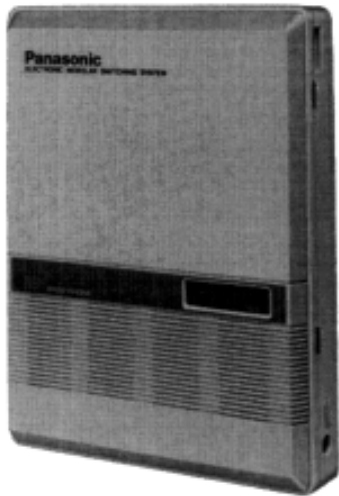


Service Manual

EASA-PHONE

ELECTRONIC MODULAR SWITCHING SYSTEM

KX-T30810-1



SPECIFICATIONS/ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ
NAME AND LOCATION/НАИМЕНОВАНИЕ И РАСПОЛОЖЕНИЕ
CONNECTION/ПОДСОЕДИНЕНИЕ
PROGRAMMING/ПРОГРАММИРОВАНИЕ
IC I/O DATA/ЦОКОЛЕВКА И ФУНКЦИОНАЛЬНОЕ НАЗНАЧЕНИЕ ВЫВОДОВ
МИКРОСХЕМ
ADJUSTMENTS/РЕГУЛИРОВКИ
BLOCK DIAGRAM/БЛОК-СХЕМА
SCHEMATIC DIAGRAMS/ПРИНЦИПИАЛЬНЫЕ СХЕМЫ
WIRING CONNECTION DIAGRAM/СХЕМА СОЕДИНЕНИЙ
IC BLOCK DIAGRAM/БЛОК-СХЕМА ИНТЕГРАЛЬНЫХ МИКРОСХЕМ
TERMINAL GUIDE OF IC's, TRANSISTORS AND DIODES/ЦОКОЛЕВКА
ИНТЕГРАЛЬНЫХ СХЕМ, ТРАНЗИСТОРОВ И ДИОДОВ
EXPLODED VIEW/СБОРОЧНЫЙ ЧЕРТЕЖ
ACCESSORIES AND PACKING MATERIALS/ПРИНАДЛЕЖНОСТИ И
УПАКОВОЧНЫЕ МАТЕРИАЛЫ
REPLACEMENT PARTS LIST/СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

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Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic

SPECIFICATIONS

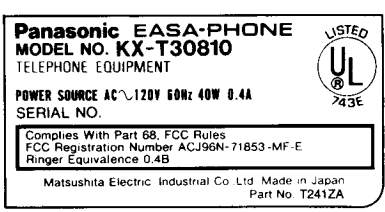

General Description

- | | |
|-----------------------|--|
| 1. Capacity | Outsides (CO) 3
Stations 8 |
| 2. Control Method | Stored Program CPU: 8 bits CPU, 4 bits CPU
Control ROM: 48 KB, Control RAM: 8 KB |
| 3. Switching | Space Division CMOS Crosspoint Switch |
| 4. Power Supplies | Primary AC 120 V 60 Hz
Secondary Station Supply Volt: +26 V,
Circuit Volt: +5 V, +12 V, +18 V, +26 V
Power Failure ●3 outsiders assigned to stations (1 through 3) ...power failure transfer
●System operation for 4 hours by optional Backup Adaptor. |
| 5. Dialing | Outward Dial Pulse 10PPS
Tone Dial
Internal Dial Pulse 10PPS, 20PPS
Tone Dial
Mode Conversion DP-DTMF, DTMF-DP |
| 6. Connector | Outsides (CO) Modular Jack (RJ-11)
Station Modular Jack
Paging Output Pin Jack (PCA JACK)
External Music Input two-conductors Jack (MINI JACK 9/64 inch diameter) |
| 7. EXT Connection | Cable 1 pair wire (Standard Telephone)
2 pair wire (KX-T30830/KX-T30820) |
| 8. Intercom Paths | 3 |
| 9. Dimensions | 334 (W)×437 (H)×107 (D) mm
(13 ⁶ / ₃₂ "×17 ⁷ / ₃₂ "×4 ⁷ / ₃₂ " |
| 10. Weight | 5 kg (11 lb 0.4 oz) |
| 11. Power Consumption | 40 W (Max.) |

Characteristics

- | | |
|---|---|
| 1. Station Loop Limit | KX-T30830/KX-T30820 40 ohms
Standard Telephone 600 ohms including set
Doorphone 20 ohms |
| 2. Minimum Leak Resistance | 15,000 ohms |
| 3. Maximum Number of Station Instruments per Line | 1 (KX-T30830 or KX-T30820) or 3 (Standard telephone) |
| 4. Ring Voltage | 90 Vrms at 20 Hz depends on Ringing Load |
| 5. Primary Power | 120 Vac, 60 Hz, 0.4 A maximum |
| 6. Central Office Loop Limit | 1600 ohms maximum |
| 7. Environmental Requirements | 0–40°C, 10%–90% |
| 8. Hookswitch Flash Timing Range | 204–1000 msec |

Design and specifications are subject to change without notice.

 <p>Panasonic EASA-PHONE MODEL NO. KX-T30810 TELEPHONE EQUIPMENT</p> <p>POWER SOURCE AC~120V 60Hz: 40W 0.4A SERIAL NO.</p> <p>Complies With Part 68, FCC Rules FCC Registration Number ACJ96N-71853-MF-E Ringer Equivalence 0.4B</p> <p>Matsushita Electric Industrial Co. Ltd. Made in Japan Part No. T241ZA</p> <p style="text-align: center;">(Model KX-T30810)</p>	 <p>Panasonic EASA-PHONE MODEL NO. KX-T30810 TELEPHONE EQUIPMENT</p> <p>POWER SOURCE AC~120V 60Hz: 40W 0.4A SERIAL NO.</p> <p>Complies With Part 68, FCC Rules FCC Registration Number ACJ96N-71853-MF-E Ringer Equivalence 0.4B</p> <p>Matsushita Electric Industrial Co. Ltd. Made in Japan Part No. T373ZA</p> <p style="text-align: center;">(Model KX-T30810-1)</p>	<ol style="list-style-type: none"> 1. There are 2 types of model KX-T30810, such as KX-T30810 and KX-T30810-1. 2. The model KX-T30810-1, have a mark ① on the name plate in figure left. 3. Please use this manual for model KX-T30810-1.
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NAME AND LOCATION

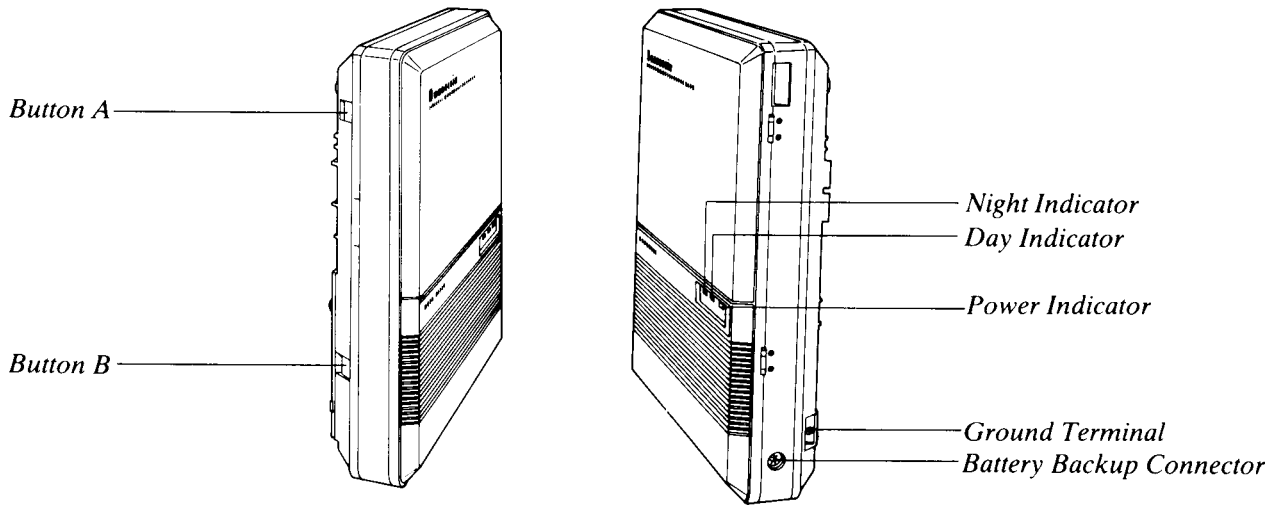


Fig. 3

Push Buttons A and B simultaneously to open Front Cover.

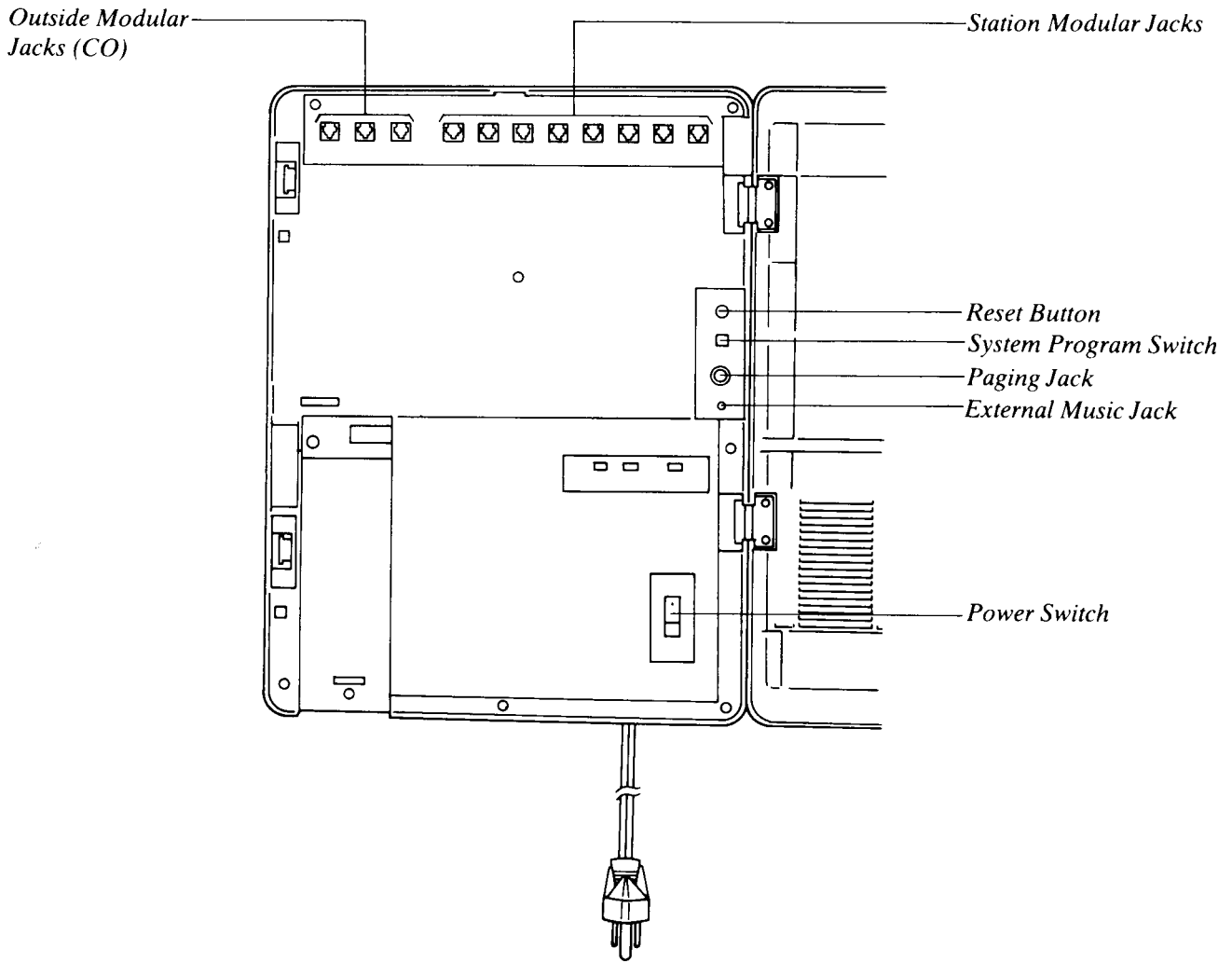


Fig. 4

CONNECTION

Cautions

1. Do not wire the telephone cable in parallel with the AC power source, computer, telex, etc. If the cables run near those wires, shield the cables with metal tube or use shield cables and ground the shields.
2. When cables run on the floor, use protectors or the like to protect the wires where they may be stepped on. Avoid wiring under carpets.
3. Avoid using the same AC 120 V power supply outlet for computers, telexes, and other office equipment. Otherwise, KX-T30810 system operation may be interrupted by the induction noise from such equipments.
4. Please use one pair telephone wire for extension connection of (telephone) equipments such as standard telephone, data terminal, answering machine, computer, etc., except proprietary telephone KX-T30830, KX-T30820, KX-T30850 etc.).

After all the connections are completed, turn the Power Switch ON.

If an extension does not operate properly (for example: The LCD of the KX-T30830 does not display properly.), disconnect the telephone from the extension line and then connect again, or turn OFF the power switch of the KX-T30810 and then ON again after 5 minutes.

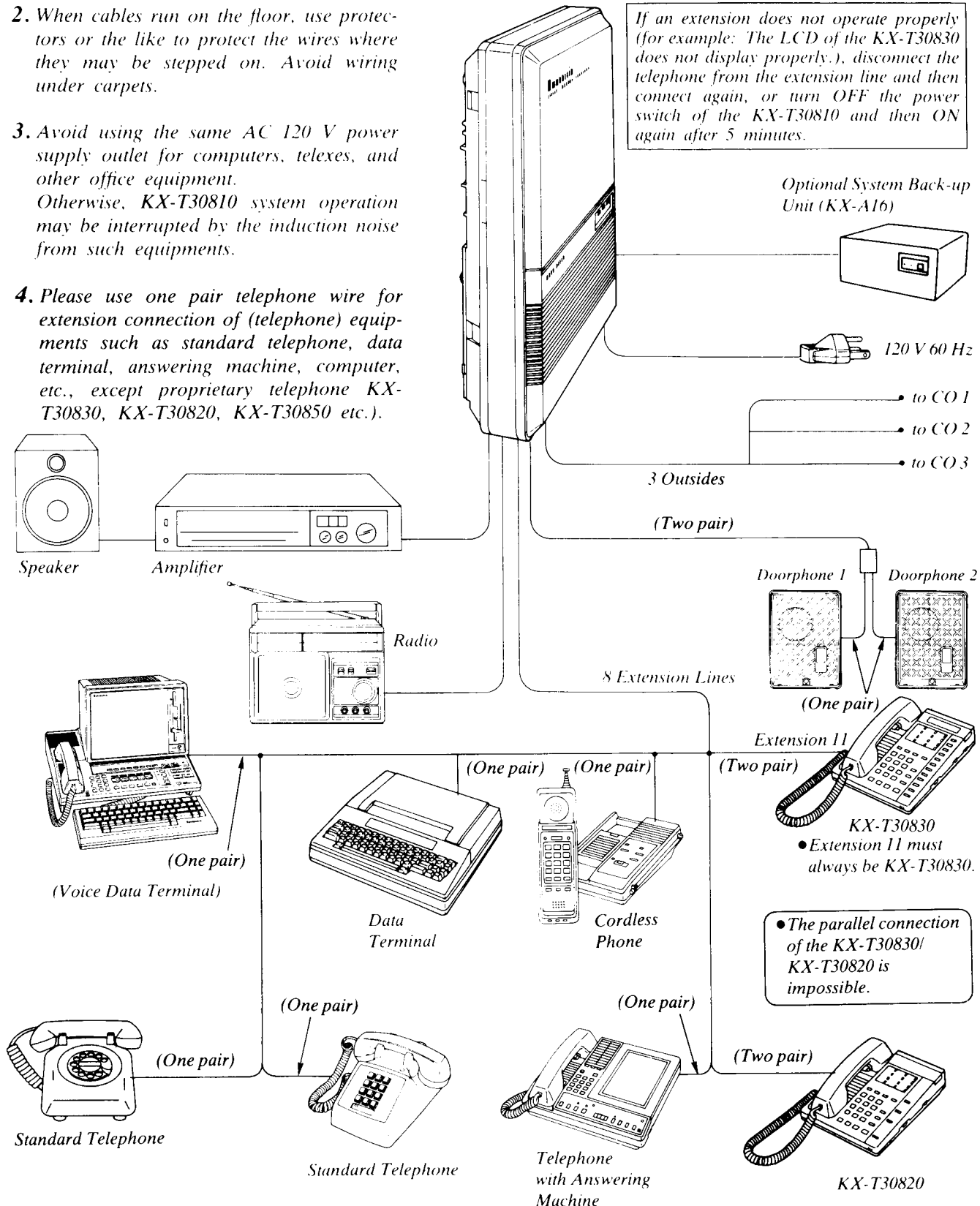


Fig. 5

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-T30830.**

2. System Program Switch setting:

The System Program Switch located on the KX-T30810 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 on buttons are inscribed on this card. Refer to page 7.

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

System Speed Calling

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 Line Assignment

Programmable Call Waiting

Duration Time Count Start Mode

Hookswitch Flash Timing

Disconnect Time

Calling Party Control (CPC) Signal

Intercom Alerting Mode

Programmable Doorphone

Dial Call Pickup Group Assignment

Busy Tone Selection

Hold Time Reminder

Hold Recall Time Set

Programmable External Paging Access Tone

DTMF Receiver

Programmable Toll Prefix

Programmable Secret Auto Dial

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

When the System Program Switch on the KX-T30810 is set to the PROGRAM position, the operation of the KX-T30830 will change as follows.

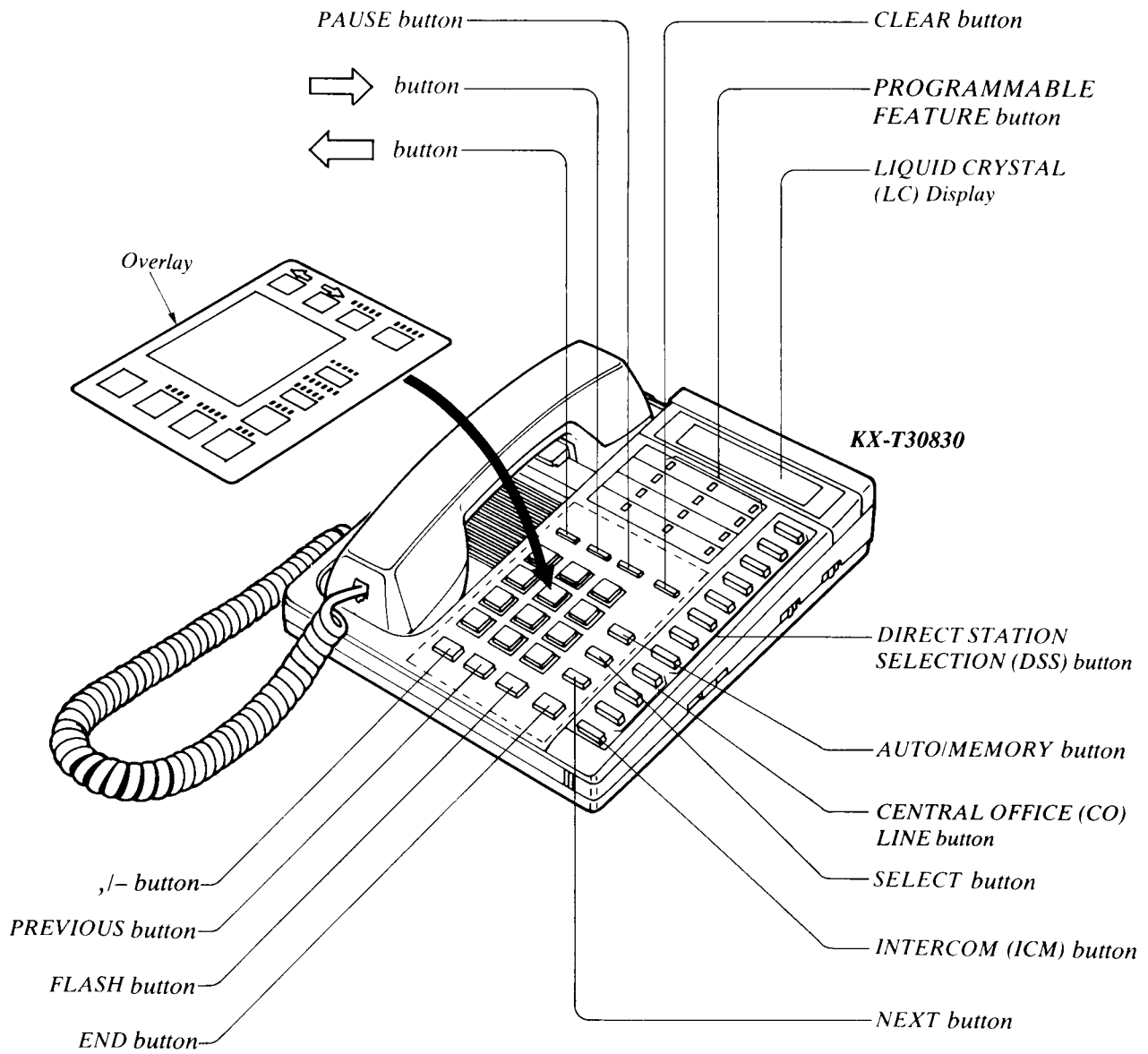


Fig. 6

- Notes:** 1. For details of installation, refer to the Installation Manual (Part No. PQQX5289Z).
2. For details of operation, refer to the User Guide (Part No. PQQX5291Z).

Example of Programming

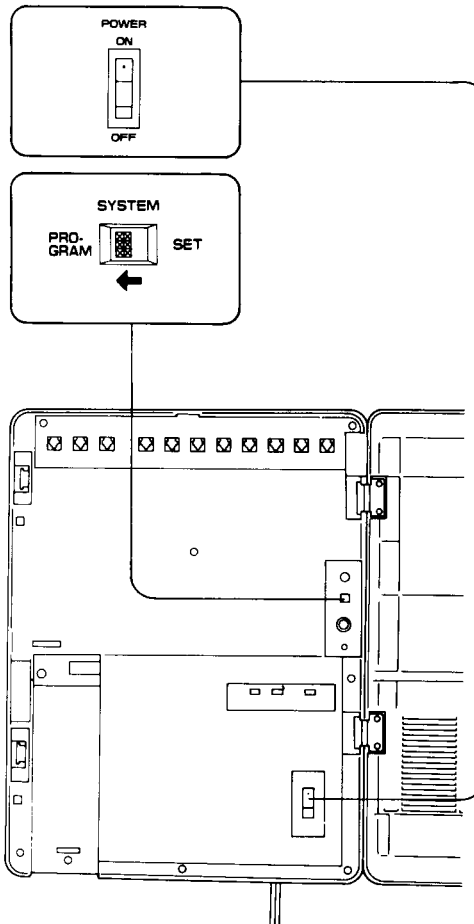
1. Turn the Power Switch to ON

2. Set the System Program Switch to PROGRAM

The LCD on the KX-T30830 shows "ENTER PGM CODE".

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

3. To program automatic line access number 9 and the phone number 987-654-3210 into memory location (speed dial access) number 00.



KX-T30830 at extension 11 (Extension 11 must always be KX-T30830.)		
1.	Dial (01) or press the AUTO button.	Display SPEED CALLING
2.	Press the NEXT button.	ENTER SPEED CODE
3.	Dial (00) or press the NEXT button.	<ul style="list-style-type: none"> • If nothing is stored in access code "00", 00: NOT STORED • If already stored the automatic line access number 9 and the phone number 123-456-7890, 00: -123-456-7890
4.	<ol style="list-style-type: none"> ① Dial "9". ② Press "-" button. ③ Dial "987". ④ Press "-" button. ⑤ Dial "654". ⑥ Press "-" button. ⑦ Dial "3210". 	00: -987-654-3210
5.	Press the MEMORY button.	00: -987-654-3210
6.	<ul style="list-style-type: none"> • To program a next access code, press the NEXT button. • To program a desired access code, press the SELECT button and then dial the number. 	
7.	Repeat step 4 to 6.	
8.	To return to the initial program mode, press the END button.	ENTER PGM CODE

While programming if a mistake is made,

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

- You will hear the beeps after press the MEMORY button.
- The MEMORY indicator light goes on when the MEMORY button is pressed, and then Indicator light goes 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.

PROGRAMMING TABLE

TO SET	PROGRAM ADDRESS	STEPS REQUIRED TO CHANGE PROGRAM																																																		
Date and Time	[00]	[NEXT] [A] [↔] [SELECT] [↔] [B] [↔] [SELECT] [↔] [C] [↔] [D] [↔] [SELECT] [MEMORY] [END] year month day day of the week hour minute AM/PM																																																		
System Speed Calling Entry	[01] or [AUTO]	[NEXT] [AB] [CD] [phone number] [MEMORY] [9]: automatic line access number [81] through [83]: outside line access number speed access code •To advance to the next code. [SELECT] [AB] [CD] [phone number] [MEMORY] •To exit the speed calling entry, press [END].																																																		
CO Connection Assignment	[02]	[NEXT] [NEXT] [SELECT] [MEMORY] [END] CONNECT/NO CONNECT until the desired CO number appears <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td>all CO's</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>Connect</td> <td style="text-align: center;">x</td> <td></td> <td></td> <td></td> </tr> <tr> <td>No connect</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Default	To make program change			CO(s)	all CO's	1	2	3	Connect	x				No connect																																		
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Switching Mode (Day/Night Service)	[04]	[NEXT] [SELECT] [MEMORY] [END] MAN/AUTO <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>Manual</td> <td style="text-align: center;">x</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Automatic</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Default	To make program change			Manual	x				Automatic																																							
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Starting Time (Day/Night Service)	[05]	[NEXT] [A] [↔] [B] [↔] [SELECT] [MEMORY] [NEXT] [C] [↔] [D] [↔] [SELECT] [MEMORY] [END] minute AM/PM minute AM/PM starting time for day service (hour) starting time for night service (hour) <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>Day plan</td> <td>9:00 AM</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Night plan</td> <td>5:00 PM</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Default	To make program change			Day plan	9:00 AM				Night plan	5:00 PM																																						
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Flexible Day Outward Dialing Assignment	[06]	[NEXT] [NEXT] [C...E] [MEMORY] [END] CO number until the desired extension number appears <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">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> </tr> <tr> <td>CO 1</td> <td style="text-align: center;">x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO 2</td> <td style="text-align: center;">x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO 3</td> <td style="text-align: center;">x</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	CO 1	x									CO 2	x									CO 3	x								
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Toll Restriction—Class Assignment	[10]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- CLASS 1/2/3/4 ----- until the desired extension number appears</p> <table border="1"> <thead> <tr> <th rowspan="2">Extensions</th> <th>Default</th> <th colspan="8">To make program change</th> </tr> <tr> <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> </tr> </thead> <tbody> <tr> <td>Class 1 (all calls)</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Class 2 (toll calls, local calls)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Class 3 (selected area-codes, local calls)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Class 4 (local calls)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Extensions	Default	To make program change								all extensions	11	12	13	14	15	16	17	18	Class 1 (all calls)	x									Class 2 (toll calls, local calls)										Class 3 (selected area-codes, local calls)										Class 4 (local calls)									
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Toll Restriction—Area Code Selection	[11]	<p>[NEXT] [NEXT] [C] [MEMORY] [END] ----- area code with 3 digits ----- until the desired memory location number appears</p> <table border="1"> <thead> <tr> <th rowspan="2">Area code entry</th> <th colspan="10">Memory location number</th> </tr> <tr> <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></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Area code entry	Memory location number										00	01	02	03	04	05	06	07	08	09																																						
Area code entry	Memory location number																																																												
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Programmable Operator Call	[12]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- ENABLE/DISABLE ----- until the desired extension number appears</p> <table border="1"> <thead> <tr> <th rowspan="2">Extensions</th> <th>Default</th> <th colspan="8">To make program change</th> </tr> <tr> <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> </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> </tr> <tr> <td>Disable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Extensions	Default	To make program change								all extensions	11	12	13	14	15	16	17	18	Enable	x									Disable																													
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Disable																																																													
Host PBX Access Codes Assignment	[13]	<p>[NEXT] [NEXT] [A...D] [MEMORY] [END] ----- up to four outside access codes each with a maximum of 2 digits ----- until the desired CO numbers appears</p> <table border="1"> <thead> <tr> <th>CO</th> <th colspan="8">Outside access codes of the host PBX</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	CO	Outside access codes of the host PBX								1										2										3																													
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Automatic Answering (Automatic/Manual) Selection	[14]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- AUTO ANSWER/MAN ANSWER ----- until the desired extension number appears</p> <table border="1"> <thead> <tr> <th rowspan="2">Extensions</th> <th>Default</th> <th colspan="8">To make program change</th> </tr> <tr> <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> </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> </tr> <tr> <td>Manual</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Extensions	Default	To make program change								all extensions	11	12	13	14	15	16	17	18	Automatic	x									Manual																													
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Preferred Line Assignment	[15]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- ••••• (none) / CO 1 / CO 2 / CO 3 --- until the desired extension number appears</p> <table border="1" data-bbox="544 254 1273 415"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">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> </tr> <tr> <td>••••• (none)</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>CO1</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>CO2</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>CO3</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	••••• (none)	x									CO1										CO2										CO3									
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Programmable Call Waiting	[16]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- ENABLE/DISABLE --- until the desired extension number appears</p> <table border="1" data-bbox="544 537 1273 644"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">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> </tr> <tr> <td>Disable</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Enable</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	Disable	x									Enable																													
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Duration Time Count Start Mode	[17]	<p>[NEXT] [SELECT] [MEMORY] [END] --- INSTANTLY/5S AFTER DIAL/10S AFTER DIAL</p> <table border="1" data-bbox="544 718 1273 825"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">To make program change</th> </tr> </thead> <tbody> <tr> <td>Instantly</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>5S after dial</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>10S after dial</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								Instantly										5S after dial	x									10S after dial																													
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Hookswitch Flash Timing	[18]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- 300 MS/600 MS/900 MS --- until the desired CO number appears</p> <table border="1" data-bbox="544 932 1273 1066"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td>all CO's</td> <td>1</td><td>2</td><td>3</td> </tr> <tr> <td>300 msec</td> <td></td> <td></td><td></td><td></td> </tr> <tr> <td>600 msec</td> <td>x</td> <td></td><td></td><td></td> </tr> <tr> <td>900 msec</td> <td></td> <td></td><td></td><td></td> </tr> </tbody> </table>		Default	To make program change			CO(s)	all CO's	1	2	3	300 msec					600 msec	x				900 msec																																							
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Disconnect Time	[19]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- 1.5 SEC/4.0 SEC --- until the desired CO number appears</p> <table border="1" data-bbox="544 1184 1273 1291"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td>all CO's</td> <td>1</td><td>2</td><td>3</td> </tr> <tr> <td>1.5 sec</td> <td>x</td> <td></td><td></td><td></td> </tr> <tr> <td>4.0 sec</td> <td></td> <td></td><td></td><td></td> </tr> </tbody> </table>		Default	To make program change			CO(s)	all CO's	1	2	3	1.5 sec	x				4.0 sec																																												
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Calling Party Control (CPC) Signal	[20]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- ENABLE/DISABLE --- until the desired CO number appears</p> <table border="1" data-bbox="544 1411 1273 1518"> <thead> <tr> <th></th> <th>Default</th> <th colspan="3">To make program change</th> </tr> </thead> <tbody> <tr> <td>CO(s)</td> <td>all CO's</td> <td>1</td><td>2</td><td>3</td> </tr> <tr> <td>Enable</td> <td>x</td> <td></td><td></td><td></td> </tr> <tr> <td>Disable</td> <td></td> <td></td><td></td><td></td> </tr> </tbody> </table>		Default	To make program change			CO(s)	all CO's	1	2	3	Enable	x				Disable																																												
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Intercom Alerting Mode	[21]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- TONE CALL/VOICE CALL --- until the desired extension number appears</p> <table border="1" data-bbox="544 1644 1273 1751"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">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> </tr> <tr> <td>Tone call</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Voice call</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	Tone call	x									Voice call																													
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Programmable Doorphone	[22]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] --- D-PHONE 1, 2/1/2/ ••• (deny the ringing) --- until the desired extension number appears</p> <table border="1" data-bbox="544 1856 1273 1990"> <thead> <tr> <th></th> <th>Default</th> <th colspan="8">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> </tr> <tr> <td>Doorphone 1</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Doorphone 2</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>deny the ringing</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	Doorphone 1	x									Doorphone 2	x									deny the ringing																			
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Dial Call Pickup Group Assignment	[23]	<p>[NEXT] [NEXT] [SELECT] [MEMORY] [END] ----- PICKUP-G:1/2/1, 2/1 • • • (out of the group) ----- until the desired extension number appears</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th colspan="10">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></td><td></td> </tr> <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> </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> </tr> <tr> <td>out of the group</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			Pickup Group 1	x											Pickup Group 2												out of the group											
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Busy Tone Selection	[24]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- TONE 1/2</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th colspan="10">To make program change</th> </tr> </thead> <tbody> <tr> <td>Tone 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> </tr> <tr> <td>Tone 2</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										Tone 1	x											Tone 2																																			
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Hold Time Reminder	[25]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- 1 MIN/2 MIN...../9 MIN</p> <table border="1"> <thead> <tr> <th></th> <th colspan="9">minutes</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td> </tr> <tr> <td>To make program change</td> <td></td><td></td><td></td><td>x</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		minutes									Default		1	2	3	4	5	6	7	8	9	To make program change				x																																		
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To make program change				x																																																										
Hold Recall Time Set	[26]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- 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																																															
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DTMF Receiver Check	[28]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- ENABLE/DISABLE ----- until the desired DTMF receiver appears</p> <table border="1"> <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																																															
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Programmable Toll Prefix	[29]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- WITH 1/ WITHOUT 1</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th colspan="10">To make program change</th> </tr> </thead> <tbody> <tr> <td>With 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> </tr> <tr> <td>Without 1</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										With 1	x											Without 1																																			
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Programmable secret Auto Dial	[30]	<p>[NEXT] [SELECT] [MEMORY] [END] ----- NO SECRET/ SECRET</p> <table border="1"> <thead> <tr> <th></th> <th>Default</th> <th colspan="10">To make program change</th> </tr> </thead> <tbody> <tr> <td>No secret</td> <td>x</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Secret</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										No secret	x											Secret																																			
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System Clear	[99]	[NEXT] [MEMORY] [END]																																																												

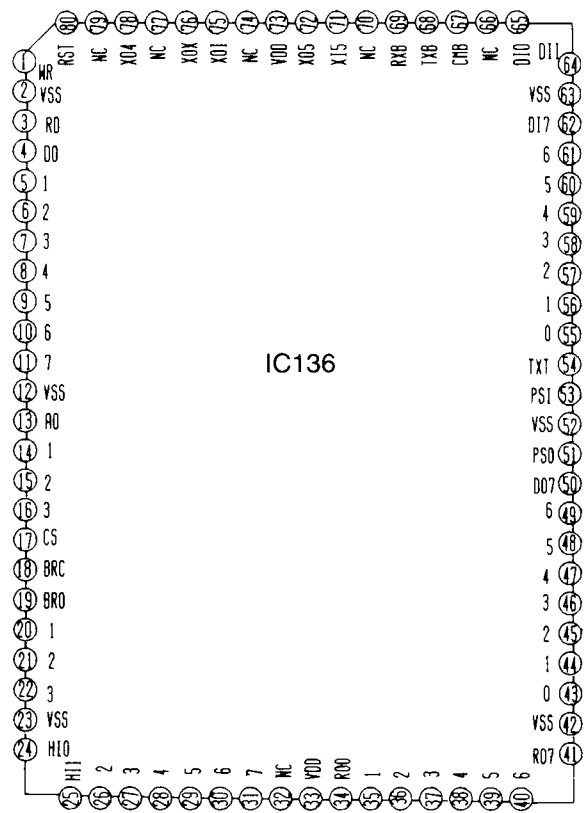
IC I/O DATA

IC100

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3	EXTAL	WR	62
4	MPO	R/W	61
5	MPI	LIR	60
6	RST	BA	59
7	STBY	D0	58
8	NMI	D1	57
9	P20	D2	56
10	P21	D3	55
11	P22	D4	54
12	P23	D5	53
13	P24	D6	52
14	P25	D7	51
15	P26	A0	50
16	P27	A1	49
17	P50	A2	48
18	P51	A3	47
19	P52	A4	46
20	P53	A5	45
21	P54	A6	44
22	P55	A7	43
23	P56	VSS	42
24	P57	A8	41
25	P60	A9	40
26	P61	A10	39
27	P62	A11	38
28	P63	A12	37
29	P64	A13	36
30	P65	A14	35
31	P66	A15	34
32	P67	Vcc	33

IC100

Port	Pin No.	I/O	Signal Name	High Imp.	High Level	Low Level	Remarks
NMI	8	I	CPU Restart	-----	-----	-----	
P20	9	I	CNCT1: Doorphone 1 Connect Detection	-----	Connect	Non-Connect	
P21	10	I	CNCT2: Doorphone 2 Connect Detection	-----	Connect	Non-Connect	
P22	11	I	DHK1: Doorphone 1 Connect Detection	-----	Off-Hook	On-Hook	
P23	12	I	DHK2: Doorphone 2 Connect Detection	-----	Off-Hook	On-Hook	
P26	15	I	DROP: Doorphone Adaptor Connect Detection	-----	Non-Connect	Connect	
P51	18	I	PFD: Power Failure Detection	-----	Power Failure	Normal	
P53	20	I	HALT: Halt Control Input	-----	Normal	Power Failure	
P54	21	I	TEST1	-----	Normal	Test Mode	
P55	22	I	TEST2	-----	Normal	Test Mode	
P56	23	I	STD1: DTMF Signal Detection 1	-----	Reception	Non-Reception	DTMF R1
P57	24	I	STD2: DTMF Signal Detection 2	-----	Reception	Non-Reception	DTMF R2
P63	28	O	20Hz: Ringing Signal Output	-----	-----	-----	
P64	29	O	PF: Power Failure Control	-----	Power Failure	Normal	
P65	30	O	20Hz: Ringing Signal Output	-----	-----	-----	
P66	31	O	BRK: EXT Over Current Protection	Break	On	Break	EXT11-18



IC136

IC136

Port	Pin No.	I/O	Signal Name	High Imp.	High Level	Low Level	Remarks
HI0	24	I	HK11: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI1	25	I	HK12: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI2	26	I	HK13: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI3	27	I	HK14: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI4	28	I	HK15: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI5	29	I	HK16: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI6	30	I	HK17: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
HI7	31	I	HK18: EXT Telephone Hook Detection	-----	On-Hook	Off-Hook	Pullup by 2.2kΩ
RO0	34	O	RG11: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO1	35	O	RG12: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO2	36	O	RG13: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO3	37	O	RG14: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO4	38	O	RG15: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO5	39	O	RG16: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO6	40	O	RG17: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
RO7	41	O	RG18: Extension Ring Relay Control	Bell Transmission		Non-Bell Transmission	
DO0	43	O	TXD11: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO1	44	O	TXD12: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO2	45	O	TXD13: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO3	46	O	TXD14: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO4	47	O	TXD15: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO5	48	O	TXD16: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO6	49	O	TXD17: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
DO7	50	O	TXD18: EMSS TEL. Data Transmission	Non-Transmission		Transmission	
D10	55	I	RXD11: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D11	56	I	RXD12: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D12	57	I	RXD13: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D13	58	I	RXD14: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D14	59	I	RXD15: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D15	60	I	RXD16: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D16	61	I	RXD17: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ
D17	62	I	RXD18: EMSS TEL Reception Data	-----	Non-Data	Data	Pullup by 2.2kΩ

IC113

33		P60	31
73		P61	32
2	VSS	P10	13
3	NC	P11	14
12	VSS	P12	15
22	NC	P13	16
23	VSS	P14	17
42	VSS	P15	18
43	NC	P16	19
52	VSS		
82	NC	P20	21
63	VSS	P21	24
		P22	25
56	P51	P23	26
57	P52		
58	P53	P00	4
59	P54	P01	5
60	P55	P02	6
61	P56	P03	7
64	P57	P04	8
		P05	9
47	P41	P06	10
48	P42		
49	P43	A0	77
50	P44	A1	78
51	P45	A2	79
53	P46	A3	80
54	P47	RD	66
		WR	65
36	P30	CS	67
37	P31	D0	68
38	P32	D1	69
39	P33	D2	70
40	P34	D3	71
41	P35	D4	72
45	P37	D5	74
55	P50	D6	75
46	P40	D7	76
		RST	L

IC113

Port	Pin No.	I/O	Signal Name	High Imp.	High Level	Low Level	Remarks
P00	4	O	COL1: HD Signal Generator Control 1	-----	Active	In-Active	
P01	5	O	COL2: HD Signal Generator Control 2	-----	Active	In-Active	
P02	6	O	COL3: HD Signal Generator Control 3	-----	Active	In-Active	
P03	7	O	ROW1: HD Signal Generator Row 1	-----	Active	In-Active	
P04	8	O	ROW2: HD Signal Generator Row 2	-----	Active	In-Active	
P05	9	O	ROW3: HD Signal Generator Row 3	-----	Active	In-Active	
P06	10	O	ROW4: HD Signal Generator Row 4	-----	Active	In-Active	
P10	13	O	A: Cross Point Address	-----	Address High	Address Low	
P11	14	O	B: Cross Point Address	-----	Address High	Address Low	
P12	15	O	C: Cross Point Address	-----	Address High	Address Low	
P13	16	O	D: Cross Point Address	-----	Address High	Address Low	
P14	17	O	E: Cross Point Address	-----	Address High	Address Low	
P15	18	O	STB0: Cross Point Strobe	-----	Active	In-Active	
P16	19	O	STB1: Cross Point Strobe	-----	Active	In-Active	
P20	21	O	XD0: Cross Point Data	-----	Data High	Data Low	
P21	24	O	XD1: Cross Point Data	-----	Data High	Data Low	
P22	25	O	XD2: Cross Point Data	-----	Data High	Data Low	
P23	26	O	XD3: Cross Point Data	-----	Data High	Data Low	
P60	31	I	OL: EXT Over Current Detection	-----	Over Current	Normal	EXT11-18
P61	32	I	PRG: System Selection	-----	System Mode	Program Mode	
P30	36	O	PDRLY: Power Failure Control	Break	Make	Break	RLY10A-10C
P31	37	O	DL3: Line Close, Dial Transmission	Break	Make	Break	CO3
P32	38	O	CF3: CO Amp Conference	Conference	Non-Conference	Conference	CO3
P33	39	O	HD3: CO Amp Hold on Music Control	Transmission	Non-Transmission	Transmission	CO3
P34	40	O	SH3: CO Amp Shunt Control	Shunt	Non-Shunt	Shunt	CO3
P35	41	O	MT3: CO Amp Mute Control	Non-Mute	Mute	Non-Mute	CO3
P37	45	I	BELL3: Bell, CPC Input	-----	Non-Bell,Line Break	Bell, Line Make	CO3
P40	46	O	DAY: Day Mode LED Control	Lights-Out	Lighting	Lights-Out	
P41	47	O	DL2: Line Close, Dial Transmission	Break	Make	Break	CO2
P42	48	O	CF2: CO Amp Conference	Conference	Non-Conference	Conference	CO2
P43	49	O	HD2: CO Amp Hold on Music Control	Transmission	Non-Transmission	Transmission	CO2
P44	50	O	SH2: CO Amp Shunt Control	Shunt	Non-Shunt	Shunt	CO2
P45	51	O	MT2: CO Amp Mute Control	Non-Mute	Mute	Non-Mute	CO2
P46	53	O	BUSY2: Doorphone 2 ON/Off Control	Off	On	Off	
P47	54	I	BELL2: Bell, CPC Input	-----	Non-Bell,Line Break	Bell, Line Make	CO2
P50	55	O	NIGHT: Night Mode LED Control	Lights-Out	Lighting	Lights-Out	
P51	56	O	DL1: Line Close, Dial Transmission	Break	Make	Break	CO1
P52	57	O	CF1: CO Amp Conference	Conference	Non-Conference	Conference	CO1
P53	58	O	HD1: CO Amp Hold on Music Control	Transmission	Non-Transmission	Transmission	CO1
P54	59	O	SH1: CO Amp Shunt Control	Shunt	Non-Shunt	Shunt	CO1
P55	60	O	MT1: CO Amp Mute Control	Non-Mute	Mute	Non-Mute	CO1
P56	61	O	BUSY1: Doorphone 1 ON/Off Control	Off	On	Off	
P57	62	I	BELL1: Bell, CPC Input	-----	Non-Bell,Line Break	Bell, Line Make	CO1

ADJUSTMENTS

■ OSCILLATION PERIOD ADJUSTMENT

Perform the following adjustment after replacing IC109.

1. Connect the AC cord to the AC power source.
2. Set the power switch to ON.
3. Connect the lead wire. (See Fig. 12)
(After adjustment, remove the lead wire.)
4. Push the reset switch.
5. Connect the frequency counter. (See Fig. 11)
6. Set the frequency counter to PERIOD.
7. Adjust VC100 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 (±0.00001)	20~20.9	15.624880 (±0.00001)
15~15.9	15.624933 (±0.00001)	21~21.9	15.624876 (±0.00001)
16~16.9	15.624922 (±0.00001)	22~27.9	15.624870 (±0.00001)
17~17.9	15.624910 (±0.00001)	28~28.9	15.624876 (±0.00001)
18~18.9	15.624899 (±0.00001)	29~29.9	15.624880 (±0.00001)
19~19.9	15.624888 (±0.00001)		

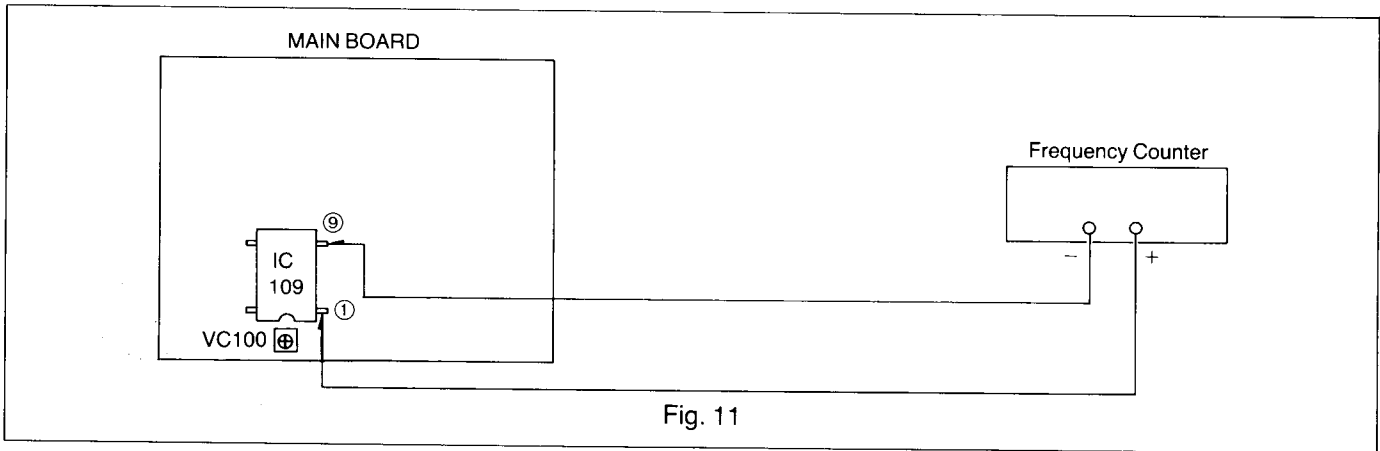


Fig. 11

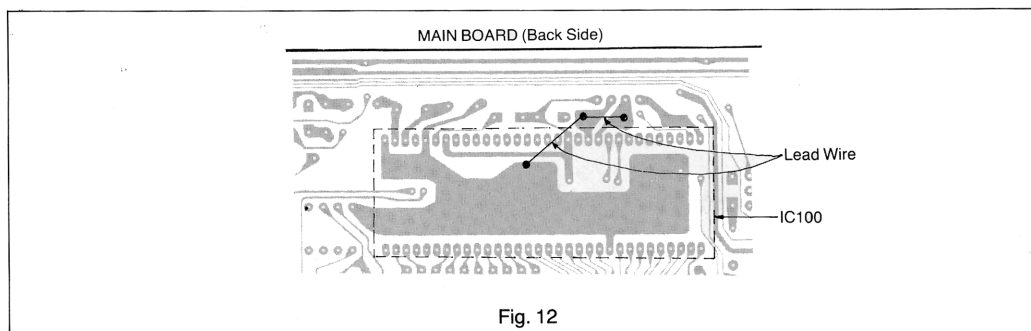
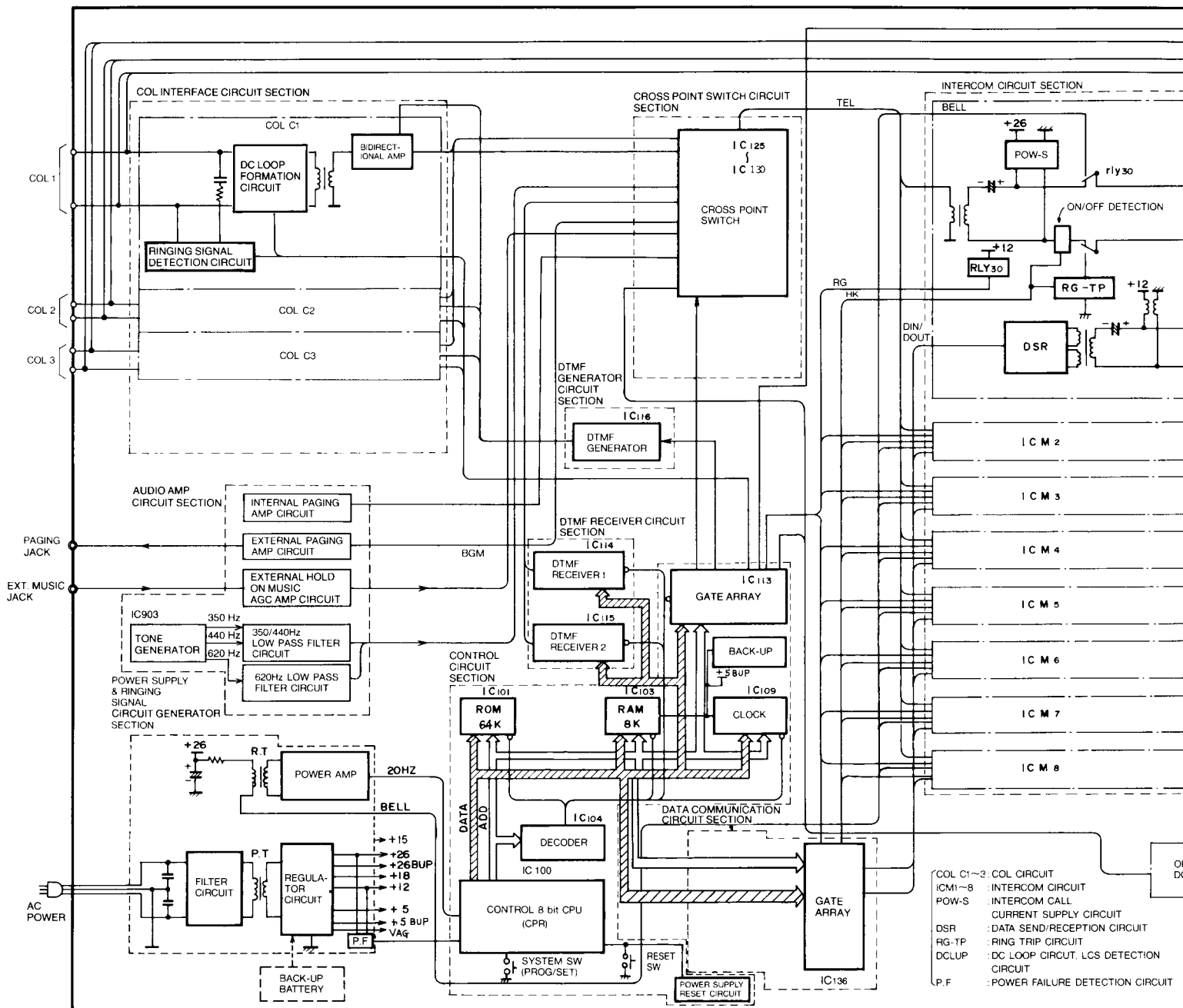
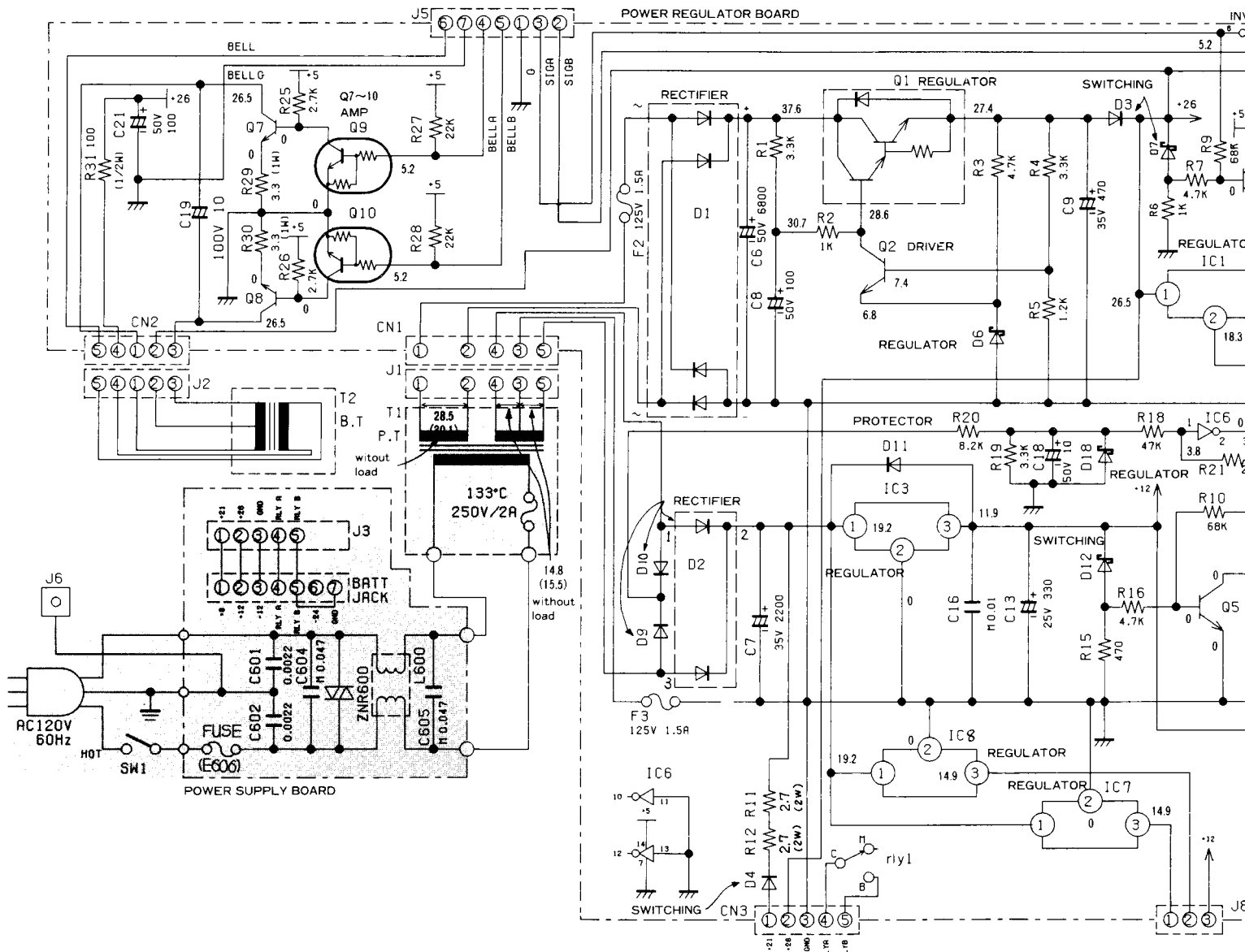


Fig. 12

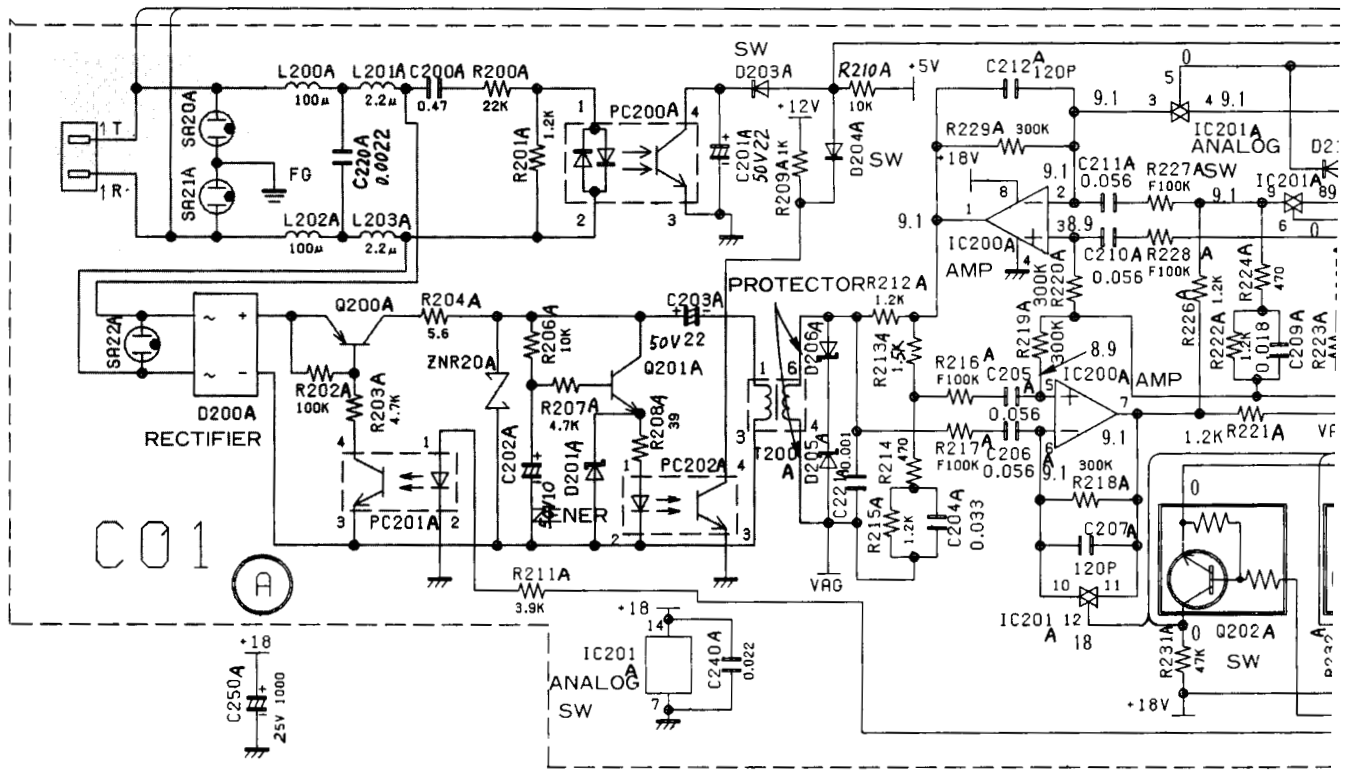
BLOCK DIAGRAM



SCHEMATIC DIAGRAM



A
B
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G

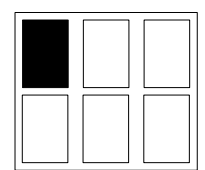
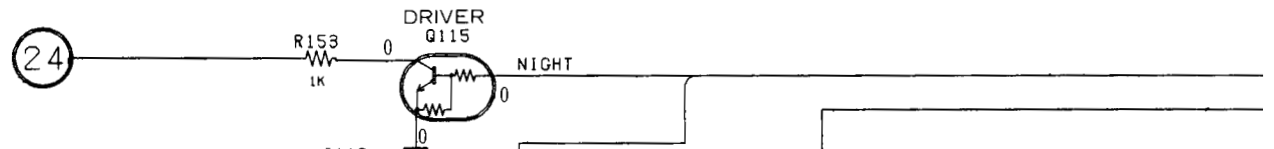


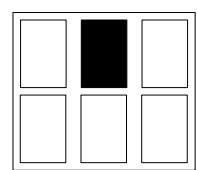
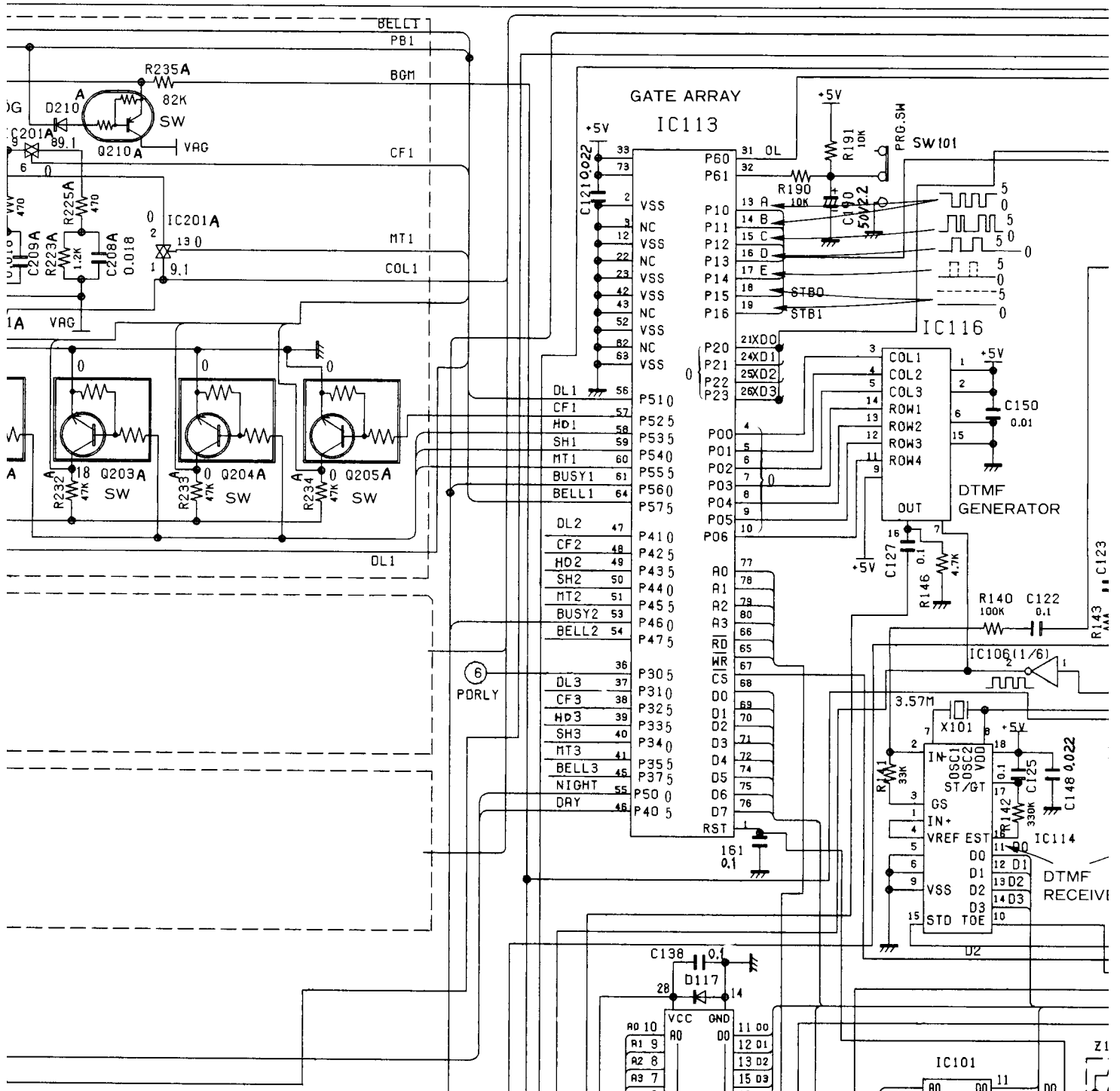
C01

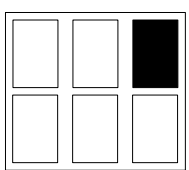
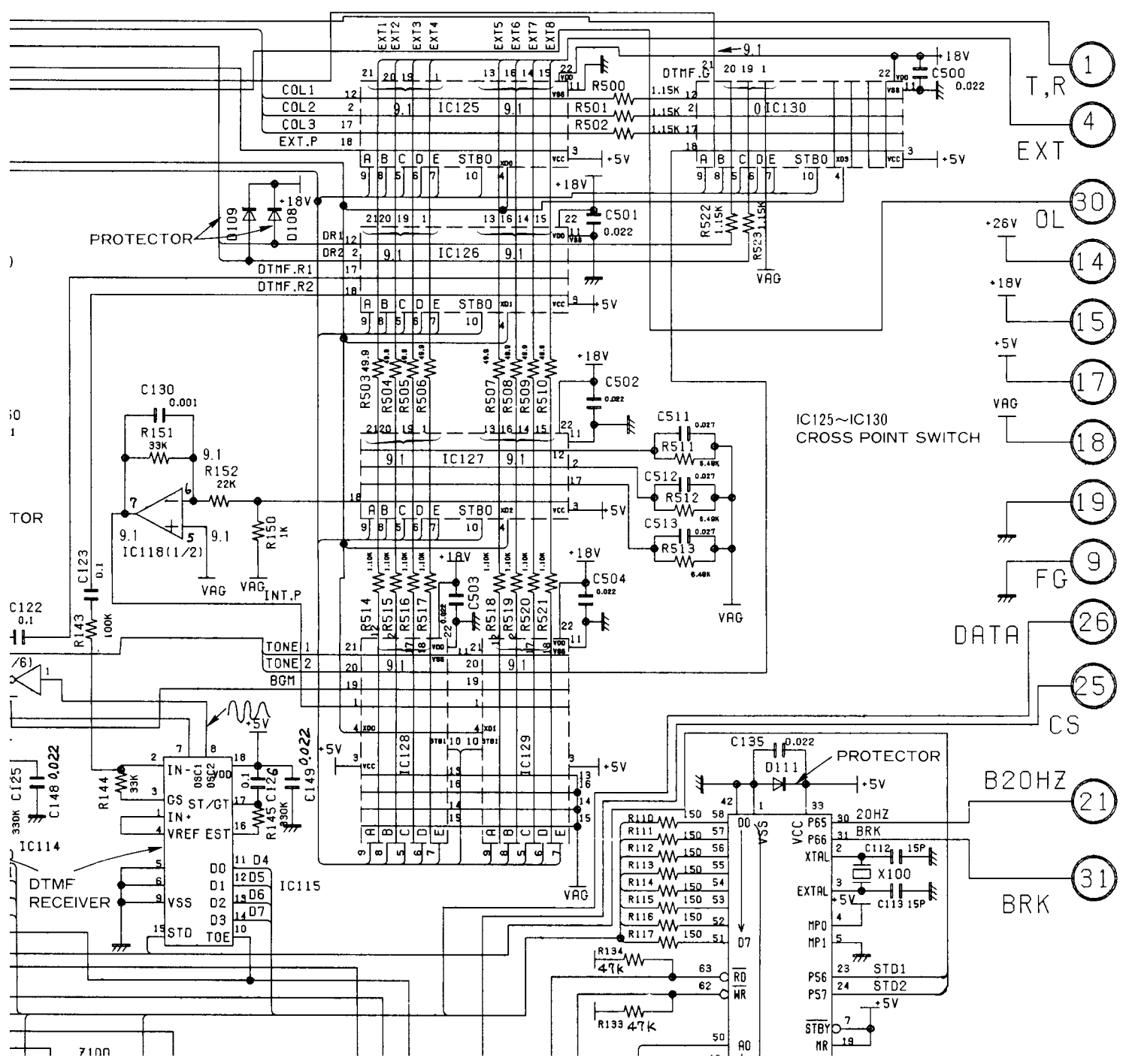
(A)

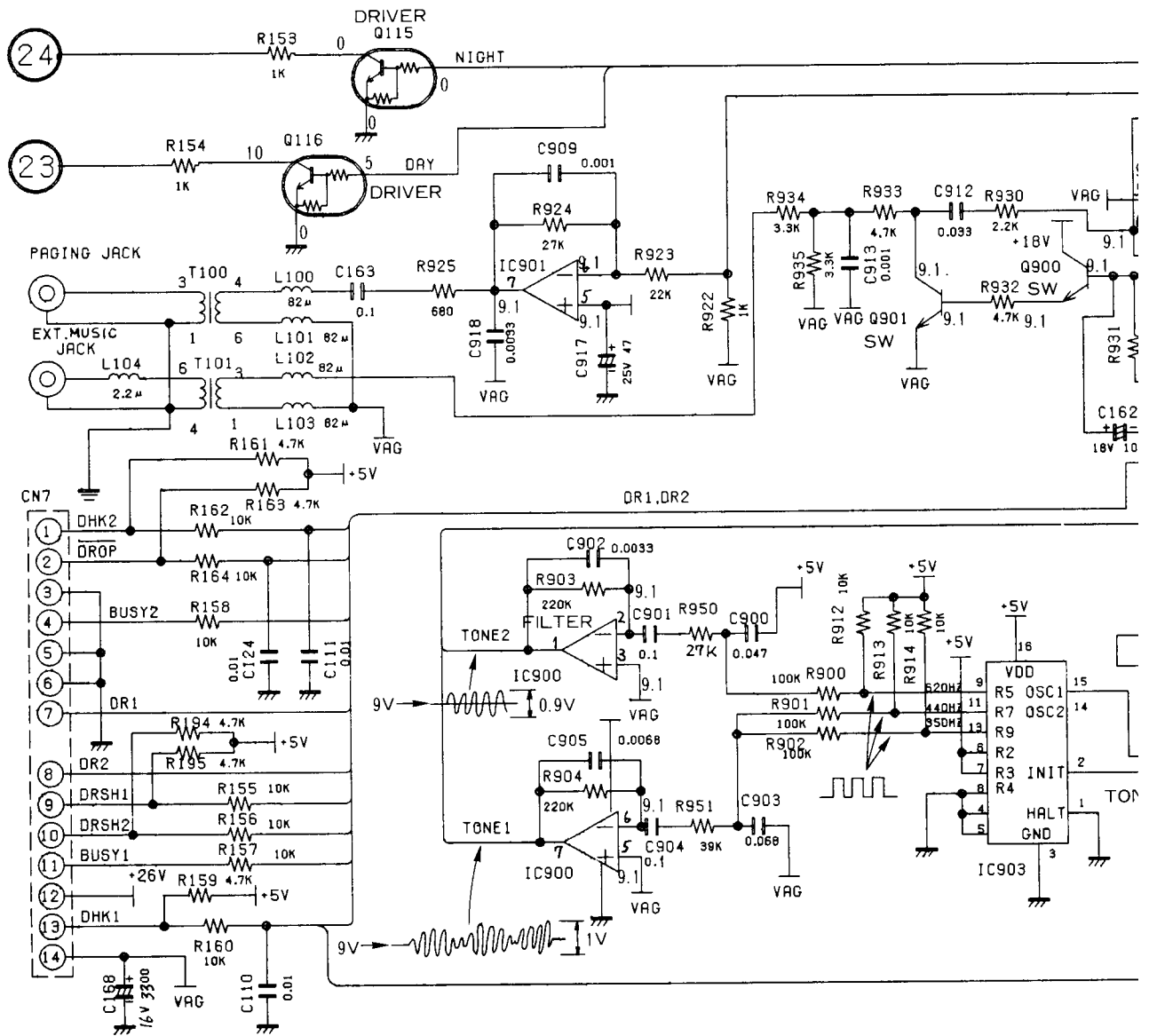
C02 (B)

C03 (C)









Notes:

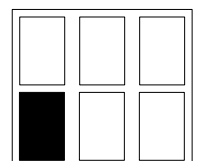
1. SW1: Power switch.
2. SW100: Reset switch.
3. SW101: System program switch in "PROGRAM" position.
4. DC voltage measurements are taken with electronic voltmeter and oscilloscope from ground line.

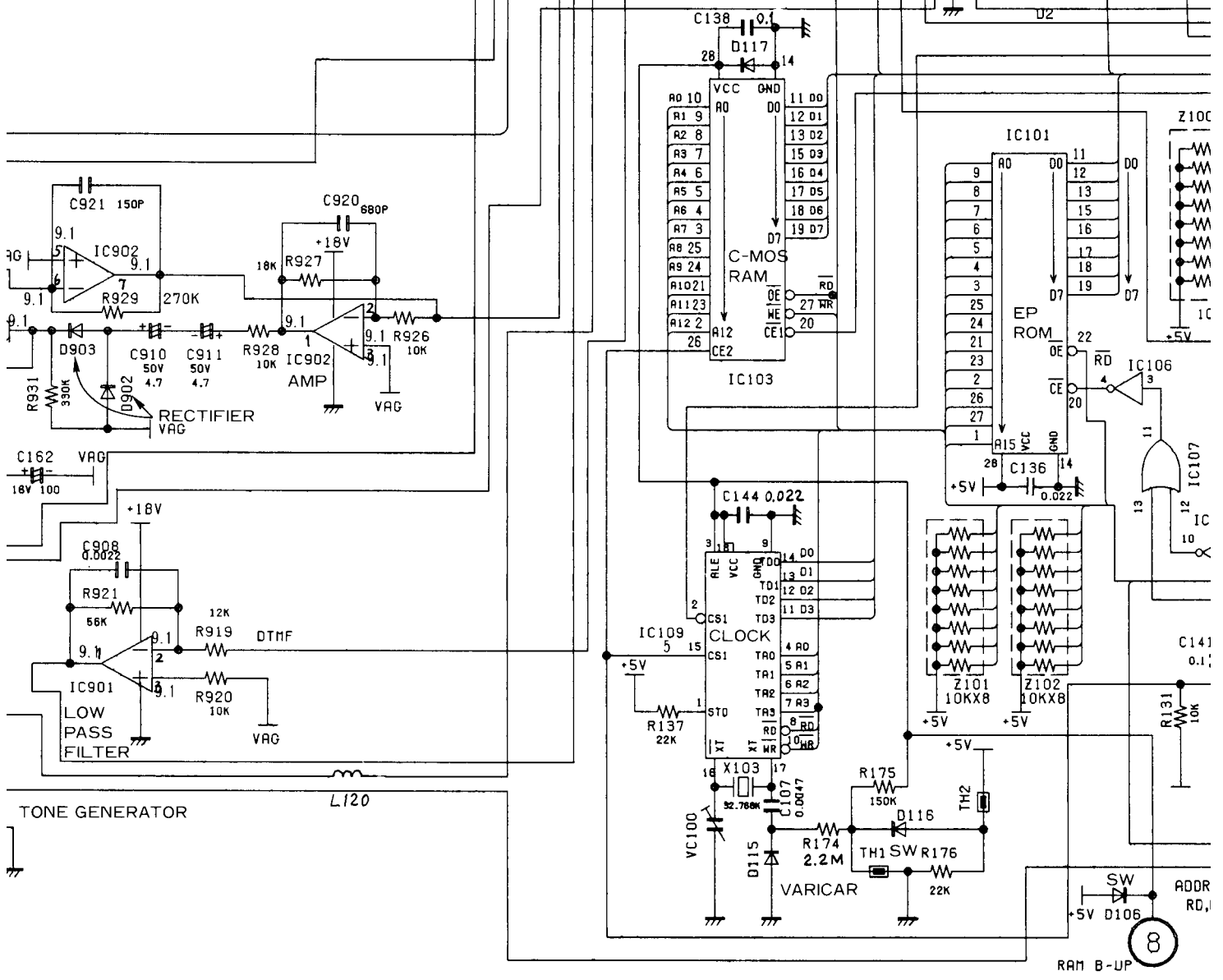
● Power Switch ON condition
 ● Voltage Value: V

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

6.

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.





- 7.
- | | | | | |
|--|--|--------------------------------------|------------------------------------|--|
| Varcap.

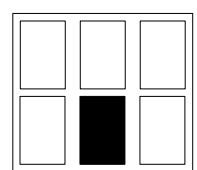
Anode
Cathode | General

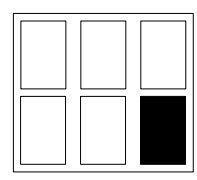
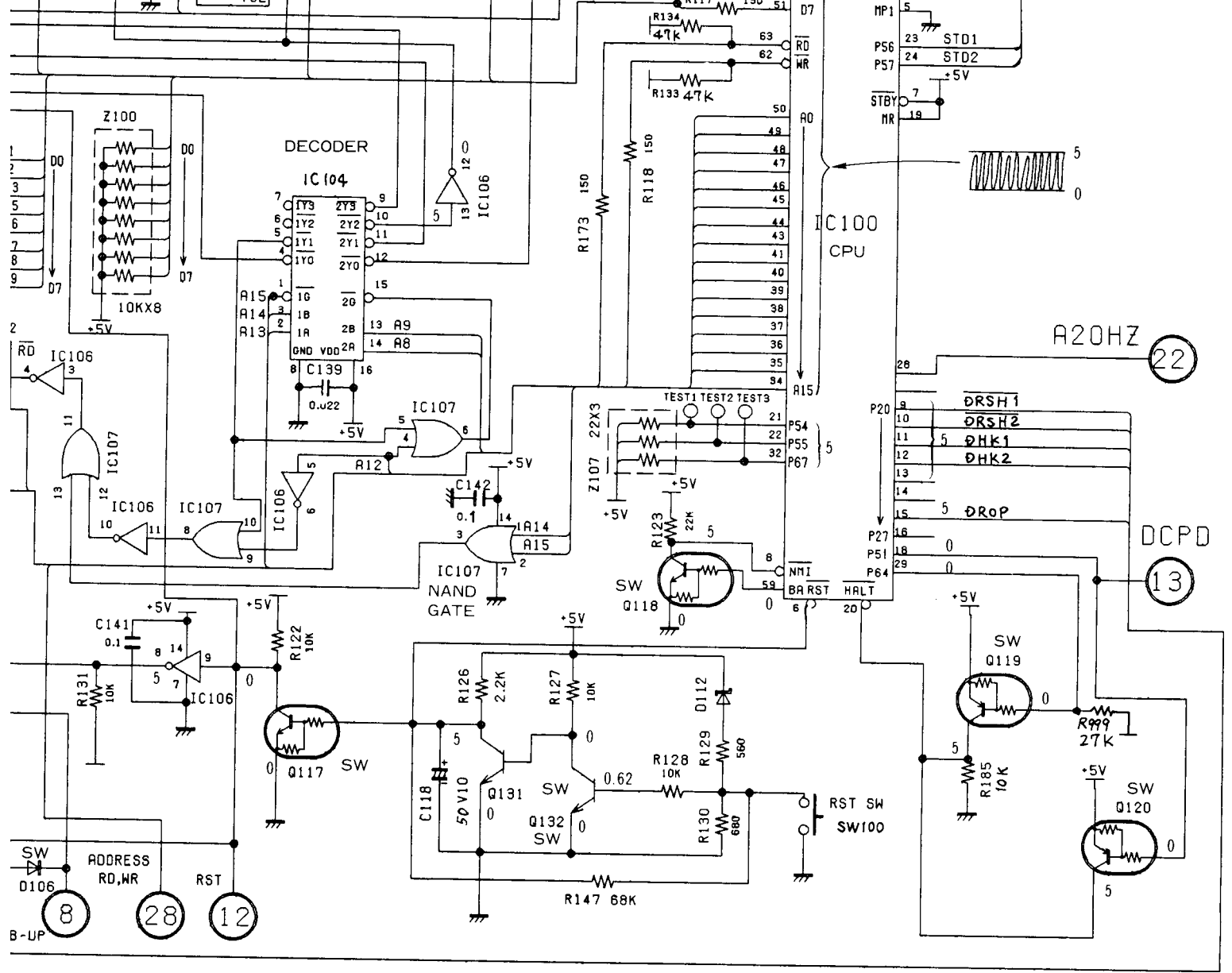
Anode
Cathode | Zener

Anode
Cathode | LED

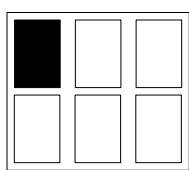
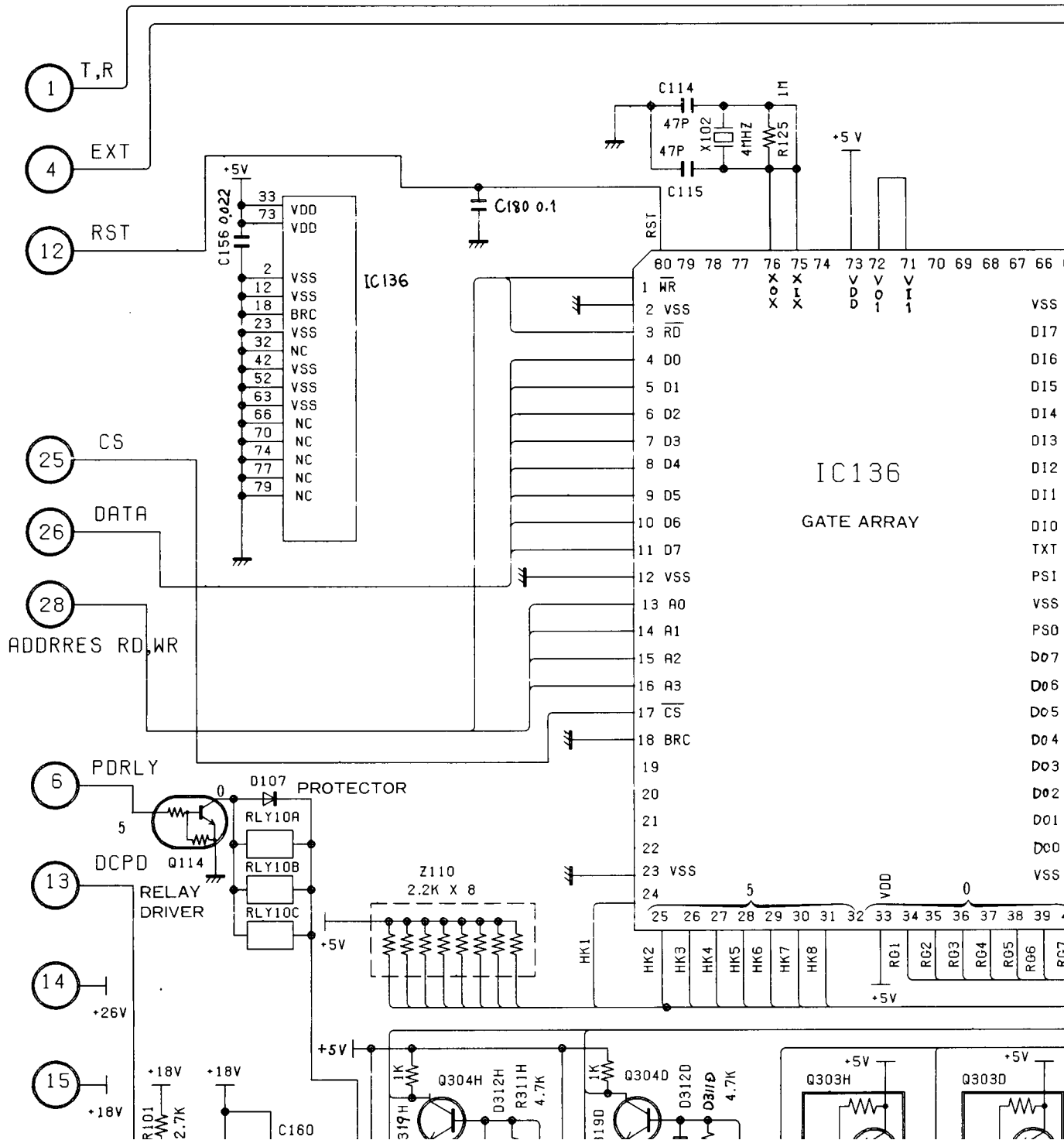
Anode
Cathode | Photo Diode

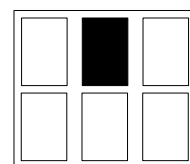
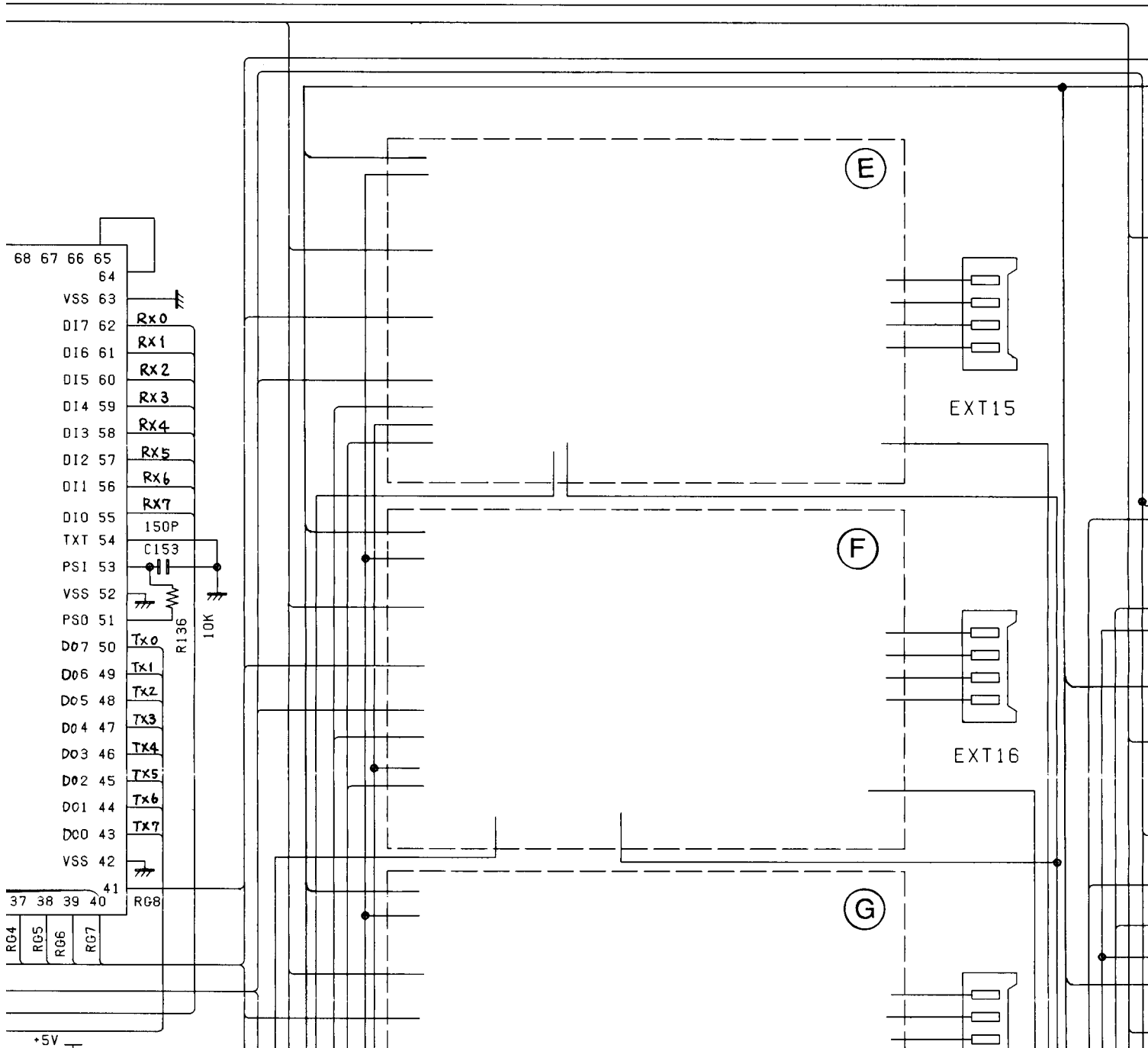
Cathode
Anode |
|--|--|--------------------------------------|------------------------------------|--|

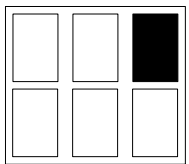
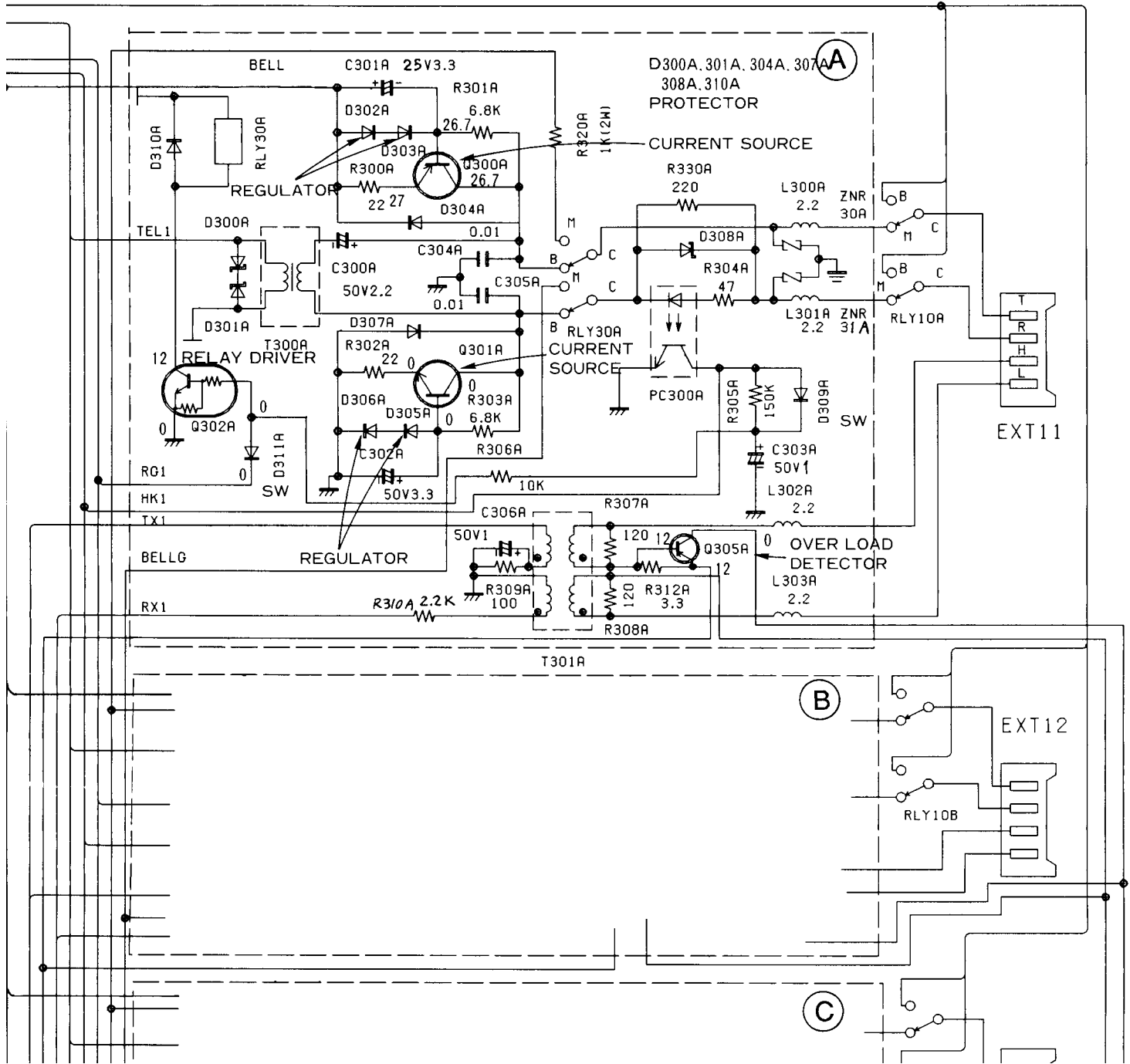


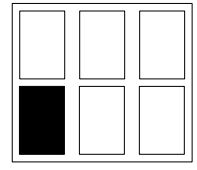
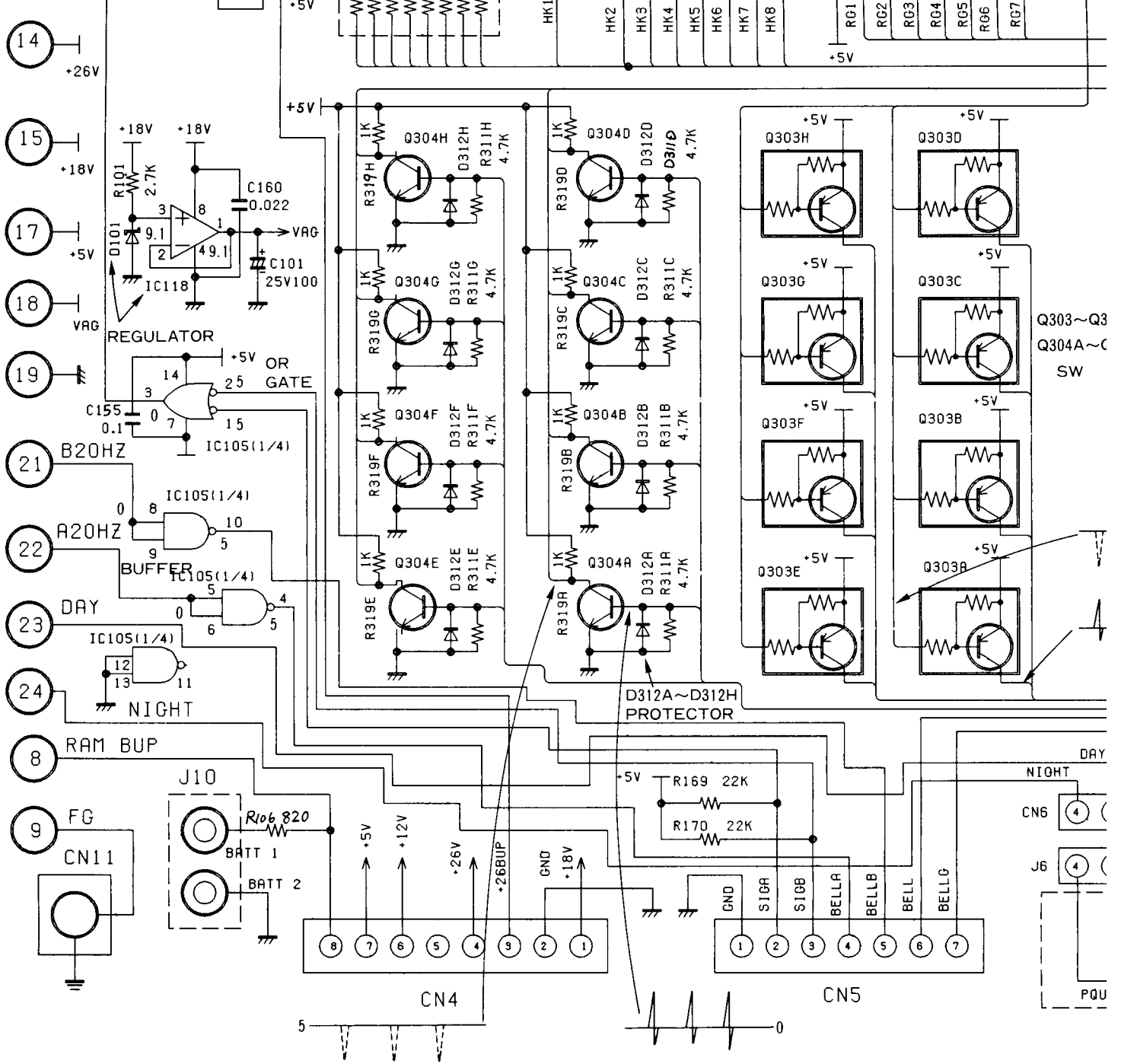


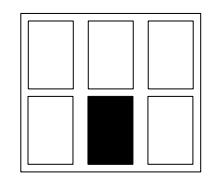
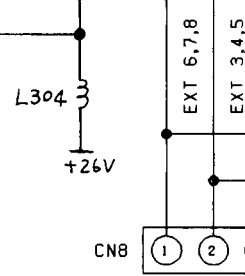
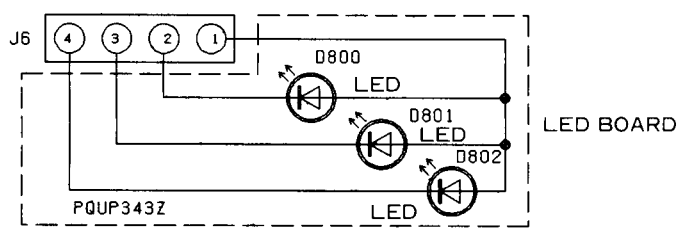
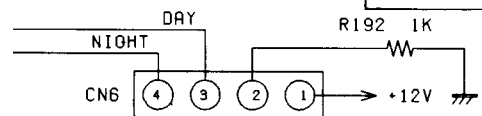
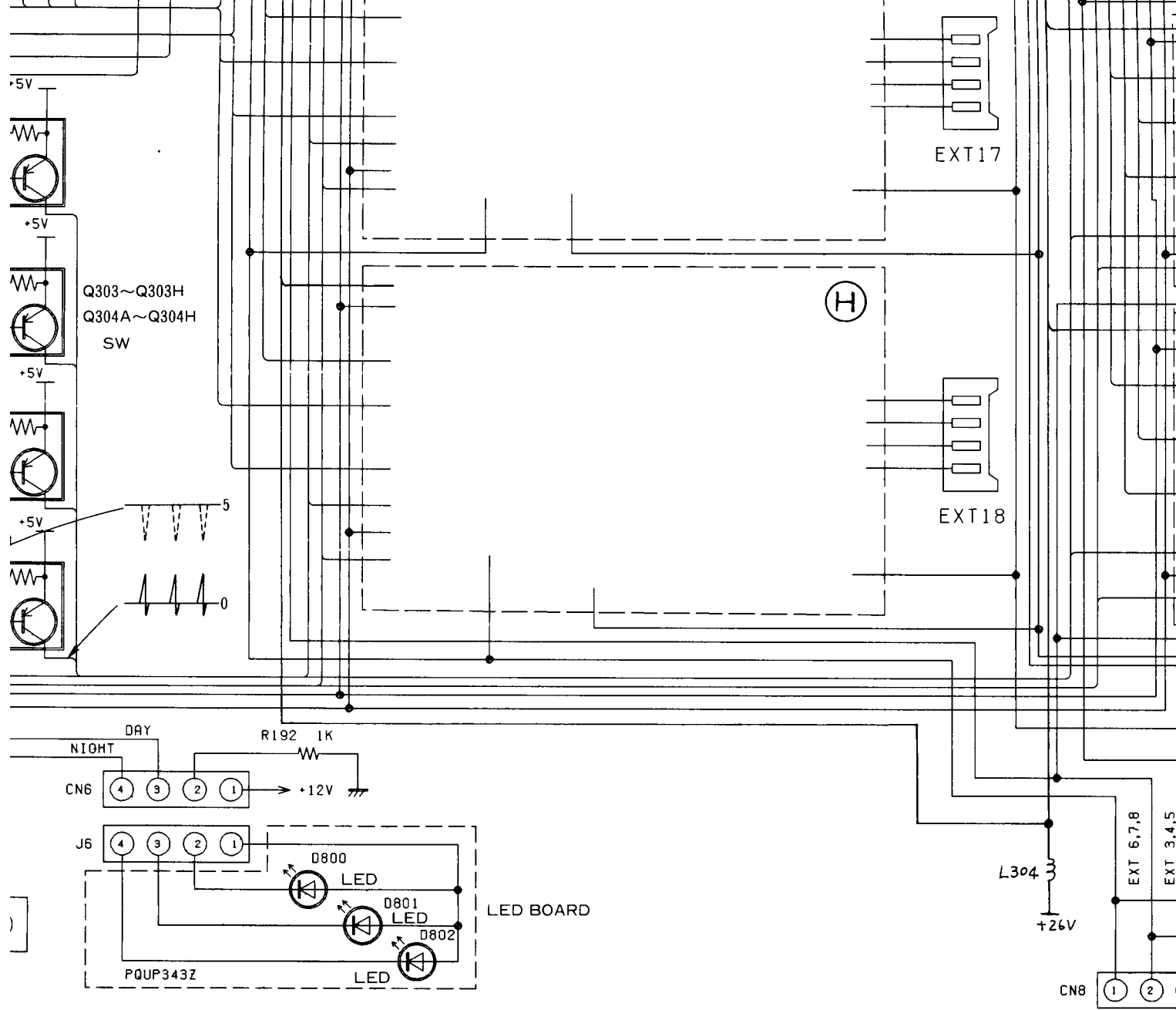
A
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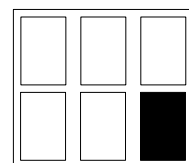
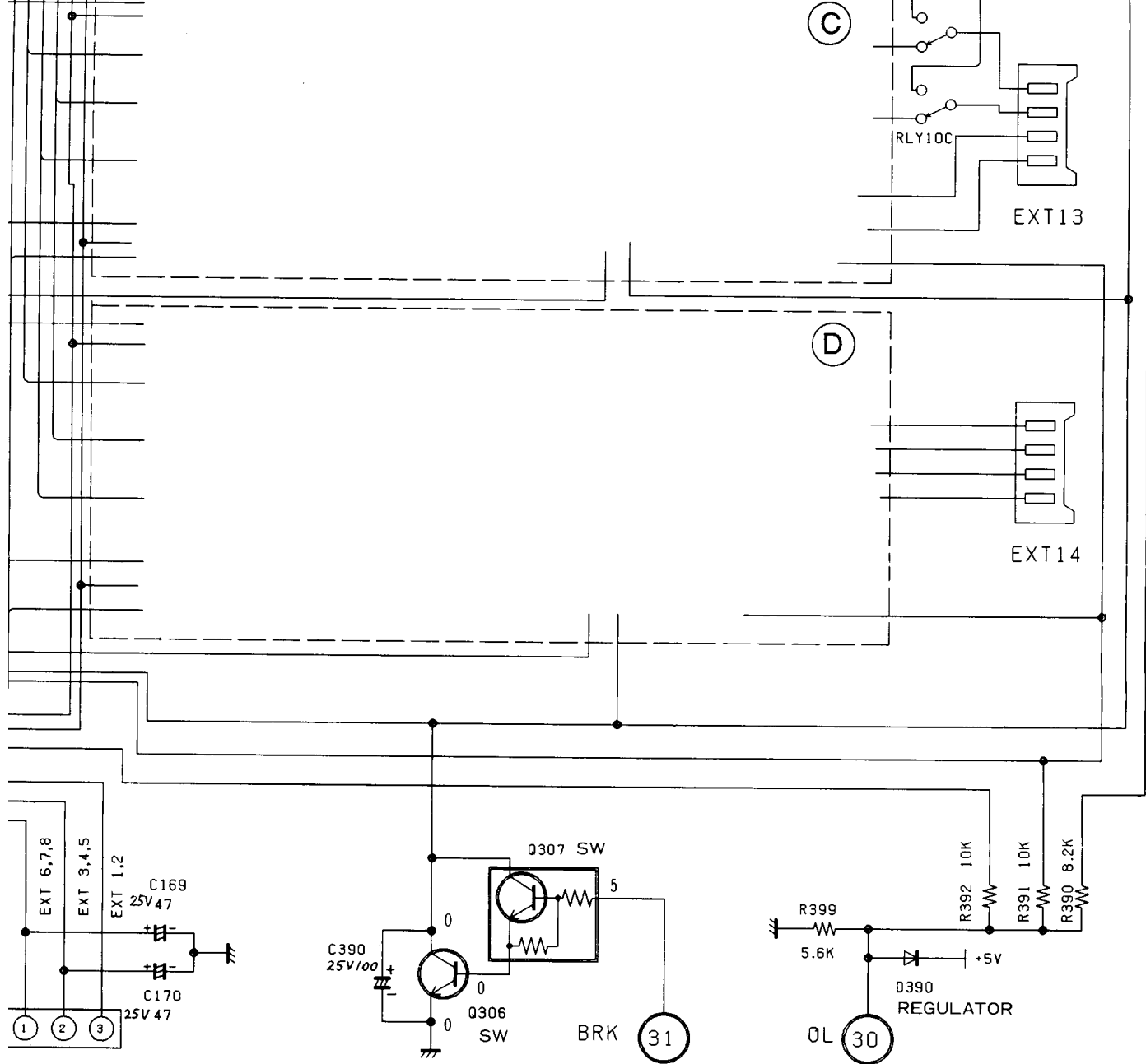




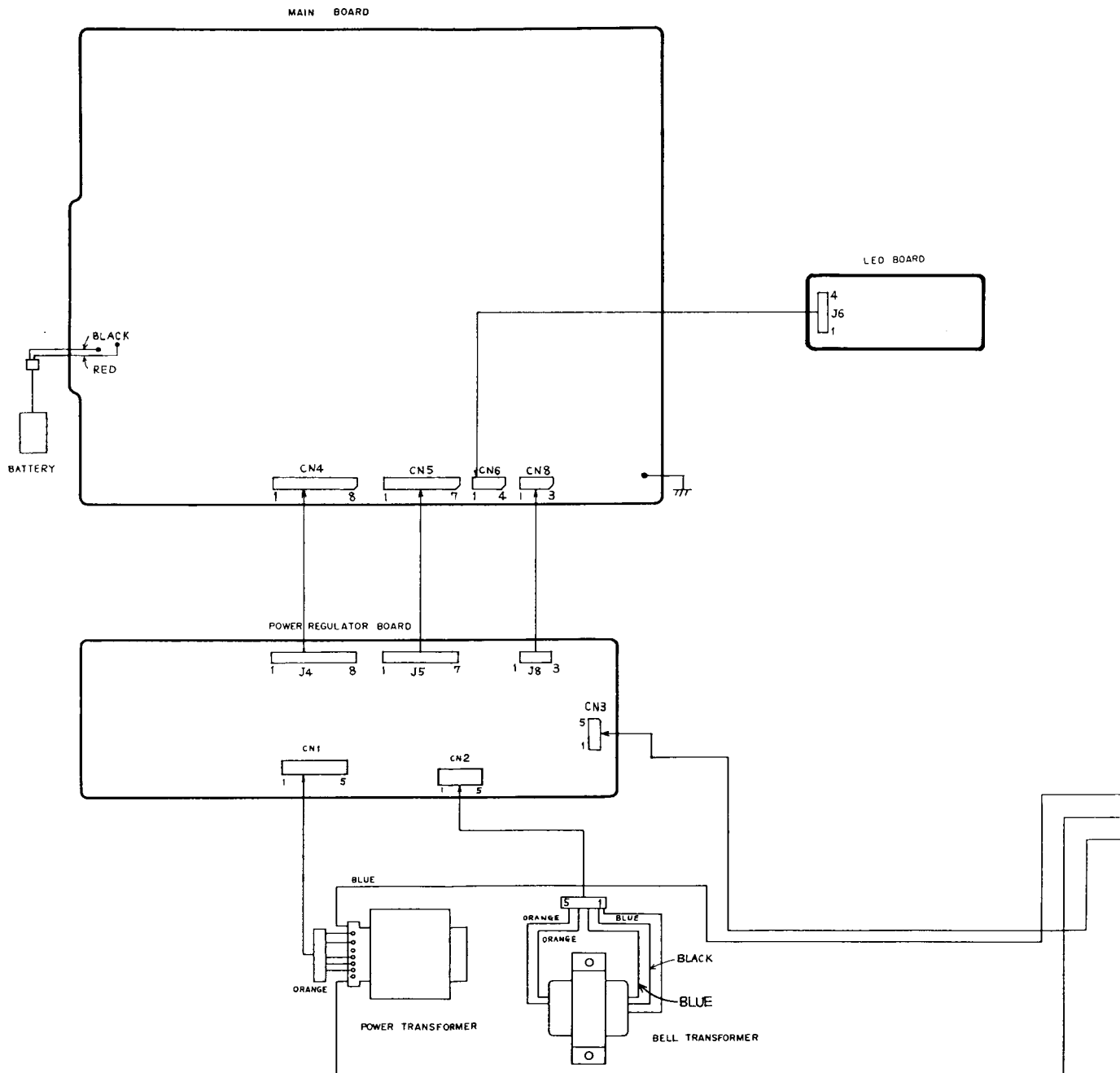






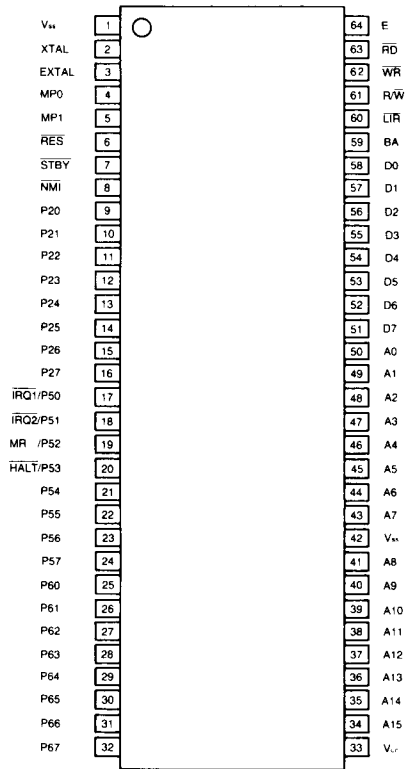


WIRING CONNECTION DIAGRAM

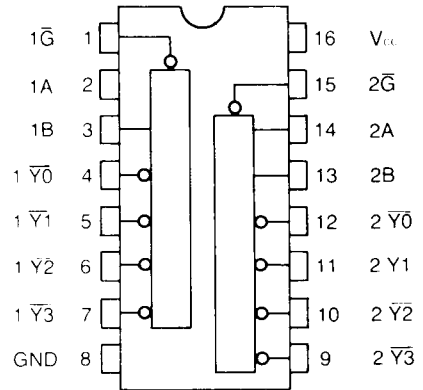
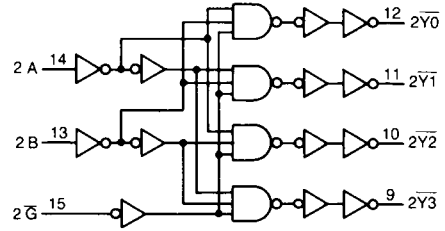
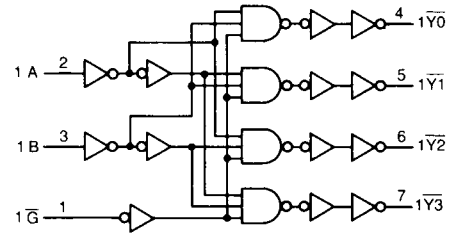


IC BLOCK DIAGRAM

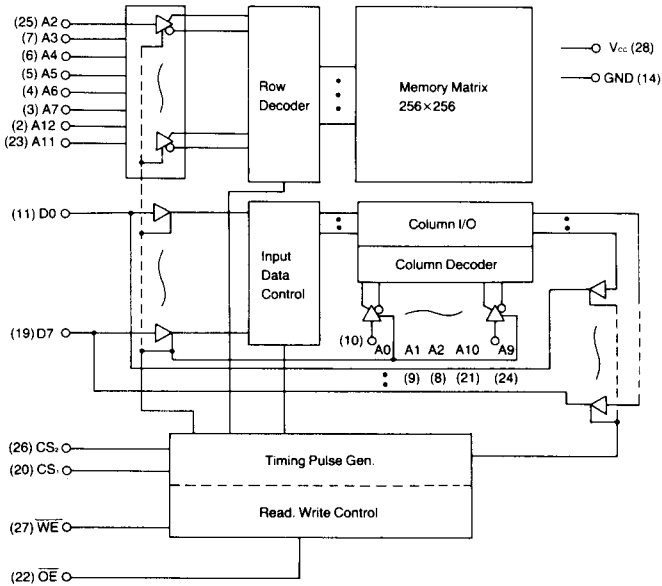
IC100 PQVIH63B03XP



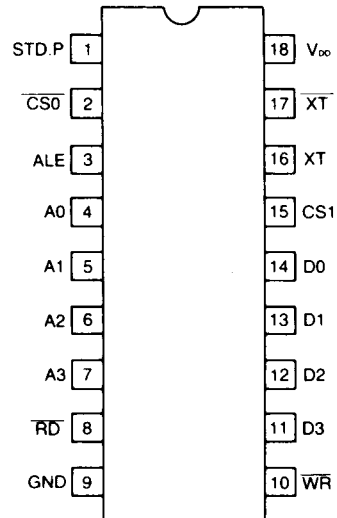
IC104 PQVITC7H139P



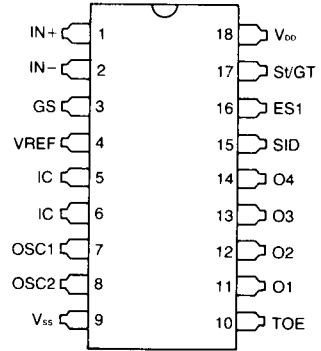
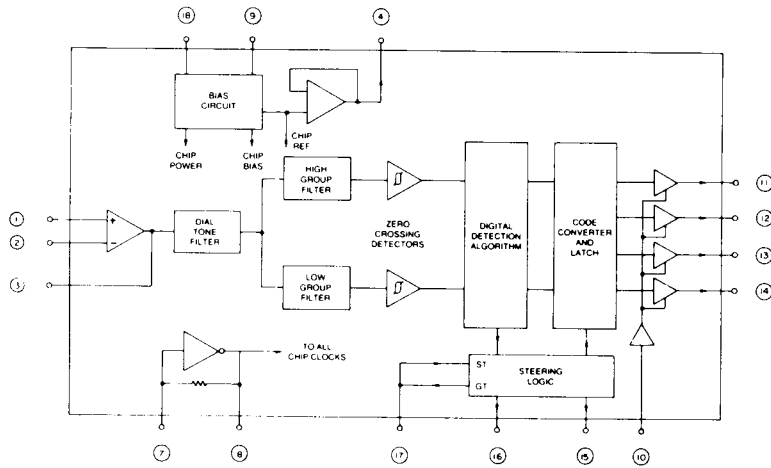
IC103 PQVIHM6264LA



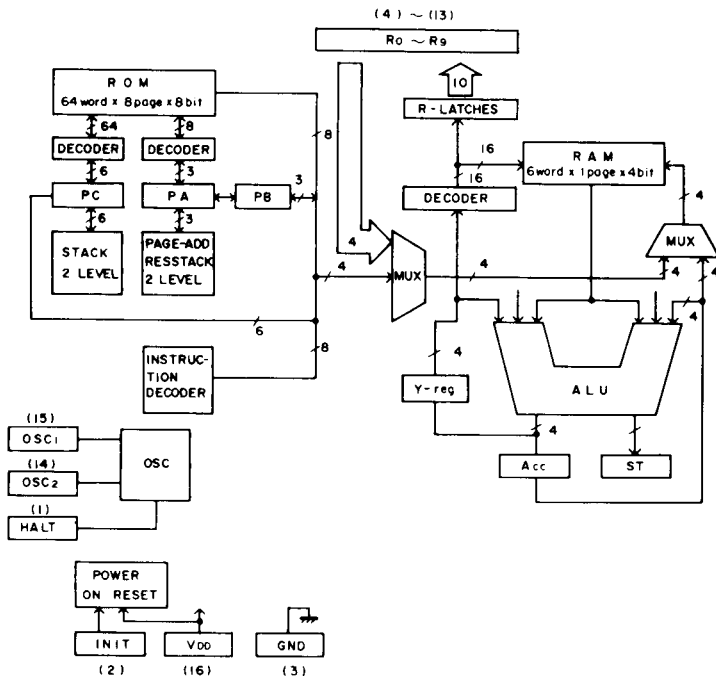
IC109 PQVIMS6242BS



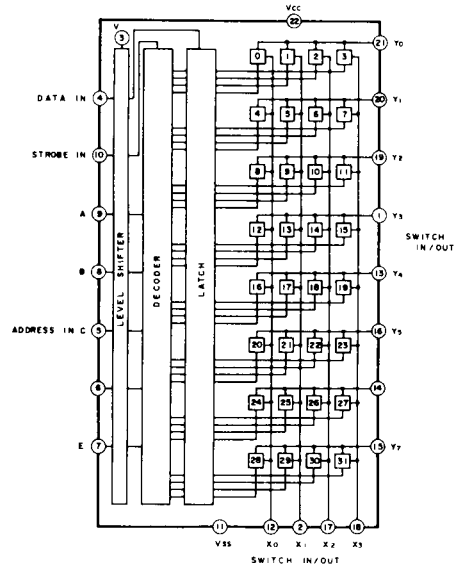
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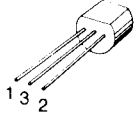
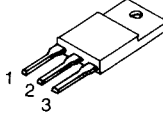
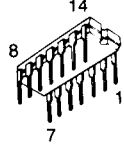
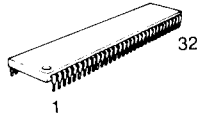
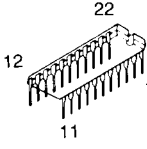
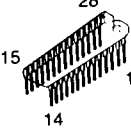
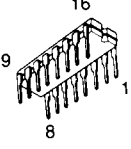
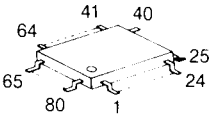
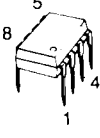
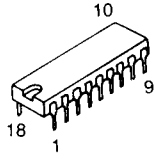
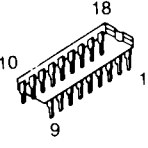
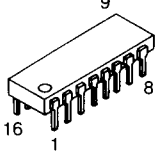
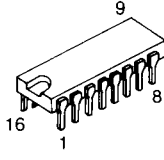
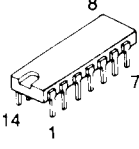
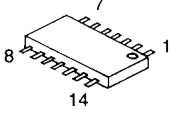
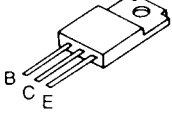
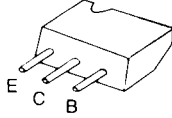
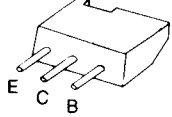
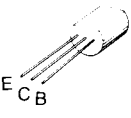
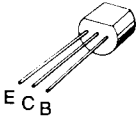
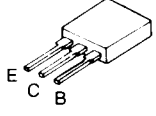
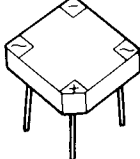
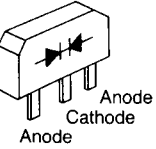
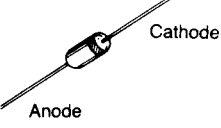
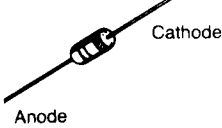
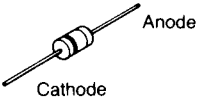
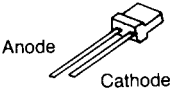
IC903 PQVIBU3140



IC125~130 PQVIM402101P



TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

 AN78L18	 AN78M12F	 PQVITC7H04P PQVINJM4011BC PQVIPD4066UC	 PQVIH63B03XP	 PQVIM402101P
 PQVIHM6264LA PQWIT30810M2	 PQVITC7H139P	 PQVI671152F PQVI672191F	 PQVINJM4558D	 PQVIMS6242BS
 PQVIMT8870BC	 PQVITP5089N	 PQVIBU3140	 PQVITC7H32P	
 PQVIPD4066BC	 2SD1275 2SD1406	 2SB644 2SD637 2SD639	 DTA124XA DTA143A DTC143XA DTC144A 2SA937 2SC2021 PQVTDTC114Y	
 2SC2235	 2SC2878	 2SA1626	 PQVD2B4B41	
 PQVDMI151	 1SS131 1SV124 1SR35-200 MA4030 PQVDHZS2B1		 MA4039 MA4047 MA4051 MA4062 MA4091 PQVDHZ7A2	
 MA4200	 LN220RPH LN320GPH LN420YPH			

EXPLODED VIEW

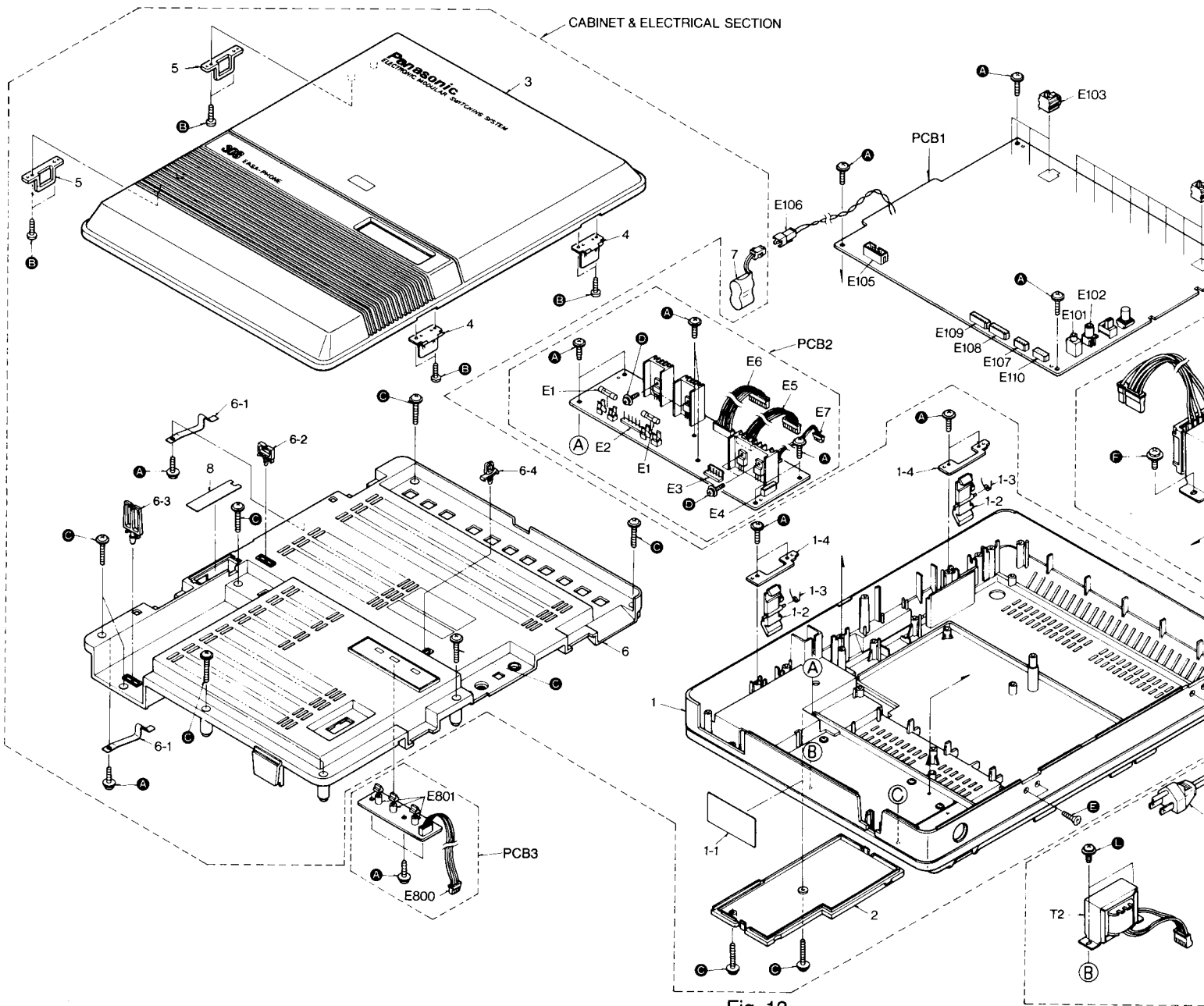


Fig. 13

ACCESSORIES & PACKING MATERIALS

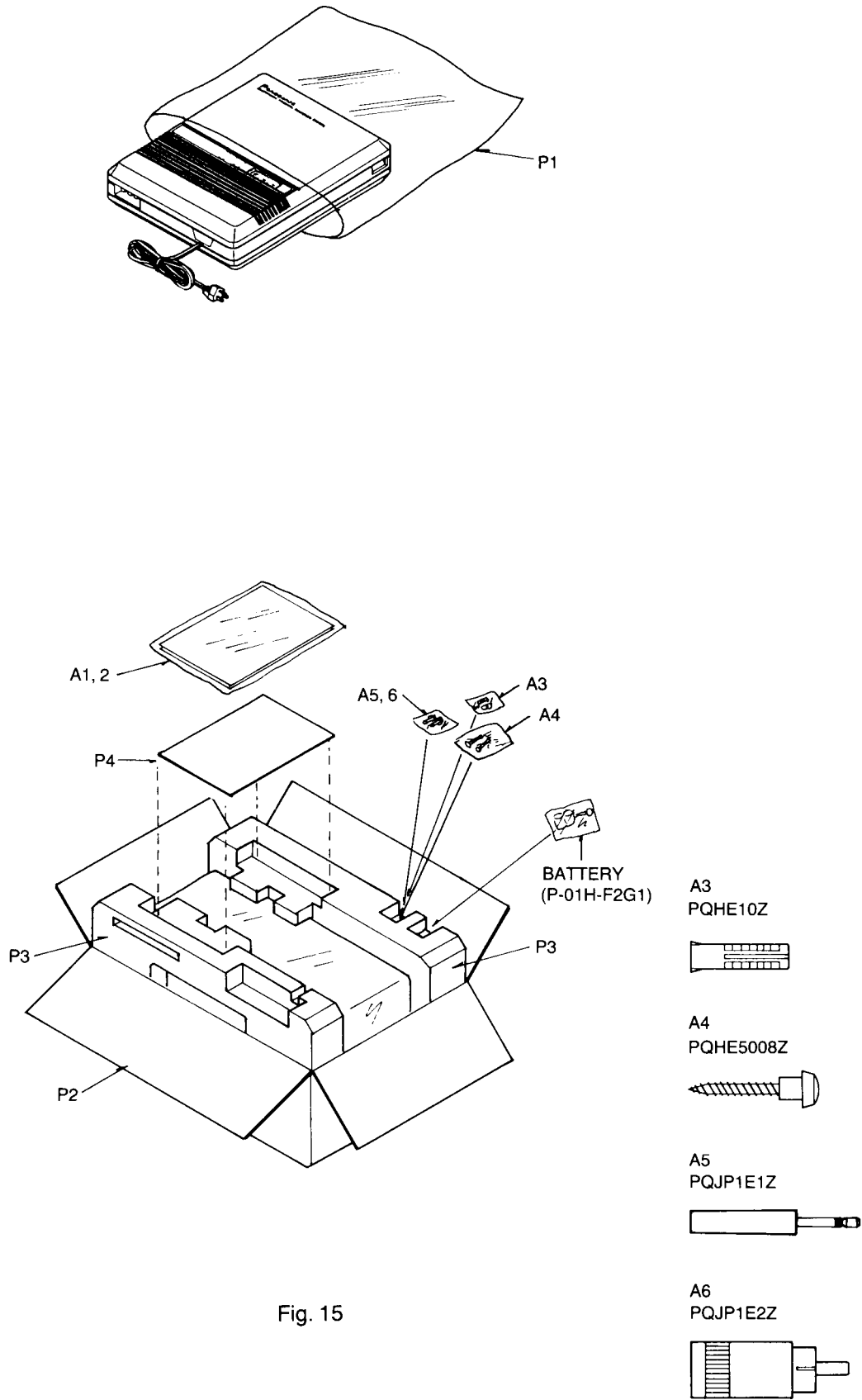












Fig. 15

REPLACEMENT PARTS LIST			
Notes:		Model KX-T30810-1	
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 Δ 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=1000 Ω , M=1000k Ω All capacitors are in MICRO FARADS (μ F) P = 0.001 μ F *Type & Wattage of Resistor			
Type			
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	ECED,ECKD,PQCBC, : Ceramic		
ECQS:Styrol	ECQM,ECQV,ECQE,ECQU,ECQB : Polyester		
PQCBX,ECUV:Chip	ECEA,ECSZ,ECOS : Electrolytic		
ECMS:Mica	ECQP : Polypropylene		
Voltage			
ECQ Type	ECQG 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
CABINET & ELECTRICAL PARTS			
1	PQYMT30810M1	Rear Cabinet Assembly	1
1-1	PQGT373Z	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	PQYF1T30810M	Front Cabinet Assembly	1
4	PQBH2Z	Hinge-A	2
5	PQHR9121Z8	Hinge-B	2
6	PQYF230810M1	Inside Cover Assembly	1
6-1	PQUS102Z	Leaf Spring	2
6-2	PQHR118Z	Cord Holder-A	1
6-3	PQHR119Z	Cord Holder-B	1
6-4	PQHR120Z	Cord Holder-C	1
7	P-01H-F2G1	Battery	1
8	PQUV50Z	Battery Cover	1
ACCESSORIES AND PACKING MATERIALS			
A1	PQQX5289Z	Installation Manual	1
A2	PQQX5291Z	User Guide	1
A3	PQHE10Z	Mounting Bracket (Curl Plug)	3
A4	PQHE5008Z	Mounting Bracket (Screw)	3
A5	PQJP1E1Z	Plug-A	1
A6	PQJP1E2Z	Plug-B	1
P1	XZB45X06A05	Protection Cover	1
P2	PQPK392Y	Packing Case	1
P3	PQPN9036Z	Cushion Complete (L,R Side)	1
P4	PQPN668Z	Cushion	1

Ref. No.	Part No.	Part Name & Description	Pcs
MAIN BOARD PARTS			
PCB1	PQWP130810M1	Main P.C. Board Assy (NLA)	1
(ICs)			
IC100	PQVIH63B03XP	IC	1
IC101	PQWIT30810M2	IC	1
IC102	Not Used		
IC103	PQVIHM6264LA	IC	S 1
IC104	PQVITC7H139P	IC	S 1
IC105	PQVIPD4011BC	IC	S 1
IC106	PQVITC7H04P	IC	S 1
IC107	PQVITC7H32P	IC	S 1
IC108	Not Used		
IC109	PQVIMS6242BS	IC	1
IC110-112	Not Used		
IC113	PQVI672191F	IC	1
IC114,115	PQVIMT8870BC	IC	S 2
IC116	PQVITP5089N	IC	1
IC117	Not Used		
IC118	PQVINJM4558D	IC	S 1
IC119-124	Not Used		
IC125-130	PQVIM402101P	IC	6
IC131-135	Not Used		
IC136	PQVI671152F	IC	1
IC200A,200B	PQVINJM4558D	IC	S 3
	,200C		
IC201A,201B	PQVIPD4066BC	IC	S 3
	,201C		
IC900,901	PQVINJM4558D	IC	S 3
	,902		
IC903	PQVIBU3140	IC	1
(TRANSISTORS)			
Q114,115	DTC143XA	Transistor (Si)	3
	,116		
Q117,118	DTC144A	Transistor (Si)	S 2
Q119,120	DTA143A	Transistor (Si)	S 2
Q131,132	2SC2021	Transistor (Si)	2
Q200A,200B	2SA1626	Transistor (Si)	Δ 3
	,200C		
Q201A,201B	2SC2235	Transistor (Si)	Δ 3
	,201C		
Q202A,202B	DTC144A	Transistor (Si)	S 12
	,202C,203A		
	,203B,203C		
	,204A,204B		
	,204C,205A		
	,205B,205C		
Q210A,210B	DTA124XA	Transistor (Si)	3
	,210C		
Q300A-	2SB644	Transistor (Si)	8
	300H		
Q301A-	2SD639	Transistor (Si)	8
	301H		
Q302A-	PQVTDTC114Y	Transistor (Si)	8
	302H		
Q303A-	DTA143A	Transistor (Si)	S 8
	303H		
Q304A-	2SC2021	Transistor (Si)	8
	304H		
Q305A-	2SA937	Transistor (Si)	8
	305H		
Q306	2SD1406	Transistor (Si)	1
Q307	DTC144A	Transistor (Si)	S 1
Q900	2SC2021	Transistor (Si)	1
Q901	2SC2878	Transistor (Si)	1

Ref. No.	Part No.	Part Name & Description	Pcs
		(DIODES)	
D101	MA4091	Diode (Si)	1
D102-105	Not Used		
D106-109	1SS131	Diode (Si)	4
D110	Not Used		
D111	1SS131	Diode (Si)	1
D112	MA4039	Diode (Si)	1
D113,114	Not Used		
D115	1SV124	Diode (Si)	1
D116,117	1SS131	Diode (Si)	2
D200A,200B ,200C	PQVDS1YB40F1	Diode (Si) 	3
D201A,201B ,201C	PQVDHVS2B1	Diode (Si) 	3
D202A-202C	Not Used		
D203A,203B ,203C,204A ,204B,204C	1SS131	Diode (Si)	6
D205A,205B ,205C,206A ,206B,206C	MA4047	Diode (Si)	6
D207A-209C	Not Used		
D210A,210B ,210C	1SS131	Diode (Si)	3
D300A-300H ,301A-301H	MA4047	Diode (Si)	16
D302A-302H ,303A-303H ,304A-304H ,305A-305H ,306A-306H ,307A-307H	1SS131	Diode (Si)	48
D308A-308H	MA4030	Diode (Si)	8
D309A-309H ,310A-310H ,311A-311H ,312A-312H	1SS131	Diode (Si)	32
D390	1SS131	Diode (Si)	1
D902,903	1SS131	Diode (Si)	2
		(VARISTORS)	
ZNR20A,20B ,20C	ERZC07DK820	Varistor 	3
ZNR30A- 30H ,31A-31H	ERZC03DK241	Varistor	16
SA20A,20B ,20C,21A ,21B,21C ,22A,22B ,22C	PQVDSAE310F1	Surge Absorber 	9
		(CRYSTAL OSCILLATORS)	
X100	PQVCK6000N3Z	Crystal Oscillator	1
X101	PQCVX3579H5R	Crystal Oscillator S	1
X102	PQVCX4000N8Z	Crystal Oscillator S	1
X103	PQVCL3276N4Z	Crystal Oscillator	1
		(COMPONENT COMBINATIONS)	
Z100,101 ,102	EXBP88473K	Resistor Array S	3
Z107	PQRS8B3223J	Resistor Array	1
Z110	EXBP88222K	Resistor Array S	1

Ref. No.	Part No.	Part Name & Description	Pcs
		(COILS)	
L100-103	ELEPK820KA	Choke Coil S	4
L104	PQLQZM2R2M	Choke Coil S	1
L105-109	Not Used		
L110,111 ,120 ,300B-300H ,301A-301H ,302A-302H ,303A-303H	PQLQZM2R2M	Choke Coil S	35
L200A,200B ,200C,202A ,202B,202C	PQLQZK101K	Choke Coil 	6
L201A,201B ,201C,203A ,203B,203C	PQLQZK2R2K	Choke Coil 	6
L304	ELEA100KA	Choke Coil	1
		(TRANSFORMERS)	
T100,101	PQLT2D6B	Interface Transformer	2
T200A,200B ,200C ,300A-300H	ETA14Y85AY	Interface Transformer 	11
T301A-301H	ETE13K38AY	Pulse Transformer	8
		(SWITCHES)	
SW100	PQSH1A12Z	Switch, Reset	1
SW101	PQSS2A20Z	Switch, System Program	1
		(RELAYS)	
RLY10A,10B ,10C	PQSL49Z	Relay	3
RLY30A- 30H	PQSL41Z	Relay	8
		(VARIABLE CAPACITOR)	
VC100	PQCVTZB30B	Trimmer	1
		(THERMISTORS)	
TH1	PQRRTS104U	Thermistor	1
TH2	PQRRTS203U	Thermistor	1
		(PHOTO ELECTIC TRANSDUCERS)	
PC200A ,200B,200C	PQVITLP520	Photo Coupler 	3
PC201A ,201B,201C	PQVITLP627	Photo Coupler 	3
PC202A ,202B,202C ,300A-300H	PQVITLP521	Photo Coupler  S	11
		(RESISTORS)	
C101	ECEA1EU101	100	1
C102-106	Not Used		
C107	ECQM1H472JV	0.0047	1
C108,109	Not Used		
C110,111	ECKD1H103KB	0.01 S	2
C112,113	ECCD1H150JC	15P S	2
C114,115	ECCD1H470JC	47P	2
C116,117	Not Used		
C118	ECEA1HU100	10	1
C119,120	Not Used		
C121	ECKD1H223MD	0.022 S	1
C122,123	ECQV1H104JZ	0.1	2











Ref. No.	Part No.	Part Name & Description	Pcs	Ref. No.	Part No.	Value	Pcs
C124	ECKD1H103KB	0.01	S 1	C306A-306H	ECEA1HU010	1	8
C125,126	ECQV1H104JZ	0.1	3	C390	ECEA1EU101	100	1
,127				C500-504	ECKD1H223MD	0.022	S 5
C128-129	Not Used			C511,512	ECQV1H273JZ	0.027	3
C130	ECKD1H102JA	0.001	S 1	,513			
C131-134	Not Used			C900	ECQV1H473JZ	0.047	1
C135,136	ECKD1H223MD	0.022	S 2	C901	ECQV1H104JZ	0.1	1
C138	ECQV1H104JZ	0.1	1	C902	ECQM1H332JV	0.0033	1
C139	ECKD1H223MD	0.022	S 1	C903	ECQV1H683JZ	0.068	1
C140	Not Used			C904	ECQV1H104JZ	0.1	1
C141,142	ECQV1H104JZ	0.1	2	C905	ECQM1H682JV	0.0068	1
C143	Not Used			C906,907	Not Used		
C144	ECKD1H223MD	0.022	S 1	C908	ECQM1H222JV	0.0022	1
C145-147	Not Used			C909	ECKD1H102JA	0.001	S 1
C148,149	ECKD1H223MD	0.022	S 2	C910,911	ECEA1HU4R7	4.7	2
C149	Not Used			C912	ECQV1H333JZ	0.033	1
C150	ECQV1H104JZ	0.1	1	C913	ECKD1H102JA	0.001	S 1
C151,152	Not Used			C914-916	Not Used		
C153	ECCD1H151JC	150P	S 1	C917	ECEA1EU470	47	1
C154	Not Used			C918	ECQM1H332JV	0.0033	1
C155	ECQV1H104JZ	0.1	1	C919	Not Used		
C156	ECKD1H223MD	0.022	S 1	C920	ECCD1H681KB	680P	1
C157-159	Not Used			C921	ECCD1H151JC	150P	S 1
C160	ECKD1H223MD	0.022	S 1				
C161	ECQV1H104JZ	0.1	1			(RESISTORS)	
C162	ECEA1EU101	100	S 1	R101	ERD16TJ272	2.7k	1
C163	ECQV1H104JZ	0.1	1	R102-105	Not Used		
C164-167	Not Used			R106	ERD16TJ821	820	1
C168	ECEA1CSS332	3300	1	R107-109	Not Used		
C169,170	ECEA1EU470	47	2	R110-118	ERD16TJ151	150	9
C171-179	Not Used			R119-121	Not Used		
C180	ECQV1H104JZ	0.1	1	R122	ERD16TJ103	10k	1
C190	ECEA1HU2R2	2.2	1	R123	ERD16TJ223	22k	1
C200A,200B	ECQE2E474KZ	0.47	△ 3	R124	Not Used		
,200C				R125	ERD16TJ105	1M	1
C201A,201B	ECEA1HU220	22	3	R126	ERD16TJ222	2.2k	1
,201C				R127,128	ERD16TJ103	10k	2
C202A,202B	ECEA1HU100	10	△ 3	R129	ERD16TJ561	560	1
,202C				R130	ERD16TJ681	680	1
C203A,203B	ECEA1HU220	22	△ 3	R131	ERD16TJ103	10k	1
,203C				R132	Not Used		
C204A,204B	ECQV1H333JZ	0.033	3	R133,134	ERD16TJ473	47k	2
,204C				R135	Not Used		
C205A,205B	ECQV1H563JZ	0.056	6	R136	ERD16TJ103	10k	1
,205C,206A				R137	ERD16TJ223	22k	1
,206B,206C				R138,139	Not Used		
C207A,207B	ECCD1H121KC	120P	3	R140	ERD16TJ104	100k	1
,207C				R141	ERD16TJ333	33k	1
C208A,208B	ECQM1H183JV	0.018	6	R142	ERD16TJ334	330k	1
,208C,209A				R143	ERD16TJ104	100k	1
,209B,209C				R144	ERD16TJ333	33k	1
C210A,210B	ECQV1H563JZ	0.056	6	R145	ERD16TJ334	330k	1
,210C,211A				R146	ERD16TJ472	4.7k	1
,211B,211C				R147	ERD16TJ683	68k	1
C212A,212B	ECCD1H121KC	120P	3	R148,149	Not Used		
,212C				R150	ERD16TJ102	1k	1
C220A,220B	ECKDKC222KB	0.0022	△ 3	R151	ERD16TJ333	33k	1
,220C				R152	ERD16TJ223	22k	1
C221A,221B	ECKD1H102JA	0.001	S 3	R153,154	ERD16TJ102	1k	2
,221C				R155-158	ERD16TJ103	10k	4
C240A,240B	ECKD1H223MD	0.022	S 3	R159	ERD16TJ472	4.7k	1
,240C				R160	ERD16TJ103	10k	1
C250	ECEA1EU102	1000	1	R161	ERD16TJ472	4.7k	1
C300A-300G	ECEA1HU2R2	2.2	7	R162	ERD16TJ103	10k	1
C300H	ECEA1HKS2R2	2.2	1	R163	ERD16TJ472	4.7k	1
C301A-301H	ECEA1HU3R3	3.3	S 16	R164	ERD16TJ103	10k	1
,302A-302H				R165-168	Not Used		
C303A-303H	ECEA1HU010	1	8	R169,170	ERD16TJ223	22k	2
C304A-304H	ECKD1H103KB	0.01	S 16	R171,172	Not Used		
,305A-305H							

Ref. No.	Part No.	Part Name & Description	Pcs
R173	ERD16TJ151	150	1
R174	ERD16TJ225	2.2M	1
R175	ERD16TJ154	150k	1
R176	ERD16TJ223	22k	1
R177-184	Not Used		
R185	ERD16TJ103	10k	1
R186-189	Not Used		
R190,191	ERD16TJ103	10k	2
R192	ERD16TJ102	1k	1
R193	Not Used		
R194,195	ERD16TJ472	4.7k	2
R200A,200B ,200C	PQRD12TJ223	22k	3 Δ S
R201A,201B ,201C	ERD16TJ122	1.2k	3 Δ
R202A,202B ,202C	ERD16TJ104	100k	3 Δ
R203A,203B ,203C	ERD16TJ472	4.7k	3 Δ
R204A,204B ,204C	ERD16TJ5R6	5.6	3 Δ
R205A-205C	Not Used		
R206A,206B ,206C	ERD16TJ103	10k	3 Δ
R207A,207B ,207C	ERD16TJ472	4.7k	3 Δ
R208A,208B ,208C	ERD25TJ390	39	3 Δ S
R209A,209B ,209C	ERD16TJ102	1k	3
R210A,210B ,210C	ERD16TJ103	10k	3
R211A,211B ,211C	ERD16TJ392	3.9k	3
R212A,212B ,212C	ERD16TJ122	1.2k	3
R213A,213B ,213C	ERD16TJ152	1.5k	3
R214A,214B ,214C	ERD16TJ471	470	3
R215A,215B ,215C	ERD16TJ122	1.2k	3
R216A,216B ,216C,217A ,217B,217C	ERO16CKF1003	100k	6
R218A,218B ,218C,219A ,219B,219C ,220A,220B ,220C	ERO16CKF3003	300k	9
R221A,221B ,221C,222A ,222B,222C ,223A,223B ,223C	ERD16TJ122	1.2k	9
R224A,224B ,224C,225A ,225B,225C	ERD16TJ471	470	6
R226A,226B ,226C	ERD16TJ122	1.2k	3
R227A,227B ,227C,228A ,228B,228C	ERO16CKF1003	100k	6
R229A,229B ,229C	ERO16CKF3003	300k	3
R230A-230C	Not Used		
R231A,231B ,231C,232A ,232B,232C	ERD16TJ473	47k	6

Ref. No.	Part No.	Part Name & Description	Pcs
R233A,233B ,233C,234A ,234B,234C	ERD16TJ473	47k	6
R235A,235B ,235C	ERD16TJ823	82k	3
R300A-300H	ERD16TJ220	22	8
R301A-301H	ERD16TJ682	6.8k	8
R302A-302H	ERD16TJ220	22	8
R303A-303H	ERD16TJ682	6.8k	8
R304A-304H	ERD16TJ470	47	8
R305A-305H	ERD16TJ154	150k	8
R306A-306H	ERD16TJ103	10k	8
R307A-307H	ERD16TJ121	120	8
R308A-308H	ERD16TJ121	120	8
R309A-309H	ERD16TJ101	100	8
R310A-310H	ERD16TJ222	2.2k	8
R311A-311H	ERD16TJ472	4.7k	8
R312A-312H	ERD16TJ3R3	3.3	8
R319A-319H	ERD16TJ102	1k	8
R320A-320H	PQRD2TJ102	1k	8
R330A-330H	ERD16TJ221	220	8
R390	ERD16TJ822	8.2K	1
R391,392	ERD16TJ103	10k	2
R399	ERD16TJ562	5.6k	1
R500,501 ,502	ERO16CKF1151	1.15k	3
R503-510	ERO16CKF49R9	49.9	8
R511,512 ,513	ERO16CKF6491	6.49k	3
R514-521	ERO16CKF1101	1.1k	8
R522,523	ERO16CKF1151	1.15k	2
R900,901 ,902	ERD16TJ104	100k	3
R903	ERD16TJ224	220k	1
R904	ERD16TJ124	120k	1
R905-911	Not Used		
R912,913 ,914	ERD16TJ103	10k	3
R915-918	Not Used		
R919	ERD16TJ123	12K	1
R920	ERD16TJ103	10k	1
R921	ERD16TJ563	56k	1
R922	ERD16TJ102	1k	1
R923	ERD16TJ223	22k	1
R924	ERD16TJ273	27k	1
R925	ERD16TJ681	680	1
R926	ERD16TJ103	10k	1
R927	ERD16TJ183	18k	1
R928	ERD16TJ103	10k	1
R929	ERD16TJ274	270k	1
R930	ERD16TJ222	2.2k	1
R931	ERD16TJ334	330k	1
R932,933	ERD16TJ472	4.7k	2
R934,935	ERD16TJ332	3.3k	2
R950	ERD16TJ273	27k	1
R951	ERD16TJ393	39k	1
R999	ERD16TJ273	27k	1
E101	PQJ1D3Z	(OTHERS) Jack, External Music	1
E102	PQJ1G1Z	Jack, Paging	1
E103	PQJ1TA3Y	Jack,CO (MJ1A, MJ1B, MJ1C) Δ	3
E104	PQJ1TB16Z	Jack, Station Modular (MJ2A-2H)	8
E105	PQJP14D49Z	Connector Plug, 14P (CN7)	1
E106	PQJP2F4Z	Connector Plug, 2P	1
E107	PQJP4D14Z	Connector Plug, 4P (CN6)	1
E108	PQJP7G3Z	Connector Plug, 7P (CN5)	1
E109	PQJP8D3Z	Connector Plug, 8P (CN4)	1
E110	PQJP3D9Z	Connector Plug, 3P (CN8)	1

Ref. No.	Part No.	Part Name & Description	Pcs
POWER REGULATOR BOARD PARTS			
PCB2	PQWP230810M1	Power Regulator P.C. Board Ass'y (NLA)	1
		(ICs)	
IC1	AN78L18	IC	S 1
IC2	Not Used		
IC3	AN78M12F	IC	S 1
IC4,5	Not Used		
IC6	PQVIPD4066UC	IC	S 1
IC7,8	AN78M15F	IC	S 2
		(TRANSISTORS)	
Q1	2SD1275	Transistor (Si)	1
Q2	2SD637	Transistor (Si)	1
Q3	2SD1406	Transistor (Si)	1
Q4,5	2SC2021	Transistor (Si)	2
Q6	DTC143XA	Transistor (Si)	1
Q7,8	2SD1406	Transistor (Si)	2
Q9,10	DTC144A	Transistor (Si)	S 2
		(DIODES)	
D1	PQVD2B4B41	Diode (Si)	1
D2	PQVDMI151	Diode (Si)	1
D3,4	1SR35-200	Diode (si)	S 2
D5	Not Used		
D6	MA1068	Diode (si)	S 1
D7	MA4200	Diode (Si)	1
D8	Not Used		
D9,10,11	1SR35-200	Diode (si)	S 3
D12	MA4091	Diode (Si)	1
D13	MA4062	Diode (Si)	1
D14,15	1SR35-200	Diode (si)	S 2
D16	Not Used		
D17	1SR35-200	Diode (si)	S 1
D18	MA4051	Diode (Si)	1
D19	1SS131	Diode (Si)	1
		(RELAY)	
RLY1	PQSL50Z	Relay	1
		(CAPACITORS)	
C3	EECW0H104ZN	100000	1
C4	Not Used		
C5	ECET35S222SW	2200	1
C6	ECET50S682SW	6800	1
C7	ECET35S222SW	2200	1
C8	ECEA1HU101	100	1
C9	ECEA1VU471	470	1
C10	Not Used		
C11	ECEA1EU101	100	1
C12	Not Used		
C13	ECEA1EU331	330	1
C14	ECEA1HU100	10	S 1
C15,16	ECKD1H103KB	0.01	2
C17	ECEA1AU222	2200	S 1
C18	ECEA1HU100	10	S 1
C19	ECEA2AN100	10	1
C20	Not Used		
C21	ECEA1HU101	100	1

Pcs	Ref. No.	Part Name & Description	Pcs
		(RESISTORS)	
R1	ERD16TJ332	3.3k	1
R2	ERD16TJ102	1k	1
R3	ERD16TJ472	4.7k	1
R4	ERD16TJ332	3.3k	1
R5	ERD16TJ122	1.2k	1
R6	ERD16TJ102	1k	1
R7	ERD16TJ472	4.7k	1
R8	ERD16TJ223	22k	1
R9,10	ERD16TJ683	68k	2
R11,12	PQRD2VJ2R7	2.7	2
R13	ERD16TJ102	1k	1
R14	Not Used		
R15	ERD16TJ471	470	1
R16	ERD16TJ472	4.7k	1
R17	ERD16TJ223	22k	1
R18	ERD16TJ473	47k	1
R19	ERD16TJ332	3.3k	1
R20	ERD16TJ822	8.2k	1
R21	ERD16TJ274	270k	1
R22,23,24	Not Used		
R25,26	ERD16TJ272	2.7k	2
R27,28	ERD16TJ223	22k	2
R29,30	PQRD1VJ3R3	3.3	2
R31	PQRD12TJ101	100	1
		(OTHERS)	
E1	XBA1C15NU100	Fuse (F2,F3)	2
E2	PQJP5D30Z	Connector Plug, 5P (CN1)	1
E3	PQJP5D48Z	Connector Plug, 5P (CN2)	1
E4	PQJP5D7Z	Connector Plug, 5P (CN3)	1
E5	PQJS7L30Z	Connector Socket, 7P (w/Lead) (J5)	1
E6	PQJS8L30Z	Connector Socket, 8P (w/Lead) (J4)	1
E7	PQJS3L32Z	Connector Socket, 3P (J8)	1
LED BOARD PARTS			
PCB3	PQWP3130810M	LED P.C. Board Ass'y (NLA)	1
		(DIODES)	
D800	LN220RPH	LED	1
D801	LN420YPH	LED	1
D802	LN320GPH	LED	1
		(OTHERS)	
E800	PQJS4R31Z	Connector Socket, 4P (w/Lead) (J6)	1
E801	PQHR402Z	Spacer, LED	1

Pcs	Ref. No.	Part Name & Description	Pcs
POWER SUPPLY PARTS			
PCB4	PQWP4T30810M	Power P.C. Board Ass'y (NLA) (with/ C601,C602,C604,C605, ZNR600, L600, E603, E604 and E606)	1
		(CAPACITORS)	
C601,602	ECKDKC222KB	0.0022  S	2
C604,605	ECQU1A473MH	0.047 	2
		(VARISTOR)	
ZNR600	ERZC14DK431U	Varistor 	1
		(SWITCH)	
SW1	EST15704V	Switch, Power 	1
		(TRANSFORMERS)	
T1	PQLT5M9M4A	Power Transformer 	1
T2	PQLT1K9M1A	Bell Transformer	1
		(COIL)	
L600	PQLE61	Coil 	1
		(OTHERS)	
E600	PQWAT616M	Power Cord Assembly 	1
E601	PQUV36Y	Power Box Cover	1
E602	PQUV37Y	Power Box	1
E603	PQJP7C1Z	Connector Plug, 7P 	1
E604	PQJS5L30Z	Connector Socket, 7P (w/Lead) 	1
		(J3)	
E605	PQMD4012Z	Bracket, Power Box	1
E606	XBA2F15NU2	Fuse 	1
E607	PQQT4181Z	Label	1