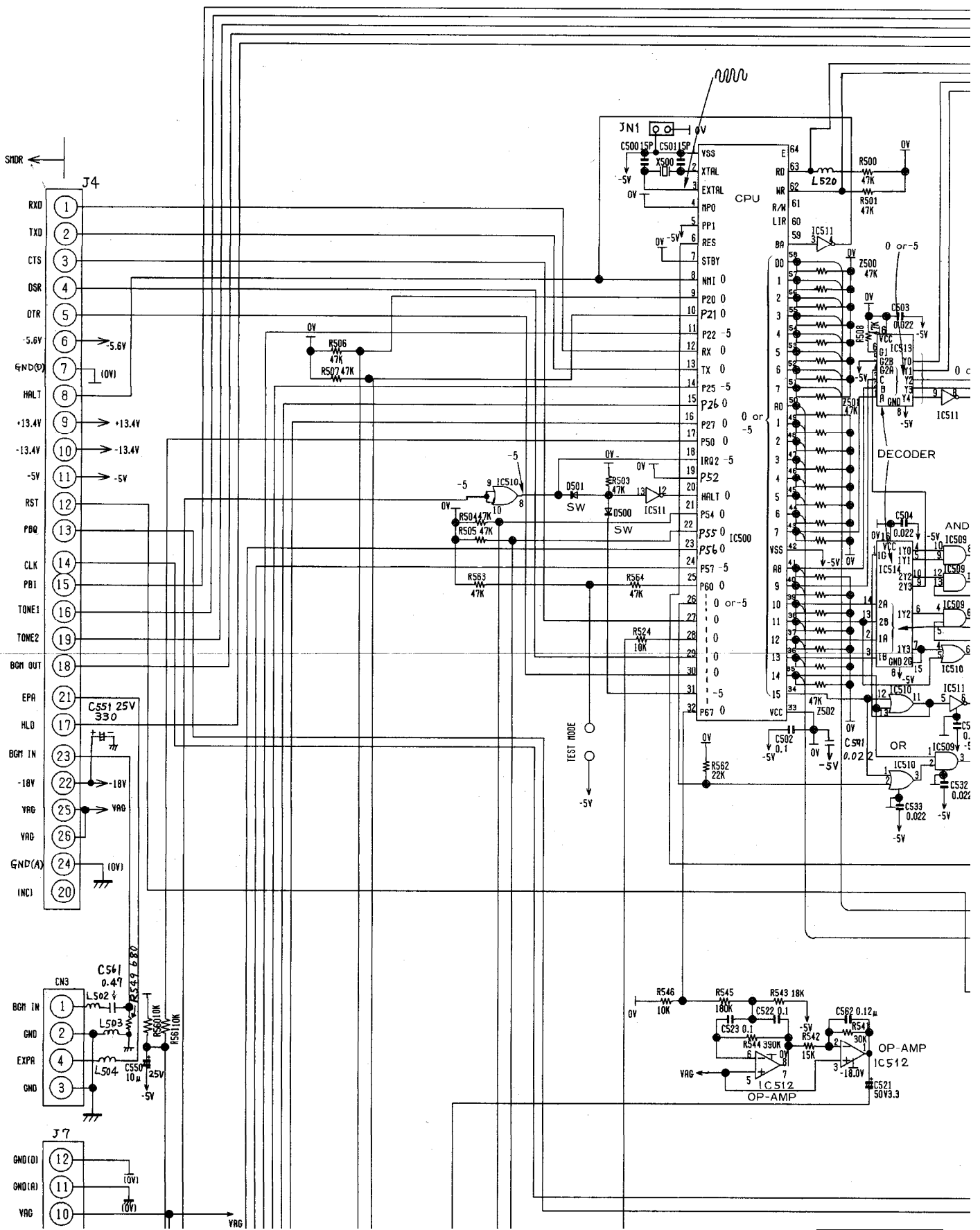


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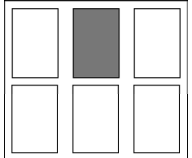
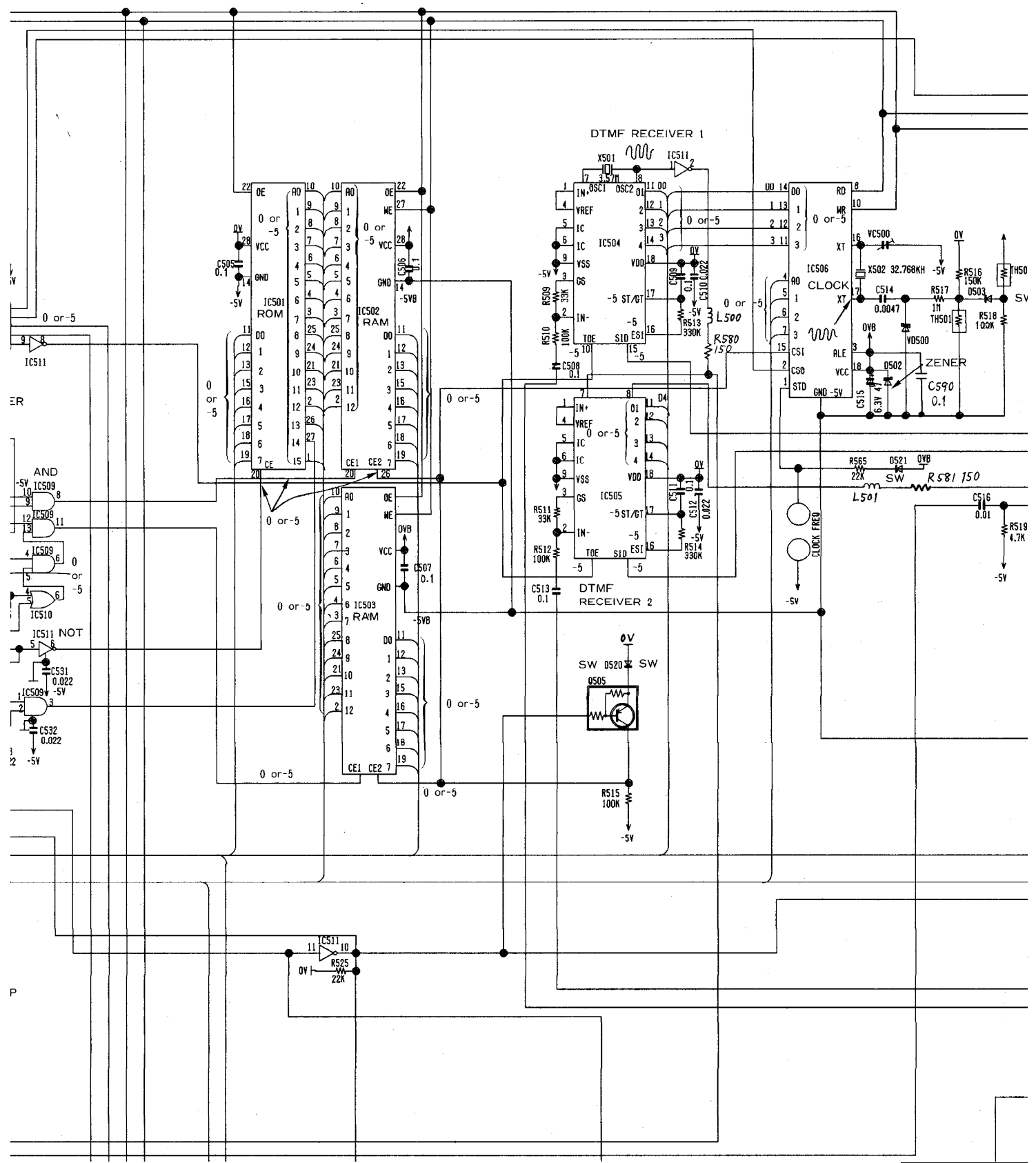


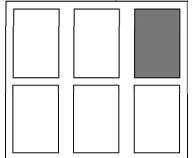
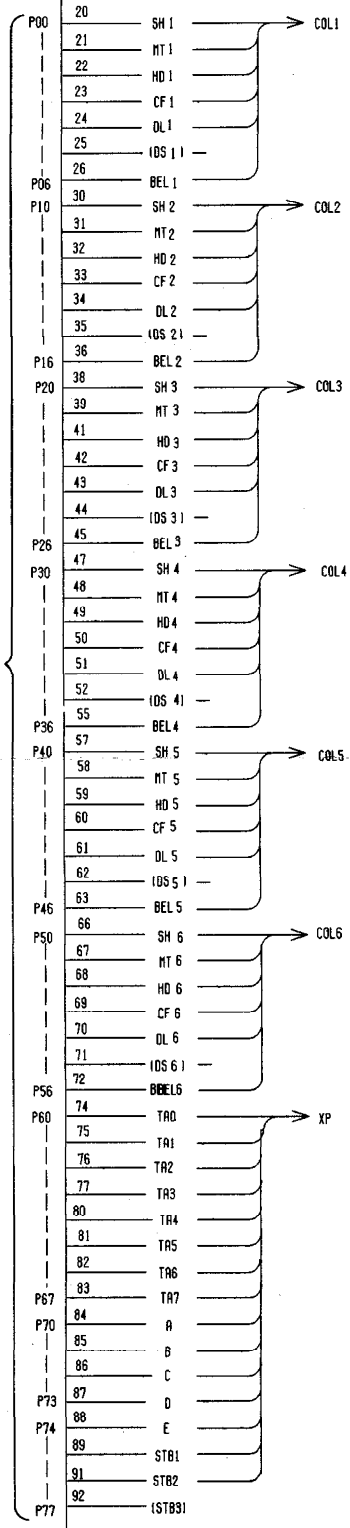
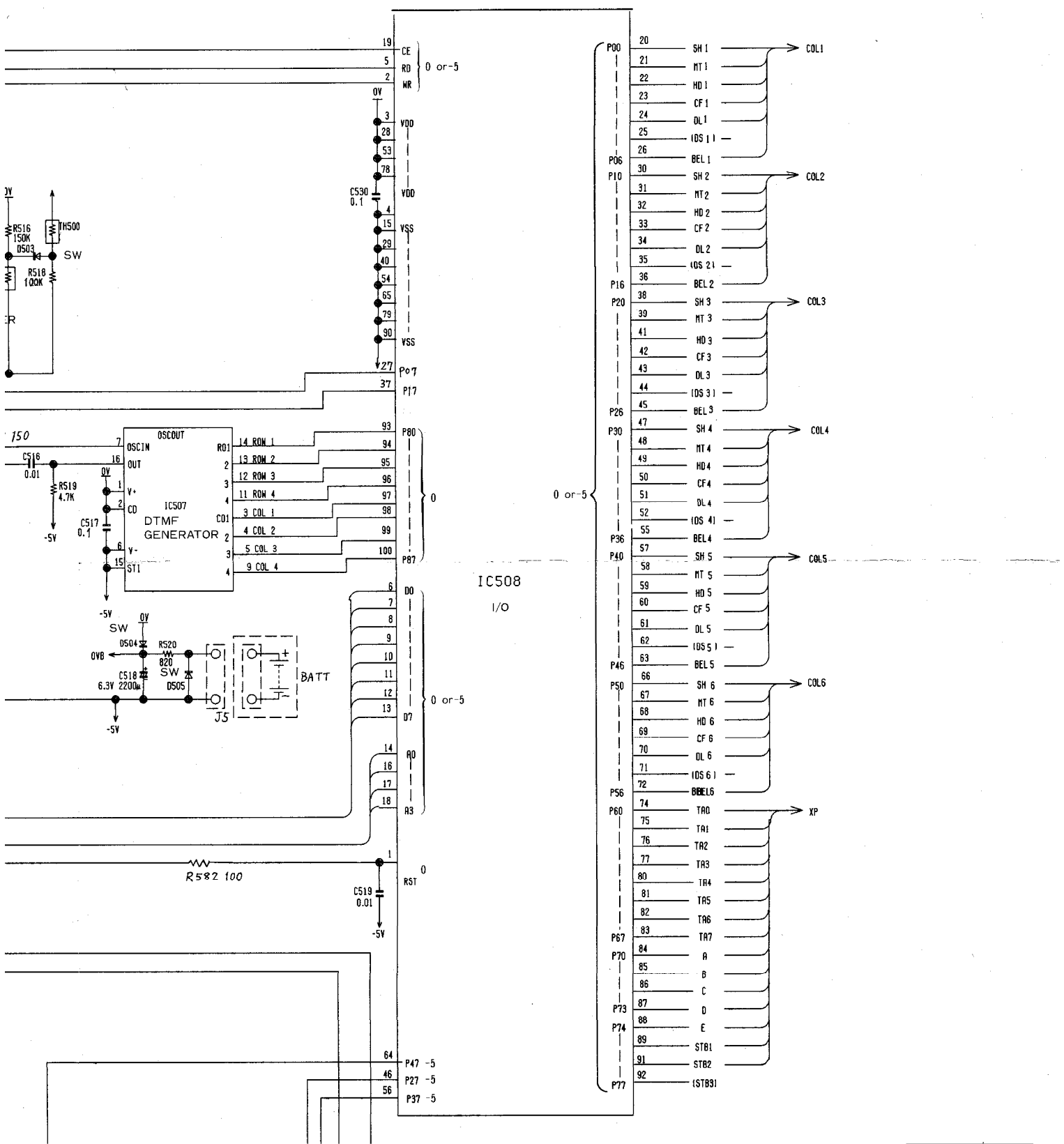
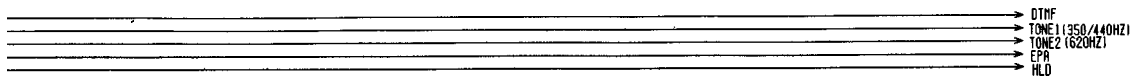


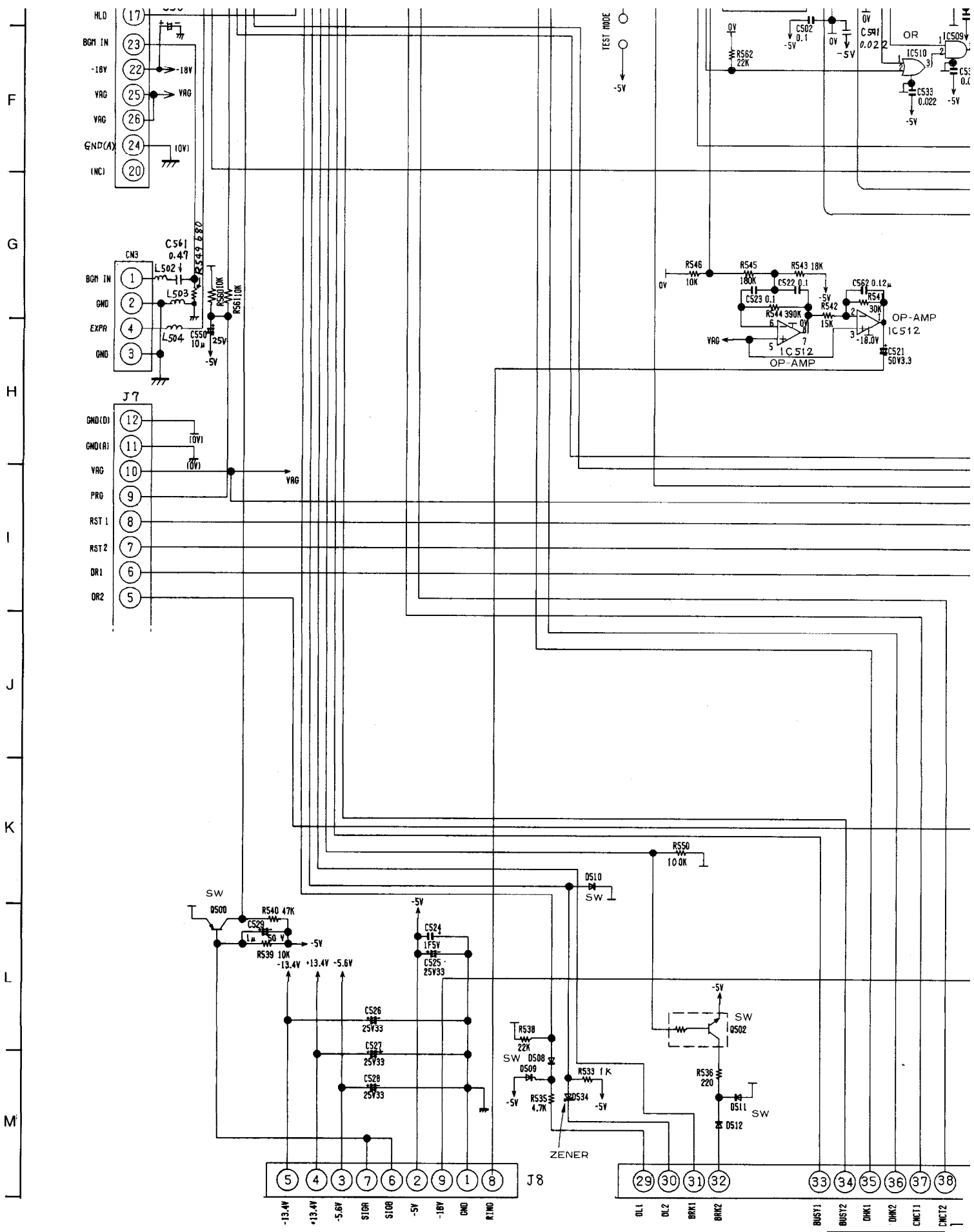


# SCHEMATIC DIAGRAM

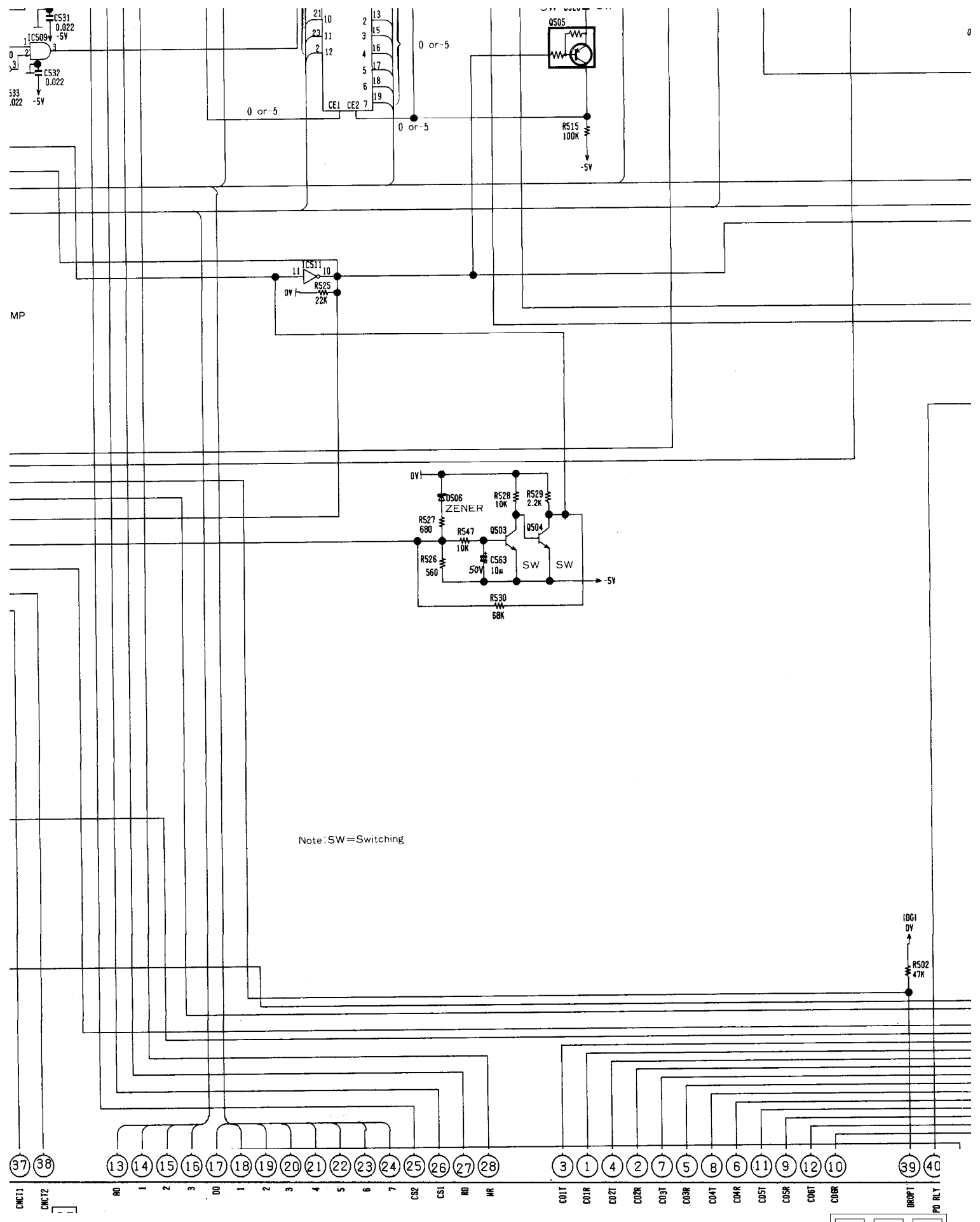
MAIN-B BOARD



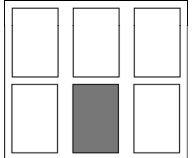


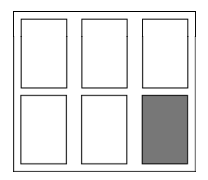
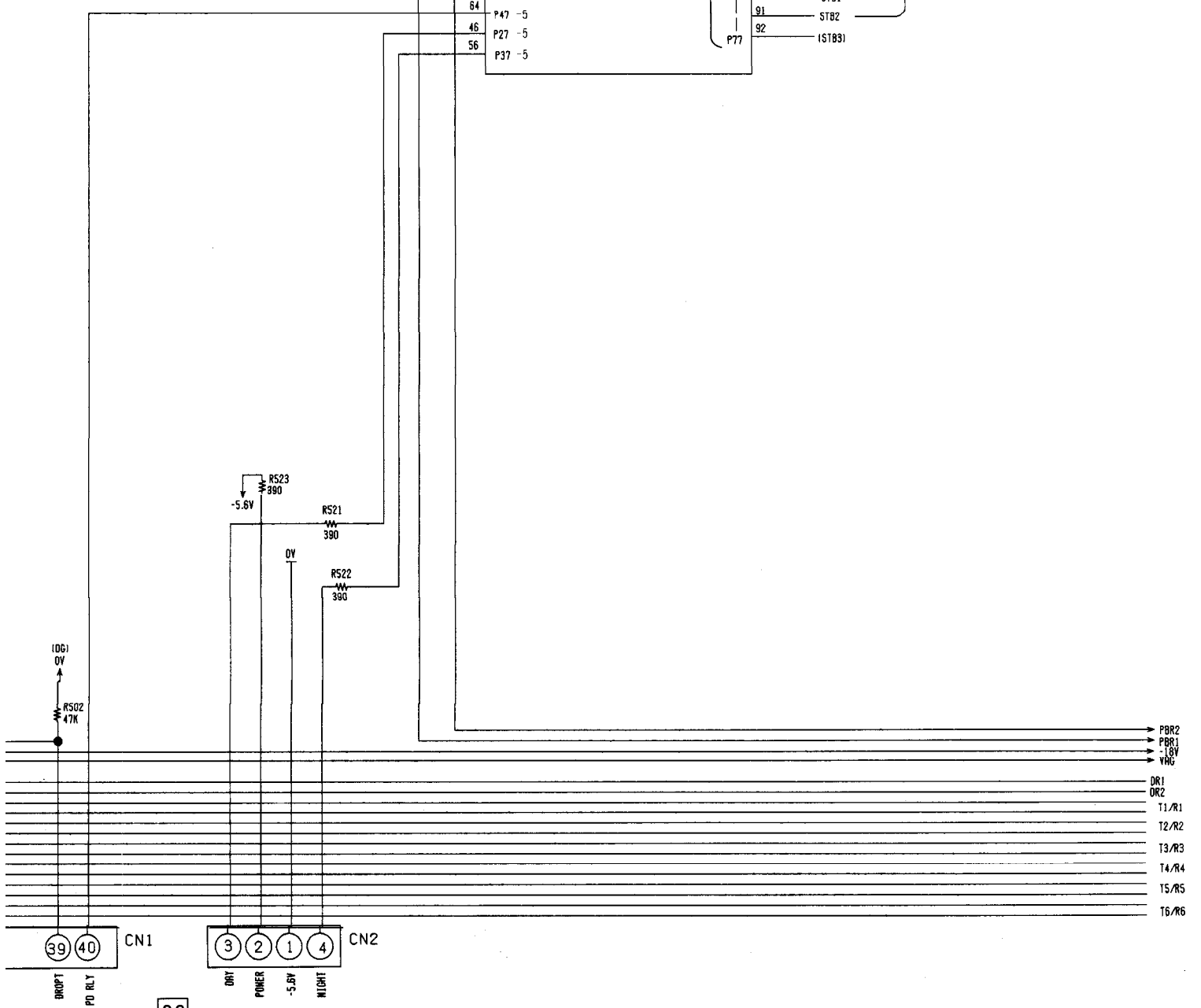
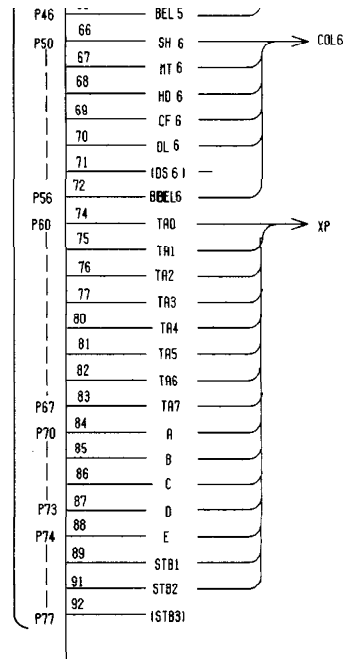
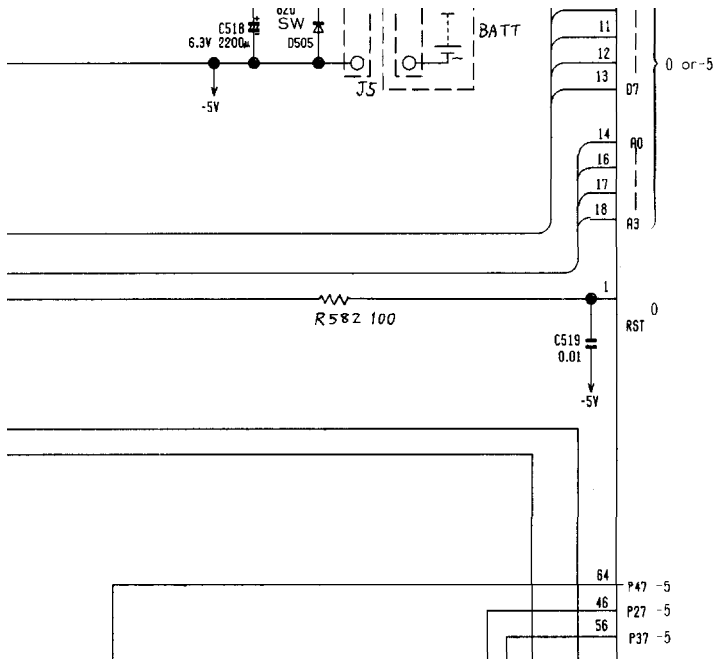


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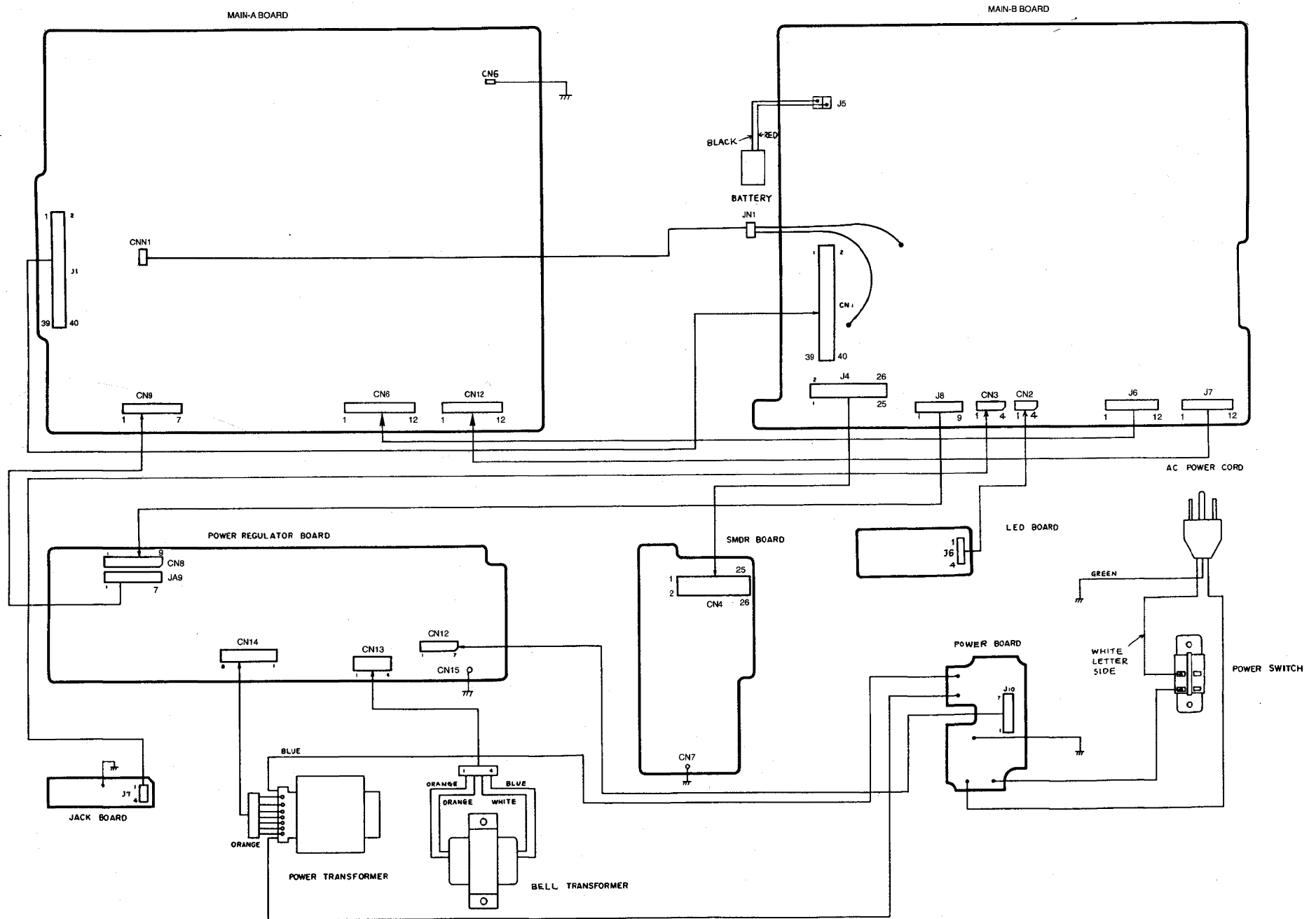


Note: SW=Switching



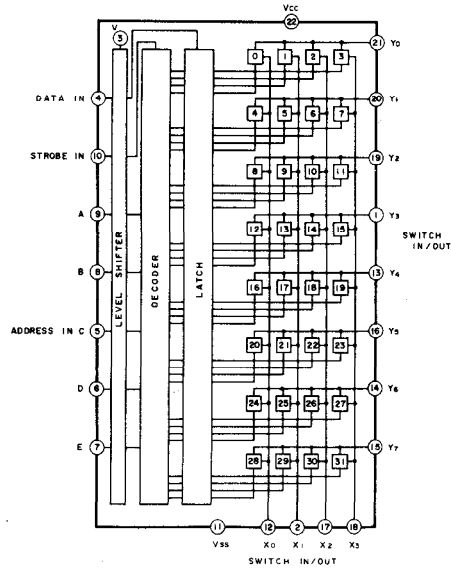


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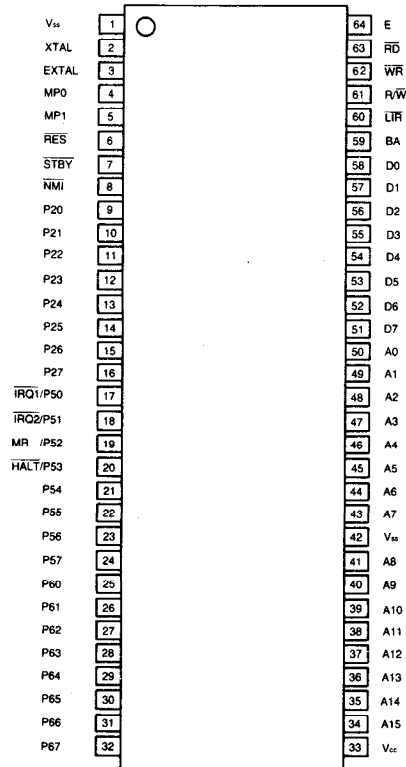


# IC BLOCK DIAGRAM

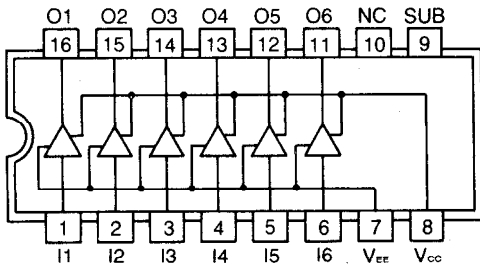
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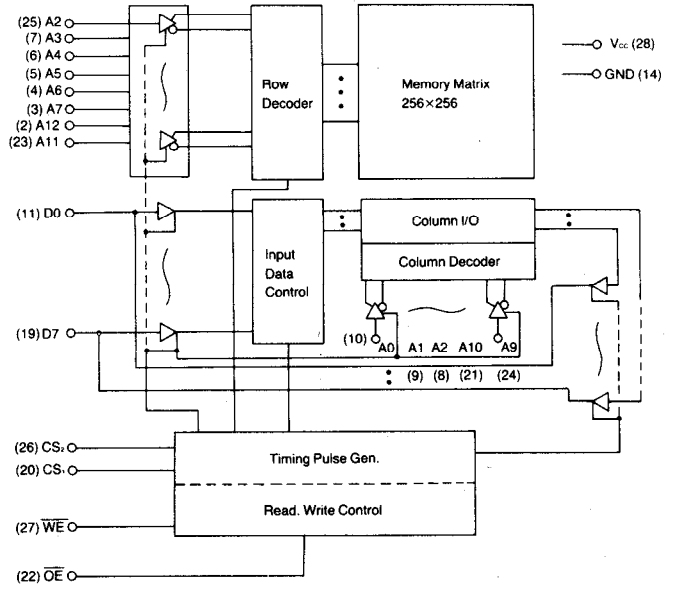
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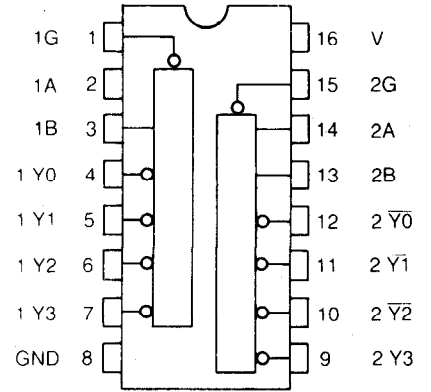
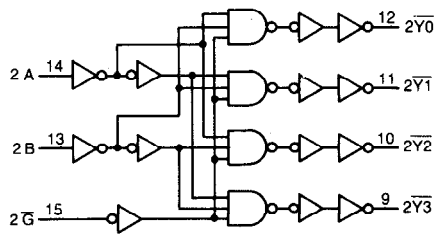
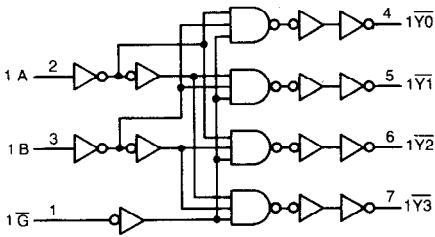
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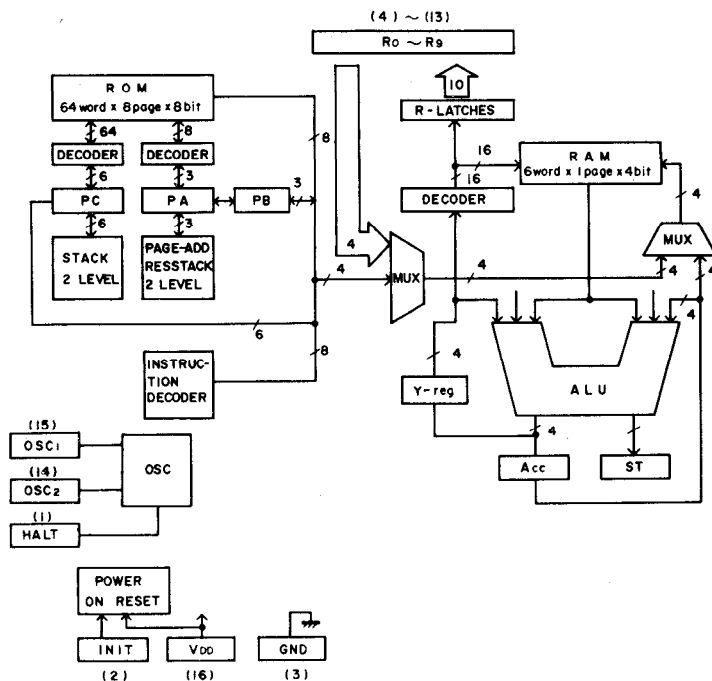
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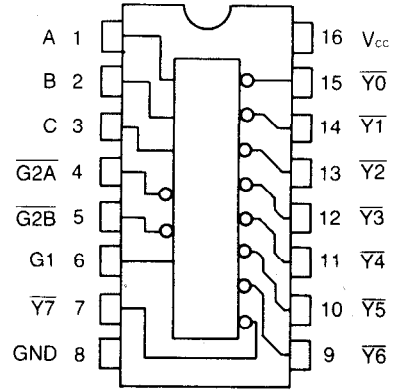
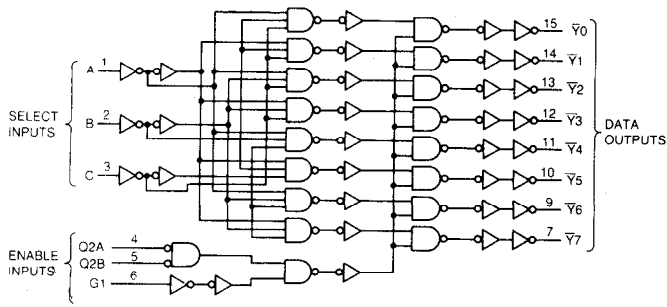
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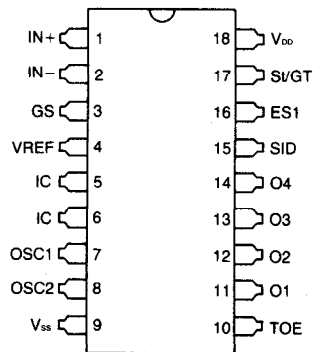
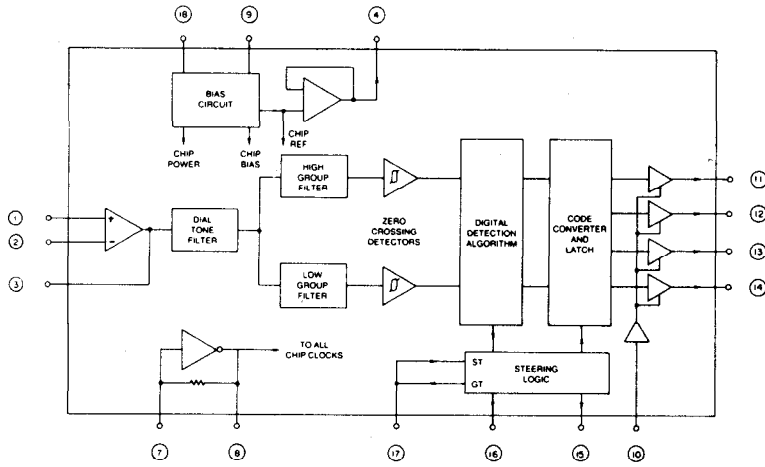
IC602 PQVIBU3140



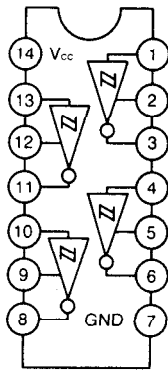
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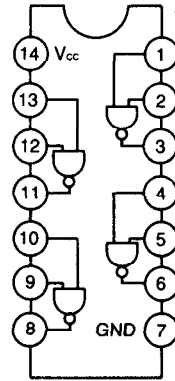
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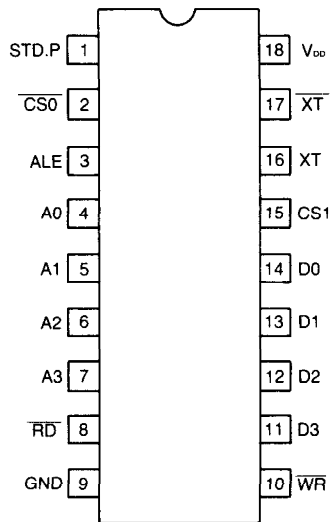
**IC600 PQVIHD75189P**



**IC601 PQVIHD75188P**

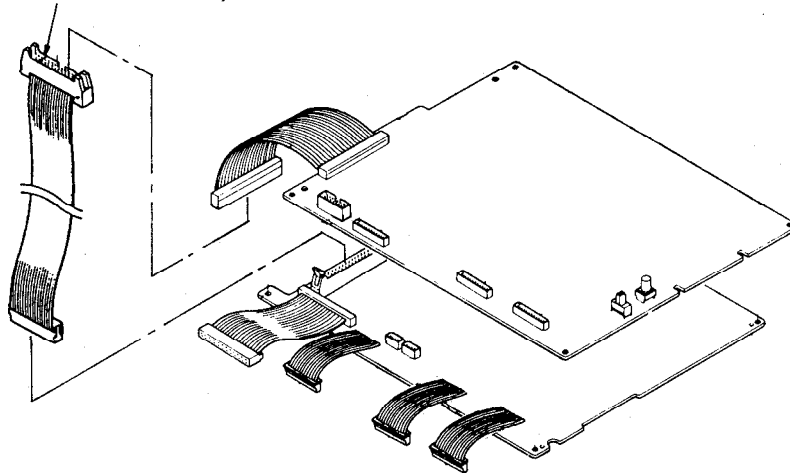


IC506 PQVIMS6242BS



## EXTENSION CORD CONNECTING METHOD

Extension Cord  
(Cord No. PQZZ40K1Z)



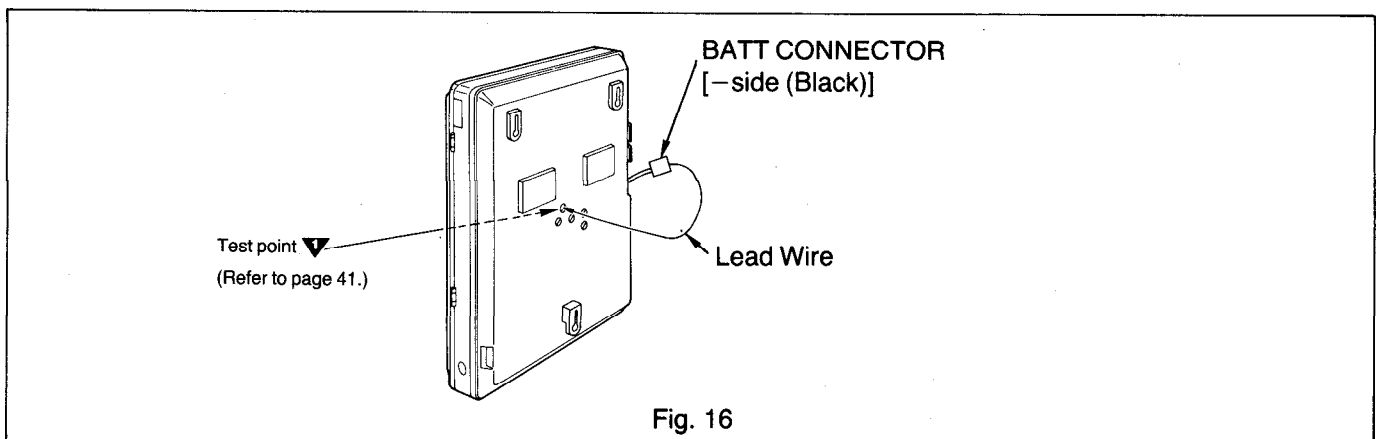
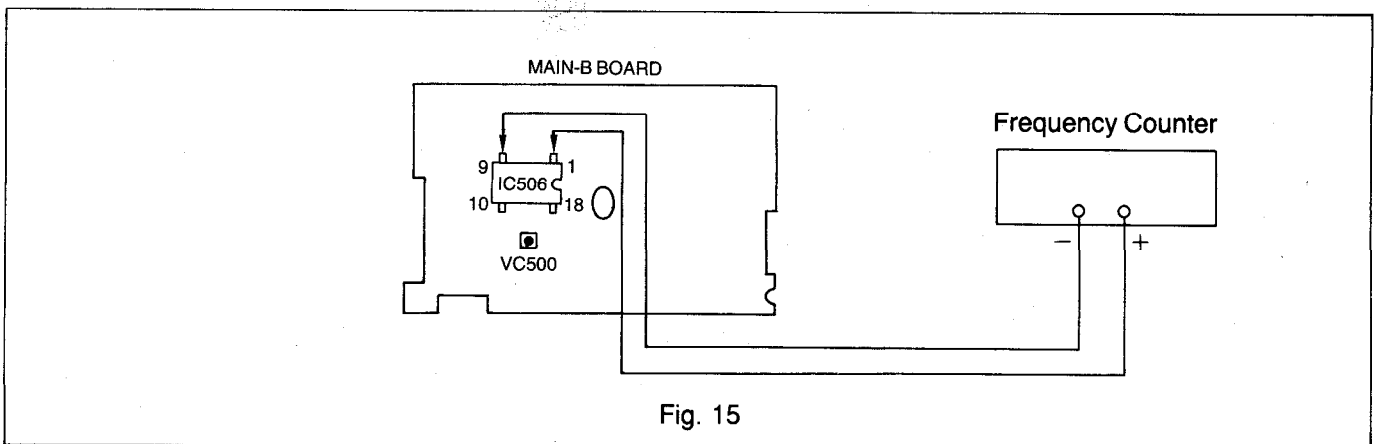
# ADJUSTMENTS

## ■ OSCILLATION PERIOD ADJUSTMENT

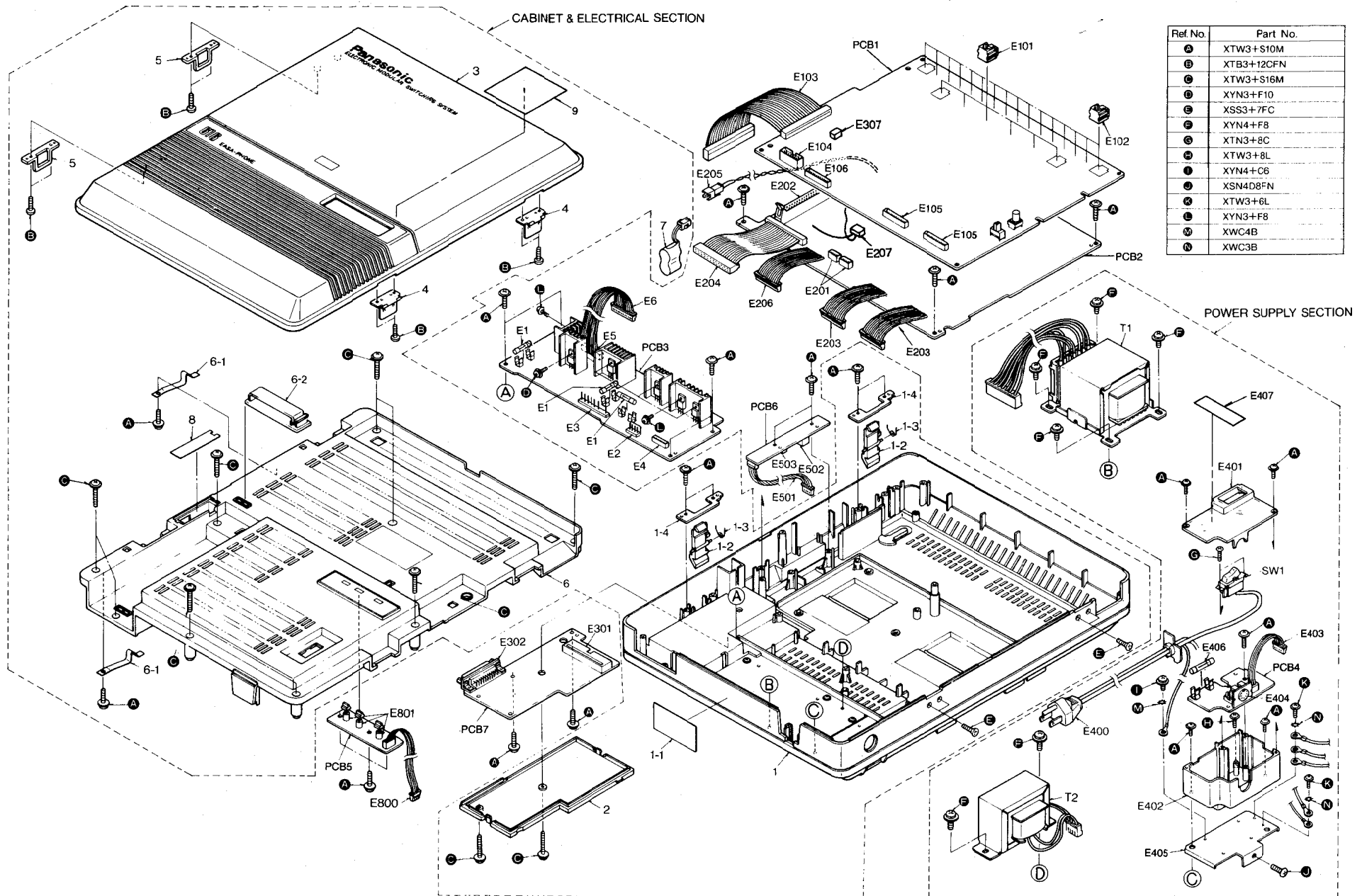
Perform the following adjustment after replacing IC506 and VC500.

1. Connect the AC cord to the AC power source.
2. Set the power switch to ON.
3. Connect the lead wire. (See Fig. 16)  
(After adjustment, remove the lead wire.)
4. Push the reset switch.
5. Connect the frequency counter. (See Fig. 15)
6. Set the frequency counter to PERIOD.
7. Adjust VC500 for a reading of ( ) msec on the frequency counter.

| Room temperature for adjusting (°C) | Period value (msec)         | Room temperature for adjusting (°C) | Period value (msec)         |
|-------------------------------------|-----------------------------|-------------------------------------|-----------------------------|
| 14~14.9                             | 15.624943 ( $\pm 0.00001$ ) | 20~20.9                             | 15.624880 ( $\pm 0.00001$ ) |
| 15~15.9                             | 15.624933 ( $\pm 0.00001$ ) | 21~21.9                             | 15.624876 ( $\pm 0.00001$ ) |
| 16~16.9                             | 15.624922 ( $\pm 0.00001$ ) | 22~27.9                             | 15.624870 ( $\pm 0.00001$ ) |
| 17~17.9                             | 15.624910 ( $\pm 0.00001$ ) | 28~28.9                             | 15.624876 ( $\pm 0.00001$ ) |
| 18~18.9                             | 15.624899 ( $\pm 0.00001$ ) | 29~29.9                             | 15.624880 ( $\pm 0.00001$ ) |
| 19~19.9                             | 15.624888 ( $\pm 0.00001$ ) |                                     |                             |



# EXPLODED VIEW



| Ref. No. | Part No.   |
|----------|------------|
| A        | XTW3+S10M  |
| B        | XTB3+12CFN |
| C        | XTW3+S16M  |
| D        | XYN3+F10   |
| E        | XSS3+7FC   |
| F        | XYN4+F8    |
| G        | XTN3+8C    |
| H        | XTW3+8L    |
| I        | XYN4+C6    |
| J        | XSN4D8FN   |
| K        | XTW3+6L    |
| L        | XYN3+F8    |
| M        | XWC4B      |
| N        | XWC3B      |

Fig. 17

# ACCESSORIES & PACKING MATERIALS

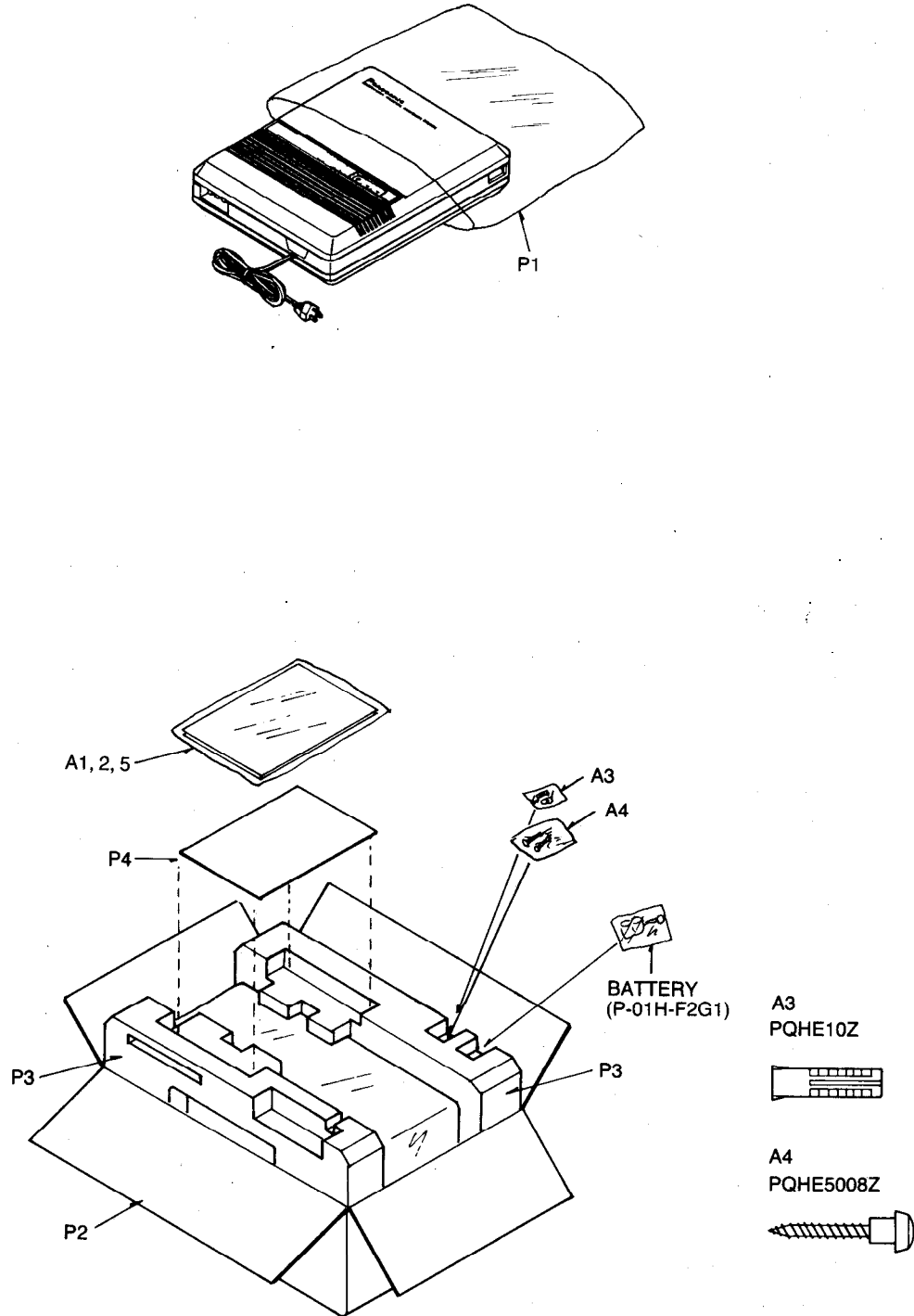


Fig. 18

**REPLACEMENT PARTS LIST**

Notes: Model KX-T61610-1

1. Printed circuit board assembly with mark (NLA) is no longer available after production discontinuation of the complete set.
2. Important safety notice.  
Components identified by the **A** mark special characteristics important for safety.  
When replacing any of these components, use only manufacturer's specified parts.
3. The S mark indicates service standard parts and may differ from production parts.
4. RESISTORS & CAPACITORS  
Unless otherwise specified.  
All resistors are in ohms (Ω) k=1000Ω, M=1000kΩ  
All capacitors are in MICRO FARADS (μF) P= 0.001μF  
\*Type & Wattage of Resistor

|            |                 |                |
|------------|-----------------|----------------|
| ERC:Solid  | ERX:Metal Film  | PQRD:Carbon    |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse      |
| PQ4R:Chip  | ERO:Metal Film  | ERF:Wire Wound |

Wattage

|               |               |               |      |      |      |
|---------------|---------------|---------------|------|------|------|
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W | 5:5W |
|---------------|---------------|---------------|------|------|------|

\*Type & Voltage of Capacitor

Type

|                     |                                      |
|---------------------|--------------------------------------|
| ECFD:Semi-Conductor | ECCD,ECKD,PQCBC,PQVP : Ceramic       |
| ECQS:Styrol         | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester |
| PQCBX,ECUV:Chip     | ECEA,ECsz,ECOS : Electrolytic        |
| ECMS:Mica           | ECQP : Polypropylene                 |

Voltage

| ECQ Type | ECQG<br>ECQV Type | ECsz Type | Others    |           |  |
|----------|-------------------|-----------|-----------|-----------|--|
| 1H: 50V  | 05: 50V           | 0F:3.15V  | 0J :6.3V  | 1V :35V   |  |
| 2A:100V  | 1:100V            | 1A:10V    | 1A :10V   | 50,1H:50V |  |
| 2E:250V  | 2:200V            | 1V:35V    | 1C :16V   | 1J :63V   |  |
| 2H:500V  |                   | 0J:6.3V   | 1E,25:25V | 2A :100V  |  |

| Ref. No.                                 | Part No.     | Part Name & Description          | Pcs |
|--|--------------|----------------------------------|-----|
| <b>CABINET &amp; ELECTRICAL PARTS</b>    |              |                                  |     |
| 1  | PQYMT61610M1 | Rear Cabinet Assembly            | 1   |
| 1-1                                      | PQGT384Z     | Name Plate                       | 1   |
| 1-2                                      | PQHR9120Z8   | Hook                             | 2   |
| 1-3                                      | PQUS91Z      | Spring, Hook                     | 2   |
| 1-4                                      | PQUL51Z      | Bracket, Hook                    | 2   |
| 2  | PQKE31Z8     | Cabinet Door                     | 1   |
| 3  | PQYF1T61610M | Front Cabinet Assembly           | 1   |
| 4  | PQBH2Z       | Hinge                            | 2   |
| 5  | PQHR9121Z8   | Hinge                            | 2   |
| 6  | PQYF2T61610M | Inside Cover Assembly            | 1   |
| 6-1                                      | PQUS102Z     | Leaf Spring                      | 2   |
| 6-2                                      | PQHR5044Z    | Cord Holder                      | 1   |
| 7  | P-01H-F2G1   | Battery                          | 1   |
| 8  | PQUV50Z      | Battery Cover                    | 1   |
| 9  | PQQT4134Z    | Label, Front Cabinet             | 1   |
| <b>ACCESSORIES AND PACKING MATERIALS</b> |              |                                  |     |
| A1                                       | PQQX5341Z    | Installation Manual              | 1   |
| A2                                       | PQQX5367Z    | User Guide                       | 1   |
| A3                                       | PQHE10Z      | Mounting Bracket (Curl Plug)     | 3   |
| A4                                       | PQHE5008Z    | Mounting Bracket (Screw)         | 3   |
| A5                                       | PQQX5402Z    | User Guide (for KX-T30830/30820) | 1   |
| P1                                       | XZB45X06A05  | Protection Cover                 | 1   |
| P2                                       | PQPK431Y     | Packing Case                     | 1   |
| P3                                       | PQPN9036Z    | Pad Complete (L,R Side)          | 1   |
| P4                                       | PQPN668Z     | Pad                              | 1   |

| Ref. No.   | Part No.     | Part Name & Description                      | Pcs  |
|--|--------------|--|------|
| <b>MAIN-A BOARD PARTS</b>                            |              |  |      |
| PCB1   | PQWP161610M1 | Main-A P.C. Board Assy (NLA)                 | 1    |
| IC300,301  | PQVI671152F  | (ICs)<br>IC                                  | 2    |
| Q300A-300P   | 2SB644       | (TRANSISTORS)<br>Transistor (Si)             | 16   |
| Q301A-301P   | 2SD639       | Transistor (Si)                              |      |
| Q302A-302P   | PQVTDTC114Y  | Transistor (Si)                              | S 16 |
| Q303A-303P   | DTA143A      | Transistor (Si)                              | S 16 |
| Q304A-304P   | 2SC2021      | Transistor (Si)                              | 24   |
| ,305I-305P   |              |  |      |
| Q305A-305H   | 2SA937       | Transistor (Si)                              | 9    |
| ,307   |              |  |      |
| Q306   | 2SB1015      | Transistor (Si)                              | 1    |
| Q308   | 2SD1406      | Transistor (Si)                              | 1    |
| Q309   | DTC124XA     | Transistor (Si)                              | 1    |
| Q310,311,<br>,312                                    | DTA124EA     | Transistor (Si)                              | 3    |
| D300I-300P   | 1SS131       | (DIODES)<br>Diode (Si)                       | 162  |
| ,301A-301P   | 1SS131       | Diode (Si)                                   |      |
| ,302A-302P   |              |  |      |
| ,303A-303P   |              |  |      |
| ,304A-304P   |              |  |      |
| ,305A-305P   |              |  |      |
| ,309A-309P   |              |  |      |
| ,310A-310P   |              |  |      |
| ,311A-311P   |              |  |      |
| ,312A-312P   |              |  |      |
| ,313-322   |              |  |      |
| D306A-306P   | MA4047       | Diode (Si)                                   | 16   |
| ,307A-307P   |              |  |      |
| D308A-308P   | MA4030       | Diode (Si)                                   | 16   |
| SA30A-30F  | PQVDSAE310F1 | (VARISTORS)<br>Varistor (Surge Absorber)     | S 12 |
| ,31A-31F   |              |  |      |
| ZNR30A-30P   | ERZC03DK241  | Varistor                                     | 32   |
| ,31A-31P   |              |  |      |
| PC300A-<br>PC300P                                    | PQVITLP521   | (PHOTO ELECTRIC TRANSDUCER)<br>Photo Coupler | 16   |
| Z300,301<br>,303                                     | EXBP88222K   | (COMPONENTS COMBINATIONS)<br>Resistor Array  | S 3  |
| Z302   | PQRS8B8102J  | Resistor Array                               | 1    |
| Z304,305   | EXBP88473K   | Resistor Array                               | S 2  |
| L30A-30F,<br>,31A-31F                                | PQLQZK101K   | (COILS)<br>Choke Coil                        | 12   |
| L32A-32F,<br>,33A-33F                                | PQLQZM100K   | Choke Coil                                   | 12   |
| L300A-300P<br>,301A-301P<br>,302A-302P<br>,303A-303P | PQLQZM2R2M   | Choke Coil                                   | 64   |

| Ref. No.   | Part No.     | Part Name & Description                    | Pcs  |
|------------|--------------|--|------|
| T300A-300P | ETA14Y85AY   | (TRANSFORMERS)<br>Interface Transformer    | 16   |
| T301A-301P | ETE13K38AY   | Pulse Transformer                          | 16   |
| X300       | PQVCX4000N8Z | (CRYSTAL OSCILLATOR)<br>Crystal Oscillator | 1    |
| SW2        | PQSH1A12Z    | (SWITCHES)<br>Switch, Reset                | 1    |
| SW3        | PQSS2A20Z    | Switch, System Program                     | 1    |
| RLY10A-10F | PQSL49Z      | (RELAYS)<br>Relay                          | 6    |
| RLY30A-30P | PQSL41Z      | Relay                                      | 16   |
| C300A-300P | ECEA1HU3R3   | (CAPACITORS)<br>3.3                        | S 32 |
| ,301A-301P |              |  |      |
| C302A-302P | ECEA1HU2R2   | 2.2  | 16   |
| C303A-303P | ECKD1H472MD  | 0.0047                                     | 32   |
| ,304A-304P |              |  |      |
| C305A-305P | ECEA1HUR47   | 0.47                                       | 16   |
| C306A-306P | ECEA1HU010   | 1  | 32   |
| ,307A-307P |              |  |      |
| C309, 313  | ECCD1H221J   | 220P                                       | 2    |
| C310,311   | ECCD1H470KC  | 47P  | 2    |
| C314,315   | ECEA1EU101   | 100  | 2    |
| C317,322   | ECEA1VU101   | 100  | 2    |
| C318-321   | ECEA1VU330   | 33   | S 4  |
| C330A-330F | ECKDKC222KB  | 0.0022                                     | 6    |
| C340,341   | ECEA1VSS222  | 2200                                       | 2    |
| C360,363   | ECQV1H104JZ  | 0.1  | 2    |
| C361,362   | ECKD1H223MD  | 0.022                                      | 2    |
| C365A-365P | ECUV1H224ZF  | 0.22                                       | 16   |
| C370       | ECEA1CU102   | 1000                                       | 1    |
| R300A-300P | PQ4R10XJ220  | (RESISTORS)<br>22                          | 32   |
| ,301A-301P |              |  |      |
| R302A-302P | PQ4R10XJ682  | 6.8k                                       | 32   |
| ,303A-303P |              |  |      |
| R304A-304P | PQRD2TJ102   | 1k   | S 16 |
| R305A-305P | PQ4R10XJ470  | 47   | 16   |
| R306A-306P | PQ4R10XJ154  | 150k                                       | 16   |
| R307A-307P | PQ4R10XJ103  | 10k  | 16   |
| R308A-308P | PQ4R10XJ561  | 560  | 16   |
| R309-312   | ERD16TJ154   | 150k                                       | 4    |
| R313       | ERD16TJ105   | 1M   | 1    |
| R314,315   | ERD16TJ103   | 10k  | 2    |
| R316       | ERD16TJ104   | 100k                                       | 1    |
| R317       | ERD16TJ393   | 39k  | 1    |
| R318       | ERD16TJ821   | 820  | 1    |
| R319       | ERD16TJ181   | 180  | 1    |
| R320, 370, | ERD16TJ101   | 100  | 18   |
| ,321A-321P |              |  |      |
| R322A-322P | PQ4R10XJ3R3  | 3.3  | 16   |
| R323A-323P | PQ4R10XJ472  | 4.7k                                       | 16   |
| R324A-324P | PQ4R10XJ121  | 120  | 32   |
| ,325A-325P |              |  |      |
| R326A-326P | PQ4R10XJ222  | 2.2k                                       | 16   |
| R360A-360P | PQ4R10XJ820  | 82   | 16   |
| R375       | ERD16TJ220   | 22   | 1    |





| Ref. No.           | Part No.     | Part Name & Description          | Pcs  |
|--------------------|--------------|----------------------------------|------|
| E301               | PQJ1TA3Y     | (OTHERS)<br>Jack, CO (MJ1A-MJ1F) | 6    |
| E302               | PQJ1TB16Z    | Jack, EXT (MJ2A-MJ2P)            | 16   |
| E303               | PQJS40R30Z   | Connector Socket, 40P (J1)       | 1    |
| E304               | PQJP14D49Z   | Connector Plug, 14P (CN10)       | 1    |
| E305               | PQJP12D68Z   | Connector Plug, 12P (CN6,7)      | 2    |
| E306               | PQJP7D68Z    | Connector Plug, 7P (CN9)         | 1    |
| E307               | PQJP2D72Z    | Connector Plug, 2P (CNN1)        | 1    |
| MAIN-B BOARD PARTS |              |                                  |      |
| PCB2               | PQWP261610M1 | Main-B P.C.Board Ass'y (NLA)     | 1    |
| IC200A-<br>IC200F  | PQVINJM4558M | (ICs)<br>IC                      | 6    |
| IC201A-<br>IC201F  | PQVITC4066BF | IC                               | 6    |
| IC400-412          | PQVIM402101P | IC                               | 13   |
| IC413,414          | PQVITD62706P | IC                               | 2    |
| IC426,512          | PQVINJM4558D | IC                               | 2    |
| IC500              | PQVIH63B03XP | IC                               | 1    |
| IC501              | PQWIT61610M2 | IC                               | 1    |
| IC502,503          | PQVIHM6264LA | IC                               | 2    |
| IC504,505          | PQVIMT8870BC | IC                               | S 2  |
| IC506              | PQVIMS6242BS | IC                               | 1    |
| IC507              | PQVILR4089   | IC                               | 1    |
| IC508              | PQVI63HB110  | IC                               | 1    |
| IC509              | PQVITC7H08P  | IC                               | 1    |
| IC510              | PQVITC7H32P  | IC                               | 1    |
| IC511              | PQVITC7H04P  | IC                               | S 1  |
| IC513              | PQVITC7H138P | IC                               | S 1  |
| IC514              | PQVITC7H139P | IC                               | 1    |
| Q201A-201F         | DTA124XA     | (TRANSISTORS)<br>Transistor (Si) | 27   |
| ,202A-202F         |              |                                  |      |
| ,203A-203F         |              |                                  |      |
| ,204A-204F         |              |                                  |      |
| ,400,401,402       |              |                                  |      |
| Q205A-205F         | 2SA1626      | Transistor (Si)                  | △ 6  |
| Q206A-206F         | 2SC2590      | Transistor (Si)                  | △ 6  |
| Q210A-210F         | DTA144A      | Transistor (Si)                  | S 7  |
| ,505               |              |                                  |      |
| Q500               | 2SA937       | Transistor (Si)                  | 1    |
| Q502               | PQVTDTC114Y  | Transistor (Si)                  | S 1  |
| Q503,504           | 2SC2021      | Transistor (Si)                  | 2    |
| D200A-200F         | 1SS131       | (DIODES)<br>Diode (Si)           | △ 24 |
| ,201A-201F         |              |                                  |      |
| ,500,501           |              |                                  |      |
| ,503,504           |              |                                  |      |
| ,505,508-          |              |                                  |      |
| ,512,520           |              |                                  |      |
| ,521               |              |                                  |      |
| D203A-203F         | PQVDHVS2B1   | Diode (Si)                       | △ 6  |
| D204A-204F         | MA4047       | Diode (Si)                       | 12   |
| ,205A-205F         |              |                                  |      |
| D210A-210F         | PQVDS1YB40F1 | Diode (Si)                       | △ 6  |
| D400               | MA4091       | Diode (Si)                       | 1    |
| D502               | MA4062       | Diode (Si)                       | 1    |
| D506               | MA4036       | Diode (Si)                       | 1    |
| D534               | PQVDMTZ15A   | Diode (Si)                       | 1    |
| VD500              | PQVD1SV124   | Diode (Si)                       | 1    |

| Ref. No.                                 | Part No.     | Part Name & Description                       | Pcs |
|--|--------------|---|-----|
| ZNR200A-ZNR200F                          | ERZC07DK820  | (VARISTORS)<br>Varistor                       | 6   |
| T200A-200F                               | ETA14Y85AY   | (TRANSFORMERS)<br>Interface Transformer       | 6   |
| Z500,501,502                             | EXBP88473K   | (COMPONENT COMBINATIONS)<br>Resistor Array    | 3   |
| TH500                                    | PQRRTS203U   | (THERMISTORS)<br>Thermistor                   | 1   |
| TH501                                    | PQRRTS104U   | Thermistor                                    | 1   |
| X500                                     | PQVCX7600N5Z | (CRYSTAL OSCILLATORS)<br>Crystal Oscillator   | 1   |
| X501                                     | PQVCX3579H5R | Crystal Oscillator                            | 1   |
| X502                                     | PQVCL3276N4Z | Crystal Oscillator                            | 1   |
| SA200A-SA200F                            | PQVDSAE310F1 | (VARISTORS)<br>Varistor (Surage Absorber)     | 6   |
| VC500                                    | PQCVTZB30B   | (VARIABLE CAPACITOR)<br>Trimmer               | 1   |
| L500-504                                 | PQLQZM1R5M   | (COILS)<br>Choke Coil                         | 5   |
| L520                                     | PQLQZM2R2M   | Choke Coil                                    | 1   |
| PC200A-PC200F                            | PQVIPC851K   | (PHOTO ELECTRIC TRANSDUCERS)<br>Photo Coupler | 6   |
| PC201A-PC201F                            | PQVITLP521   | Photo Coupler                                 | 6   |
| PC202A-PC202F                            | PQVIPC814K   | Photo Coupler                                 | 6   |
| C201A-201F                               | ECQE2E474MZ  | (CAPACITORS)<br>0.47                          | 6   |
| C202A-202F,563                           | ECEA1HU100   | 10  | 7   |
| C203A-203F                               | ECEA1HU220   | 22  | 6   |
| C205A-205F                               | ECEA1AU220   | 22  | 6   |
| C206A-206F                               | ECKD1H102KB  | 1000P   | 6   |
| C207A-207F                               | ECQV1H333JZ  | 0.033   | 6   |
| C208A-208F,209A-209F,211A-211F,215A-215F | ECQV1H563JZ  | 0.056   | 24  |
| C210A-210F,214A-214F                     | ECCD1H121KC  | 120P  | 12  |
| C212A-212F,213A-213F,400                 | ECQM1H183JZ  | 0.018   | 13  |
| C220A-220F,401                           | ECEA1EU101   | 100   | 7   |
| C230A-230F                               | ECUV1H121JC  | 120P  | 6   |
| C405-408                                 | ECQV1H273JZ  | 0.027   | 4   |
| C500,501                                 | ECCD1H150JC  | 15P   | 2   |

| Ref. No.   | Part No.     | Value               | Pcs |
|--|--------------|---------------------|-----|
| C502,505-509,511,513,517,522,523,530,590                                   | ECQV1H104JZ  | 0.1                 | 13  |
| C503,504,510,512,531,532,533,591   | ECKD1H223MD  | 0.022               | 8   |
| C514   | ECQM1H472JV  | 0.0047              | 1   |
| C515   | ECEA1AU470   | 47                  | 1   |
| C516,519   | ECKD1H103MD  | 0.01                | 2   |
| C518   | ECEA0JSS222  | 2200                | 1   |
| C521   | ECEA1HU3R3   | 3.3                 | 1   |
| C524   | EECW0HS105Z  | 1                   | 1   |
| C525-528,551   | ECEA1VU330   | 33                  | 5   |
| C529   | ECEA1HU010   | 1                   | 1   |
| C550   | ECEA1EU100   | 10                  | 1   |
| C561   | ECQV1H474JZ  | 0.47                | 1   |
| C562   | ECQV1H124JZ  | 0.12                | 1   |
| R200A-200F,510,512,515,518,550   | ERD16TJ104   | (RESISTORS)<br>100k | 11  |
| R201A-201F   | PQRD12VJ223  | 22k                 | 6   |
| R202A-202F,220A-220F,223A-223F,232A-232F,233A-233F,235A-235F,237A-237F,490 | ERD16TJ122   | 1.2k                | 43  |
| R203A-203F   | ERD16TJ5R6   | 5.6                 | 6   |
| R204A-204F,524,528,539,546,547,560,561                                     | ERD16TJ103   | 10k                 | 13  |
| R205A-205F   | ERD25TJ390   | 39                  | 6   |
| R206A-206F   | ERD10TLJ183  | 18k                 | 6   |
| R207A-207F,209A-209F,210A-210F,519,535                                     | ERD16TJ472   | 4.7k                | 20  |
| R208A-208F   | ERD16TJ392   | 3.9k                | 6   |
| R221A-221F   | ERD16TJ152   | 1.5k                | 6   |
| R222A-222F,234A-234F,236A-236F   | ERD16TJ471   | 470                 | 18  |
| R224A-224F   | ER016CKF1003 | 100k                | 24  |
| R225A-225F,230A-230F,231A-231F   | ER016CKF3003 | 300k                | 24  |
| R226A-226F,227A-227F,228A-228F,229A-229F                                   | ERD16TJ473   | 47k                 | 45  |
| R238A-238F,239A-239F,240A-240F,470-484,500-508,540,563,564                 |              |                     |     |

| Ref. No.   | Part No.     | Part Name & Description      | Pcs |
|--|--------------|------------------------------|-----|
| R241A-241F<br>.250A-250F<br>.255A-255F<br>.525,538<br>.562,565 | ERD16TJ223   | 22k                          | 22  |
| R242A-242F   | ERD16TJ823   | 82k                          | 6   |
| R260A-260F   | PQ4R18XJ821  | 820                          | 6   |
| R400-407   | ER016CKF1151 | 1.15k                        | 8   |
| R408-423   | ER016CKF49R9 | 49.9                         | 16  |
| R424-439   | ER016CKF1101 | 1.1k                         | 16  |
| R456-459   | ER016CKF6491 | 6.49k                        | 4   |
| R460,461   | ERD16TJ182   | 1.8k                         | 2   |
| R509,511   | ERD16TJ333   | 33k                          | 2   |
| R513,514   | ERD16TJ334   | 330k                         | 2   |
| R516   | ERD16TJ154   | 150k                         | 1   |
| R517   | ERD16TJ105   | 1M                           | 1   |
| R520   | ERD16TJ821   | 820                          | 1   |
| R521,522<br>.523   | ERD16TJ391   | 390                          | 3   |
| R526   | ERD16TJ561   | 560                          | 1   |
| R527,549   | ERD16TJ681   | 680                          | 2   |
| R529   | ERD16TJ222   | 2.2k                         | 1   |
| R530   | ERD16TJ683   | 68k                          | 1   |
| R533   | ERD16TJ102   | 1k                           | 1   |
| R536   | ERD16TJ221   | 220                          | 1   |
| R541   | ER016CKF3002 | 30k                          | 1   |
| R542   | ERD16TJ153   | 15k                          | 1   |
| R543   | ERD16TJ183   | 18k                          | 1   |
| R544   | ERD16TJ394   | 390k                         | 1   |
| R545   | ERD16TJ184   | 180k                         | 1   |
| R580,581   | ERD16TJ151   | 150                          | 2   |
| R582   | ERD16TJ101   | 100                          | 1   |
| (OTHERS)   |              |                              |     |
| E201   | PQJP4D14Z    | Connector Plug, 4P (CN2,3)   | 2   |
| E202   | PQJP40D53Z   | Connector Plug, 40P (CN1)    | 1   |
| E203   | PQJS12L31Z   | Connector Socket, 12P (J6,7) | 2   |
| E204   | PQJS26R30Z   | Connector Socket, 26P (J4)   | 1   |
| E205   | PQJS2L26Y    | Connector Socket, 2P (J5)    | 1   |
| E206   | PQJS9L31Z    | Connector Socket, 9P (J8)    | 1   |
| E207   | PQJS2L55Z    | Connector Socket, 2P (JN1)   | 1   |
| POWER REGULATOR BOARD PARTS                                    |              |                              |     |
| PCB3   | PQWP361610M1 | Power P.C.Board Ass'y (NLA)  | 1   |
| IC1  | PQVITA7924   | IC                           | 1   |
| IC2  | PQVIPC79M18F | IC                           | 1   |
| IC3  | PQVITA7812AP | IC                           | 1   |
| IC4  | AN7912T      | IC                           | 1   |
| (TRANSISTORS)  |              |                              |     |
| Q2   | 2SA937       | Transistor (Si)              | 1   |
| Q3   | 2SB834       | Transistor (Si)              | 1   |
| Q4   | 2SC2673      | Transistor (Si)              | 1   |
| Q5   | 2SA881       | Transistor (Si)              | 1   |
| Q6   | 2SB1015      | Transistor (Si)              | 1   |
| Q7   | 2SD1406      | Transistor (Si)              | 1   |
| (DIODES)   |              |                              |     |
| D1,3   | PQVD2B4B41   | Diode (Si)                   | 2   |
| D2   | PQVD3B4B41   | Diode (Si)                   | 1   |
| D10,12,13<br>.21,22  | 1SR35-200    | Diode (Si)                   | 5   |
| D14  | MA4110       | Diode (Si)                   | 1   |

| Ref. No.                | Part No.     | Part Name & Description  | Pcs |
|-------------------------|--------------|--|-----|
| D15-18<br>.23-29        | 1SS131       | Diode (Si)   | 11  |
| D19                     | MA1056       | Diode (Si)   | 1   |
| D20                     | PQVDEK03     | Diode (Si)   | 1   |
| (COMPONENT COMBINATION) |              |  |     |
| CA1                     | PQXF6WB07    | Capacitor Array  | 1   |
| (CAPACITORS)            |              |  |     |
| C1                      | ECET50S103SW | 10000  | 1   |
| C2                      | ECET35S472SW | 4700   | 1   |
| C3                      | ECEA1EU331   | 330  | 1   |
| C4,6                    | ECET35S682SW | 6800   | 2   |
| C5,7                    | ECEA1EU331   | 330  | 2   |
| C8                      | ECET35S222SW | 2200   | 1   |
| C9                      | ECEA1AU221   | 220  | 1   |
| C10                     | ECKD1H103MD  | 0.01   | 1   |
| C11                     | ECEA1AHA101  | 100  | 1   |
| C12                     | ECKD1H102KB  | 0.001  | 1   |
| C13                     | ECEA1HU2R2   | 2.2  | 1   |
| (RESISTORS)             |              |  |     |
| R12                     | ERD16TJ682   | 6.8k   | 1   |
| R13                     | ERD16TJ331   | 330  | 1   |
| R14                     | ERDS1TJ101   | 100  | 1   |
| R15,16                  | ERD16TJ823   | 82k  | 2   |
| R17,18                  | ERD16TJ103   | 10k  | 2   |
| R19,20                  | ERDS1TJ151   | 150  | 2   |
| R21,22                  | PQRD1VJ1R0   | 1  | 2   |
| R23,24                  | ERDS1TJ181   | 180  | 2   |
| R30                     | ERD25TJ153   | 15k  | 1   |
| (OTHERS)                |              |  |     |
| E1                      | XBA1C20NU100 | Fuse (F1-F3)   | 3   |
| E2                      | PQJP4D16Z    | Connector Plug, 4P (CN13)  | 1   |
| E3                      | PQJP7D19Z    | Connector Plug, 7P (CN14)  | 1   |
| E4                      | PQJP7G3Z     | Connector Plug, 7P (CN12)  | 1   |
| E5                      | PQJP9D68Z    | Connector Plug, 9P (CN8)   | 1   |
| E6                      | PQJS7L33Z    | Connector Socket, 7P (JA9)   | 1   |
| POWER SUPPLY PARTS      |              |  |     |
| PCB4                    | PQWP461610M1 | Power P.C.Board Ass'y (NLA)<br>(with/C401-404,ZNR401, L401,<br>E403, E404, E406) | 1   |
| (CAPACITORS)            |              |  |     |
| C401,404                | ECQU1A473MH  | 0.047  | 2   |
| C402,403                | ECKDKC222KB  | 0.0022   | 2   |
| (VARISTOR)              |              |  |     |
| ZNR401                  | ERZC14DK431U | Varistor   | 1   |
| (COIL)                  |              |  |     |
| L401                    | PQLE61       | Coil   | 1   |
| (SWITCH)                |              |  |     |
| SW1                     | EST15704V    | Switch, Power  | 1   |
| (TRANSFORMERS)          |              |  |     |
| T1                      | PQLT5M9M1A   | Power Transformer  | 1   |
| T2                      | PQLT1M9M1A   | Bell Transformer   | 1   |

| Ref. No.          | Part No.     | Part Name & Description  | Pcs |
|-------------------|--------------|--|-----|
| (OTHERS)          |              |  |     |
| E400              | PQWAT616M    | AC Power Cord Assembly          | 1   |
| E401              | PQUV36Y      | Power Box Cover  | 1   |
| E402              | PQUV37Y      | Power Box  | 1   |
| E403              | PQJS7L6Z     | Connector Socket, 7P (J10)      | 1   |
| E404              | PQJP7C1Z     | Connector Plug, 7P (BATT JACK)  | 1   |
| E405              | PQMD4012Z    | Bracket, Power Box   | 1   |
| E406              | XBA2F15NU2   | Fuse (F400)                     | 1   |
| E407              | PQQT4181Z    | Label  | 1   |
| LED BOARD PARTS   |              |  |     |
| PCB5              | PQWP5T61610M | LED P.C.Board Ass'y (NLA)  | 1   |
| (DIODES)          |              |  |     |
| D800              | LN220RPH     | LED  | 1   |
| D801              | LN420YPH     | LED  | 1   |
| D802              | LN320GPH     | LED  | 1   |
| (OTHERS)          |              |  |     |
| E800              | PQJS4L32Z    | Connector Socket, 4P (J6)  | 1   |
| E801              | PQHR402Z     | Spacer, LED  | 3   |
| JACK BOARD PARTS  |              |  |     |
| PCB6              | PQWP661610M1 | Jack P.C.Board Ass'y (NLA)   | 1   |
| (COILS)           |              |  |     |
| L501,502          | PQLQZY333J   | Choke Coil   | 2   |
| L503,505          | PQLQZL2R2K   | Choke Coil   | 2   |
| L504              | PQLQZL1R0K   | Choke Coil   | 1   |
| (TRANSFORMERS)    |              |  |     |
| T501,502          | PQLT2D6A     | Transformer  | 1   |
| (CAPACITOR)       |              |  |     |
| C501              | ECFD1E473MD  | 0.047  | 1   |
| (OTHERS)          |              |  |     |
| E501              | PQJS4L17Y    | Connector Socket, 4P (J7)  | 1   |
| E502              | PQJJ1E1Y     | Jack, Paging   | 1   |
| E503              | SJKK8        | Jack, EXT. Music   | 1   |
| SMDR BOARD PARTS  |              |  |     |
| PCB7              | PQWP761610M1 | SMDR P.C.Board Ass'y (NLA)   | 1   |
| (ICs)             |              |  |     |
| IC600             | PQVIHD75189P | IC   | 1   |
| IC601             | PQVIHD75188P | IC   | 1   |
| IC602             | PQVIBU3140   | IC   | 1   |
| IC603,604<br>.605 | PQVINJM4558D | IC   | 3   |
| (TRANSISTORS)     |              |  |     |
| Q600              | DTA143XA     | Transistor (Si)  | 1   |
| Q601,602<br>.603  | DTC124EA     | Transistor (Si)  | 3   |
| Q604              | 2SC2878      | Transistor (Si)  | 1   |
| Q605              | 2SC2021      | Transistor (Si)  | 1   |

| Pcs                          | Ref. No.    | Part Name & Description   | Pcs |
|------------------------------|-------------|---------------------------|-----|
| (DIODES)                     |             |                           |     |
| D600,601                     | 1SS131      | Diode (Si)                | 2   |
| (COILS)                      |             |                           |     |
| L600,603                     | PQLQZM1R5M  | Choke Coil                | 2   |
| L601,602<br>.604             | PQLQZM2R2M  | Choke Coil                | 3   |
| (CAPACITORS)                 |             |                           |     |
| C600-605<br>.614             | ECKD1H102KB | 0.001                     | 6   |
| C603,606<br>.607             | ECKD1H223MD | 0.022                     | 3   |
| C608                         | ECQM1H332JV | 0.0033                    | 1   |
| C609,611<br>.626             | ECQV1H104JZ | 0.1                       | 3   |
| C610                         | ECQM1H682JV | 0.0068                    | 1   |
| C612                         | ECQV1H473JZ | 0.047                     | 1   |
| C613                         | ECQV1H683JZ | 0.068                     | 1   |
| C615                         | ECQM1H222JV | 0.0022                    | 1   |
| C616                         | ECQV1H124JZ | 0.12                      | 1   |
| C617,621                     | ECQM1H103JV | 0.01                      | 2   |
| C618                         | ECEA1HU330  | 33                        | 1   |
| C619,620                     | ECEA1HU4R7  | 4.7                       | 2   |
| C622,623                     | ECEA1HU010  | 1                         | 2   |
| C630                         | ECEA1HU100  | 10                        | 1   |
| C640                         | ECQV1H104JZ | 0.1                       | 1   |
| (RESISTORS)                  |             |                           |     |
| R600                         | ERD25TJ561  | 560                       | 1   |
| R601                         | ERD16TJ224  | 220k                      | 1   |
| R602,611                     | ERD16TJ273  | 27k                       | 2   |
| R603                         | ERD16TJ124  | 120k                      | 1   |
| R604                         | ERD16TJ393  | 39k                       | 1   |
| R605,606<br>.607,621<br>.623 | ERD16TJ103  | 10k                       | 5   |
| R608,609<br>.610             | ERD16TJ104  | 100K                      | 3   |
| R612,622                     | ERD16TJ223  | 22k                       | 2   |
| R613                         | ERD16TJ102  | 1k                        | 1   |
| R614                         | ERD16TJ563  | 56k                       | 1   |
| R615,616                     | ERD16TJ123  | 12k                       | 2   |
| R617                         | ERD16TJ222  | 2.2k                      | 1   |
| R618                         | ERD16TJ474  | 470k                      | 1   |
| R619,640                     | ERD16TJ472  | 4.7k                      | 2   |
| R620                         | ERD16TJ334  | 330k                      | 1   |
| R630,631<br>.632             | ERD16TJ822  | 8.2k                      | 3   |
| R633                         | ERD16TJ683  | 68k                       | 1   |
| (OTHERS)                     |             |                           |     |
| E301                         | PQJP26D69Z  | Connector Plug, 26P (CN4) | 1   |
| E302                         | PQJS25P3Z   | EIA Connector (CN16)      | 1   |