Thank you for purchasing this Panasonic product. Please read this manual carefully before using this product and save this manual for future use.

**Note**

- In this manual, the suffix of each model number is omitted unless necessary.
- The illustrations such as some keys may differ from the appearance of the actual product.
- Certain products and features described in this document may not be available in your country or area. Contact your phone system dealer/service provider.
- The contents and design of the software are subject to change without notice.

Document Version: 2015-07
### Introduction

**Outline**
This manual describes information about the installation and operation of KX-HDV230.

**Related Documentation**
- **Quick Start Guide**
  Describes basic information about the installation and safety precautions to prevent personal injury and/or damage to property.
- **Administrator Guide**
  Describes detailed information about the configuration and management of this unit.

Manuals and supporting information are provided on the Panasonic Web site at:
[http://www.panasonic.net/pcc/support/sipphone/](http://www.panasonic.net/pcc/support/sipphone/)

**For Future Reference**
Record the information in the space below for future reference.

**Note**
- The serial number and MAC address of this product may be found on the label affixed to the bottom of the unit. You should note the serial number and MAC address of this unit in the space provided and retain this manual as a permanent record of your purchase to aid in identification in the event of theft.

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIAL NO.</td>
<td></td>
</tr>
<tr>
<td>MAC ADDRESS</td>
<td></td>
</tr>
<tr>
<td>DATE OF PURCHASE</td>
<td></td>
</tr>
<tr>
<td>NAME OF DEALER</td>
<td></td>
</tr>
<tr>
<td>DEALER'S ADDRESS</td>
<td></td>
</tr>
<tr>
<td>DEALER'S TEL. NO.</td>
<td></td>
</tr>
</tbody>
</table>
## Table of Contents

**Important Information**
- Important Information ........................................ 4
- For Users in European Countries ............................ 5
- For Users in the United Kingdom .......................... 5
- For Users in Australia ......................................... 5
- For Users in Australia and the United Kingdom ........ 6
- For Users in New Zealand .................................. 6
- For Best Performance ......................................... 7

**Before Operating the Telephones**
- Accessory Information ........................................ 8
- Location of Controls .......................................... 10
- The Display and Icons ...................................... 15
- Adjusting the Volume ........................................ 22
- Incoming/Outgoing Call Log ................................ 22
- Setting the Password ........................................ 23
- Selecting the Display Language ............................. 23
- Entering Characters .......................................... 24
- Basic Operation ................................................ 25

**Making Calls**
- Making Calls ..................................................... 26
- Basic Calling ..................................................... 26
- Easy Dialing ...................................................... 26
- Making a Multicast Voice Paging call ............... 28

**Receiving Calls**
- Receiving Calls ................................................. 29
- Answering Calls ................................................ 29
- Hands-free Mode ............................................... 30
- Training Mode ................................................... 30

**During a Conversation**
- During a Conversation ...................................... 31

**Before Leaving Your Desk**
- Call Forwarding/Do Not Disturb ............................. 34
- Listening to Voice Mail Messages .................... 34

**Using the Phonebook**
- Using the Phonebook ........................................ 35
- Using the Local Phonebook .................................. 36
- Using the Remote Phonebook .............................. 41
- ECO Mode ........................................................ 41
- Checking the Line Status .................................. 42

**Customizing the Telephone**
- Customizing the Telephone ................................ 44

**Installation and Setup**
- Installation and Setup ........................................ 51
- Updating the software ....................................... 58

**Appendix**
- Appendix .......................................................... 59
Important Information

Data Security

- To avoid unauthorized access to this product:
  - Keep the password secret.
  - Change the default password.
  - Set a password that is random and cannot be easily guessed.
  - Change the password regularly.

- This product can store your private/confidential information. To protect your privacy/confidentiality, we recommend that you erase the information such as the phonebook or call log from the memory before you dispose of, transfer or return the product, or have the product repaired.

- It is recommended that you lock the phonebook to prevent stored information from being leaked.

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.
For Users in European Countries

The following declaration is applicable to KX-HDV230NE/KX-HDV230X only

For information of Compliance with EU relevant Regulatory Directives,
Contact to Authorized Representative:
Panasonic Testing Center
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany

Ecodesign information

Please visit here: www.ptc.panasonic.eu
click [Downloads]
→ Energy related products information (Public)

Power consumption in networked standby and guidance are mentioned in the web site above.

For Users in the United Kingdom

- This unit is designed to be installed under controlled conditions of ambient temperature and a relative humidity.
- Avoid installing the unit in damp or humid environments, such as bathrooms or swimming pools.
- 999 and 112 can be dialed on the product after accessing the outside line for the purpose of making outgoing calls to the BT emergency (999) and (112) services.
- The method for accessing an outside line differs depending on the SIP server. For details, confirm the features of the SIP server.

For Users in Australia

WARNING
- Please ensure that a separate telephone, not dependent on local power, is available for emergency use.
- This equipment will be inoperative when mains power fails.
- No “000” or other calls can be made from this device during a mains power failure.
For Users in Australia and the United Kingdom

- This unit is capable of being used in conjunction with hearing aids fitted with inductive coil pick-ups. The handset should be held as for normal conversation. For operation, the hearing aid should be set to its "T" position or as directed in the operating instructions for the hearing aid.
- This unit is designed to aid the visually handicapped to locate dial keys and buttons.

For Users in New Zealand

- This equipment shall not be set to make automatic calls to the Telecom ‘111’ Emergency Service.

PTC General Warning

- The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom’s network services.

The Use of IP Networks through the PSTN

- Internet Protocol (IP) by its nature introduces delay into speech signals as each data packet is formulated and addressed. Telecom Access Standards recommends that suppliers, designers and installers using this technology for calls to or from the PSTN refer to ITU E Model requirements in the design of their networks. The overall aim is to minimize delay, distortion and other transmission impairments, particularly for those calls involving cellular and international networks, which already suffer extensive delay.

Echo cancellation

- Echo cancelers are not normally required in the Telecom PSTN because geographic delays are acceptable where CPE return loss is maintained within Telepermit limits. However, those private networks making use of Voice over IP technology are required to provide echo cancellation for all voice calls. The combined effect of audio/VoIP conversion delay and IP routing delay can cause the echo cancellation time of $\geq 64$ ms to be required.

Important Notice

- Under power failure conditions this appliance may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use.
- No “111” or other calls can be made from this device during a mains power failure.
For Best Performance

Environment
- Keep the product away from heating appliances and devices that generate electrical noise, such as fluorescent lamps, motors and televisions. These noise sources can interfere with the performance of the product.
- Do not place the product in rooms where the temperature is less than 0 °C (32 °F) or greater than 40 °C (104 °F).
- Allow 10 cm (3–15/16 in) clearance around the product for proper ventilation.
- Avoid environments with excessive smoke, dust, moisture, mechanical vibration, shock, or direct sunlight.
- The apparatus is designed to be installed and operated under controlled conditions of ambient temperature and a relative humidity.

Routine Care
- Unplug the AC adaptor from the AC outlet and disconnect the Ethernet cable before cleaning.
- Wipe the product with a soft cloth.
- Do not clean the product with abrasive powder or with chemical agents such as benzine or thinner.
- Do not use liquid cleaners or aerosol cleaners.
- Clean the terminal of the charger periodically.

Placement
- Do not place heavy objects on top of the product.
- Care should be taken so that objects do not fall onto, and liquids are not spilled into, the product.
- Place the charger on a flat surface.

Optional Equipment
- A KX-HDV20 (20 Key Expansion Module) can be used with the product.
- The KX-HDV20 can be used only when the product receives power from the optional AC adaptor; it cannot be used when the product receives power via Power-over-Ethernet (PoE).
- Up to 5 KX-HDV20 units can be connected to the product.
  However, if you mount the product on a wall, mount in with only one KX-HDV20 unit attached to the KX-HDV230. To mount a second KX-HDV20 unit or more, mount each in turn, unattached to the main unit.
Before Operating the Telephones

Accessory Information

Included Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handset</td>
<td>1</td>
</tr>
<tr>
<td>Handset Cord</td>
<td>1</td>
</tr>
<tr>
<td>Stand</td>
<td>1</td>
</tr>
<tr>
<td>Wall Mounting Adaptor</td>
<td>1</td>
</tr>
<tr>
<td>Screws for wall mounting</td>
<td>3*1</td>
</tr>
</tbody>
</table>

*1 The two large screws are for mounting the unit on the wall. The small screw is for attaching the wall mounting adaptor to the unit.

Optional Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>AC Adaptor Model No.*2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Adaptor*1</td>
<td>KX-HDV230NE/ KX-HDV230RU</td>
<td>KX-A422CE (PNLV228)</td>
</tr>
<tr>
<td></td>
<td>KX-HDV230X</td>
<td>KX-A422AG (PNLV228)/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KX-A422AL (PNLV228)/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KX-A422BR (PNLV228)/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KX-A422CE (PNLV228)/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KX-A422UK (PNLV228)/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KX-A422X (PNLV228)</td>
</tr>
<tr>
<td></td>
<td>KX-HDV230SX</td>
<td>KX-A422SX (PNLV228)</td>
</tr>
</tbody>
</table>

*1 This unit complies with the IEEE 802.3af Power-over-Ethernet (PoE) standard. If PoE is available on your network, this unit can receive the necessary power from the network through the Ethernet cable. In this case, no AC adaptor is needed. However, if PoE is not available or if you will use a KX-HDV20 (20 Key Expansion Module), you will need to connect an AC adaptor to the unit.

*2 To order an optional AC adaptor, please order using the "KX-A422xx" model number. For details about which AC adaptor model number you should order, consult your dealer.

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>20 Key Expansion Module Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Key Expansion Module</td>
<td>KX-HDV230NE</td>
<td>KX-HDV20NE</td>
</tr>
<tr>
<td></td>
<td>KX-HDV230RU</td>
<td>KX-HDV20RU</td>
</tr>
<tr>
<td></td>
<td>KX-HDV230X</td>
<td>KX-HDV20X</td>
</tr>
<tr>
<td></td>
<td>KX-HDV230SX</td>
<td>KX-HDV20SX</td>
</tr>
</tbody>
</table>
### KX-HDV20 Included Accessories

<table>
<thead>
<tr>
<th>Stand: 1</th>
<th>Connection cable: 1</th>
<th>Wall mount adaptor for KX-HDV20: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Stand" /></td>
<td><img src="image" alt="Connection cable" /></td>
<td><img src="image" alt="Wall mount adaptor" /></td>
</tr>
</tbody>
</table>

Screws for wall mounting: 3
Screw for attaching the KX-HDV20 to the unit: 1

*1 The two large screws are for mounting the unit on the wall. The small screw is for attaching the wall mounting adaptor to the unit.
Location of Controls

KX-HDV230NE

Before Operating the Telephones
Before Operating the Telephones
Before Operating the Telephones
ENTER
Used to confirm the selected item.

Main LCD (Liquid Crystal Display)
For details about the main LCD, see “Main Display”, Page 15.

Soft Keys
A/B/C (located from left to right) are used to select the item displayed on the bottom line of the display. For details about the soft keys, see “Soft Keys”, Page 18.

Navigator Key
The Navigator Key includes four direction keys. The direction keys are used to move the cursor to select an item. If in standby mode, pressing the keys perform the following functions:
LEFT (←) → Used to display the Incoming call log.*1
RIGHT (→) → Used to open the phonebook.*1
*1 When the BroadCloud (Presence) feature is enabled, the phone will operate as follows. Contact your administrator for further information.
LEFT: Used to display Presence.
RIGHT: Used to display Favorites.

CANCEL
Used to cancel the selected item.

Ringer/Message Waiting/Missed Call Indicator
The lamp flashes when you are receiving a call, or when you have an unread message or missed call notification.

Program Keys [01–12] (Function Keys*1)
Used to perform the assigned function. When a key is assigned as a Line Status key, it can be used to confirm the status of the line. The assigned key name can be confirmed on the self-labeling LCD.
Before Operating the Telephones

For details about changing the program keys, see “Changing the Function Keys (Program Keys and DSS Keys)”, Page 45.

3 Handset Hook
Keeps the handset stable when the unit is mounted on a wall. For details, see “Hooking the Handset”, Page 58.

9 Headset Jack
Optional headsets can be used with this unit. (Not all operations with the headsets can be guaranteed.) For up-to-date information about headsets that have been tested with this unit, refer to the following web site:
http://www.panasonic.net/pcc/support/sipphone/

10 MESSAGE
Used to access your voice mailbox.

11 REDIAL
Used to redial the last dialed number.

12 HEADSET
Used for performing headset operations.

13 MUTE/AUTO ANS
Used to receive an incoming call in hands-free mode or mute the microphone/handset during a conversation.

14 VOL
Used to adjust the ringer/receiver volume.

15 HOLD
During talking, used to place a call on Hold. In standby mode, used to retrieve a call on hold if there is one.

16 Microphone
Used for hands-free conversation.

17 SP-PHONE
Used for performing hands-free operations.

18 TRANSFER
Used to transfer a call to another party.

19 CONF
Used to establish a multiple-party conversation.

20 Page Key
Used to switch the page of program keys displayed on the self-labeling LCD. There are two pages of 12 program keys.

21 Self-labeling LCD
For details about the self-labeling LCD, see “Sub Display (Self-labeling LCD)”, Page 16.

22 DSS Keys [01–20] (Function Keys)*1
Used to perform the assigned function. When a key is assigned as a Line key, it can be used to confirm the status of the line. The key name that you assigned is displayed on the KX-HDV20’s self-labeling LCD. For details about changing the DSS keys, see “Changing the Function Keys (Program Keys and DSS Keys)”, Page 45.

23 DSS Page Key*2
Used to switch the page of DSS keys displayed on the KX-HDV20 self-labeling LCD. There are two pages of 20 DSS keys.

*1 In this manual, "Function key" refers to both program keys and DSS keys.

*2 These keys can be used when you connect a KX-HDV20 to the unit.

Note
- "DSS" stands for "Direct Station Selection".
The Display and Icons

Main Display

[Example]

<table>
<thead>
<tr>
<th>Pictograph</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Call Forwarding</td>
</tr>
<tr>
<td></td>
<td>Do Not Disturb</td>
</tr>
<tr>
<td></td>
<td>Auto Answer</td>
</tr>
<tr>
<td></td>
<td>Ringer Off</td>
</tr>
<tr>
<td>![ECO]</td>
<td>ECO Mode</td>
</tr>
<tr>
<td>![Off-hack Monitor]</td>
<td>Off-hook Monitor</td>
</tr>
<tr>
<td>![Training Mode]</td>
<td>Training Mode</td>
</tr>
<tr>
<td>![Standby display page switcher]</td>
<td>Standby display page switcher</td>
</tr>
</tbody>
</table>

1 Pictographs

2 Date and Time Display

3 Missed Call, New Message, or Name/Number Display

4 Soft Keys

   For more information, see “Soft Keys”, Page 18.

Note

- In standby mode, the line name is displayed. In all other modes, if only one line is configured on the telephone, the line name is not displayed.
- Example images of the display in this manual are samples only, and the actual screen on your phone may vary in color and/or appearance.
Before Operating the Telephones

Sub Display (Self-labeling LCD)

[Example]

KX-HDV230*1

KX-HDV20 (Optional model)*2

*1 Up to 24 keys (12 keys × 2 pages) can be registered.
*2 Up to 40 keys (20 keys × 2 pages) can be registered.

1 Pictographs

<table>
<thead>
<tr>
<th>Pictograph</th>
<th>Meaning</th>
<th>Pictograph</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Number)</td>
<td>No function is assigned.</td>
<td>☑</td>
<td>Phonebook</td>
</tr>
<tr>
<td>Ⓟ</td>
<td>One Touch Dial</td>
<td>☎</td>
<td>Call History</td>
</tr>
<tr>
<td>☎</td>
<td>Line</td>
<td>☎</td>
<td>Simultaneous Ring</td>
</tr>
<tr>
<td>☎</td>
<td>Line Status</td>
<td>☎</td>
<td>Wrap Up</td>
</tr>
<tr>
<td>Ⓣ</td>
<td>BLF</td>
<td>☎</td>
<td>Directed Call Pickup</td>
</tr>
<tr>
<td>Ⓛ</td>
<td>ACD (Login/Logout)</td>
<td>☎</td>
<td>Call Forward</td>
</tr>
<tr>
<td>☺</td>
<td>Hospitality</td>
<td>☺</td>
<td>Transfer</td>
</tr>
<tr>
<td>☼</td>
<td>Conference</td>
<td>☼</td>
<td>Blind Transfer</td>
</tr>
<tr>
<td>Ⓩ</td>
<td></td>
<td>☓</td>
<td>Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Park Retrieve</td>
</tr>
</tbody>
</table>

2 Function Label Name

3 Page Information

<table>
<thead>
<tr>
<th>Indication</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Displaying page 1</td>
</tr>
</tbody>
</table>
Before Operating the Telephones

<table>
<thead>
<tr>
<th>Indication</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Displaying page 2</td>
</tr>
</tbody>
</table>

**Note**

- Images of the display in this manual are samples only. The actual screen on your phone may vary in color and/or appearance.
## Soft Keys

Icons and information shown on the display will vary depending on the context. To select an item shown on the display, press the corresponding soft key. Icons may differ from the appearance of the actual product.

### Soft Key A (Left key)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="book" /></td>
<td>Opens the phonebook. Pressing this key for more than 2 seconds locks the phonebook.</td>
</tr>
<tr>
<td><img src="image" alt="back" /></td>
<td>Returns to the previous display.</td>
</tr>
<tr>
<td><img src="image" alt="book" /></td>
<td>Displayed when in Phonebook Lock. Pressing this key and then entering the password (default: not registered), unlocks the phonebook temporarily. Pressing for more than 2 seconds, then entering the password (default: not registered), unlocks the phonebook. If no password has been set, you cannot lock the phonebook. For details about setting the password, see “Setting the Password”, Page 23.</td>
</tr>
<tr>
<td><img src="image" alt="answer" /></td>
<td>Answers a call.</td>
</tr>
<tr>
<td><img src="image" alt="line" /></td>
<td>Establishes a multiple-party conversation (Conference).</td>
</tr>
<tr>
<td><img src="image" alt="line" /></td>
<td>Opens the line selection screen.</td>
</tr>
</tbody>
</table>

### Soft Key B (Middle key)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="menu" /></td>
<td>Opens the main menu.</td>
</tr>
<tr>
<td><img src="image" alt="ok" /></td>
<td>Confirms the entry.</td>
</tr>
<tr>
<td><img src="image" alt="call" /></td>
<td>Makes a call.</td>
</tr>
<tr>
<td><img src="image" alt="ringer off" /></td>
<td>Turns the ringer off.</td>
</tr>
<tr>
<td><img src="image" alt="book" /></td>
<td>Stores a new item in the phonebook.</td>
</tr>
</tbody>
</table>

### Soft Key C (Right key)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="going back" /></td>
<td>Opens the Outgoing Call Log.</td>
</tr>
<tr>
<td><img src="image" alt="going forward" /></td>
<td>Opens the Incoming Call Log.</td>
</tr>
<tr>
<td><img src="image" alt="blind" /></td>
<td>Performs an unscreened (blind) transfer.</td>
</tr>
<tr>
<td><img src="image" alt="abc" /></td>
<td>Displayed when in Latin character entry mode.</td>
</tr>
<tr>
<td><img src="image" alt="0-9" /></td>
<td>Displayed when in Numeric character entry mode.</td>
</tr>
<tr>
<td><img src="image" alt="special character" /></td>
<td>Displayed when in Special character (Extended 1) entry mode.</td>
</tr>
</tbody>
</table>
## Before Operating the Telephones

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reject</strong></td>
<td>Used to reject an incoming call.</td>
</tr>
<tr>
<td><strong>Next</strong></td>
<td>Advances to the next display.</td>
</tr>
<tr>
<td><strong>Clear</strong></td>
<td>Clears digits or characters.</td>
</tr>
<tr>
<td><strong>Search</strong></td>
<td>Searches for an item in the phonebook alphabetically.</td>
</tr>
<tr>
<td><strong>AM/PM</strong></td>
<td>Used to select AM or PM when setting the time.</td>
</tr>
<tr>
<td><strong>Cancel</strong></td>
<td>Used to cancel the setting.</td>
</tr>
<tr>
<td><strong>Delete</strong></td>
<td>Used to delete the setting.</td>
</tr>
<tr>
<td><strong>Save</strong></td>
<td>Used to save a setting.</td>
</tr>
<tr>
<td><strong>Sšš</strong></td>
<td>Displayed when in Special character (Extended 2) entry mode.</td>
</tr>
<tr>
<td><strong>leftrightarrow¹</strong></td>
<td>Used to set Call Forwarding and Do Not Disturb.</td>
</tr>
<tr>
<td><strong>ΑΒΓ</strong></td>
<td>Displayed when in Greek character entry mode.</td>
</tr>
<tr>
<td><strong>АБВ</strong></td>
<td>Displayed when in Cyrillic character entry mode.</td>
</tr>
<tr>
<td><strong>HOT9</strong></td>
<td>Dials the number assigned to the Hot Key.</td>
</tr>
<tr>
<td><strong>Page¹²</strong></td>
<td>Used to make a Multicast Voice Paging call.</td>
</tr>
<tr>
<td><strong>Park¹²</strong></td>
<td>Used to retrieve a parked call (Call Parking).</td>
</tr>
<tr>
<td><strong>Call Log</strong></td>
<td>Opens the call log.</td>
</tr>
<tr>
<td><strong>Recall¹</strong></td>
<td>Disconnects the current call and allows you to make another call without hanging up.</td>
</tr>
<tr>
<td><strong>Pause¹²</strong></td>
<td>Inserts a dialing pause.</td>
</tr>
</tbody>
</table>

*¹ This soft key can be configured to appear as Soft Key A, B, or C.
*² This soft key is displayed only when configured on the telephone.

### Editing Soft Keys

**Changing the default settings**

**[In standby mode]**

1. **Menu**
2. **[▲]/[▼]: "Basic Settings" → OK**
3. **[▲]/[▼]: "Key Option" → OK**
4. **[▲]/[▼]: "Soft Key Edit" → OK**
5. **[▲]/[▼]: Select a desired soft key. → OK**
6. **[▲]/[▼]: "Standby"/"Talking" → OK**
7. **[▲]/[▼]: "Default" → OK**
Assigning Function Keys
[In standby mode]
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Key Option" → OK
4. [▲]/[▼]: "Soft Key Edit" → OK
5. [▲]/[▼]: Select a desired soft key. → OK
6. [▲]/[▼]: "Standby"/"Talking" → OK
7. [▲]/[▼]: "Function Key" → OK
8. [▲]/[▼]: Select the desired item. → OK

Assigning Hot Key Dial keys
[In standby mode]
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Key Option" → OK
4. [▲]/[▼]: "Soft Key Edit" → OK
5. [▲]/[▼]: Select a desired soft key. → OK
6. [▲]/[▼]: "Standby"/"Talking" → OK
7. [▲]/[▼]: "Hot Key Dial" → OK
8. [▲]/[▼]: Select the desired item. → OK
Main Menu

Press Menu to display the following main menu.

Call Center*1
Used to access the Call Center feature.

Presence*1
Used to access the Presence feature.

Fwd/DND
Sets the Call Forwarding or Do Not Disturb features.
See “Call Forwarding/Do Not Disturb”, Page 34.

Paging*1
Makes a Multicast Voice Paging call.

New Phonebook
Adds a new entry into the local phonebook.
See “Storing an Item in the Local Phonebook”, Page 36.

Incoming Log
Used to display the incoming call log.
See “Incoming/Outgoing Call Log”, Page 22.

Outgoing Log
Used to display the outgoing call log.
See “Incoming/Outgoing Call Log”, Page 22.

Phonebook
Used to access the local or remote phonebook.
See “Using the Phonebook”, Page 35.

ECO Mode
Sets the ECO mode feature.
See “ECO Mode”, Page 41.

Line Status
Used to display the status of each line on the main LCD.
See “Checking the Line Status”, Page 42.

Basic Settings
Used to access the basic settings menu.
See “Changing the Basic Settings”, Page 49.

System Settings
Used to access the system settings menu.
See “Changing the System Settings”, Page 49.

Application*1
Used to access the Application feature.
*1 This item is displayed only when the feature is enabled. Contact your administrator for further information.
Adjusting the Volume

Adjusting the Receiver/Speaker/Headset Volume
1. [-]/[+] volume key: Adjust the volume during a conversation.

Note
• Both receiver volume and headset volume are adjusted in training mode. See “Training Mode”, Page 30.

Adjusting the Ringer Volume or Turning the Ringer Off
[In standby mode]
1. [-]/[+] volume key: Adjust the ringer volume.

Note
• For details about setting the ringer pattern, see “Incoming Option”, Page 61.

Adjusting the Ringer Volume or Turning the Ringer Off while Ringing
While receiving a call, do the following to adjust the ringer volume or turn the ringer off:

Note
• If you attach a headset while receiving an incoming call, ringing will be heard from the speaker.

To adjust the ringer volume
1. [-]/[+] volume key: Adjust the ringer volume.
   *1 The adjusted volume level will also be used for subsequent calls.

To turn the ringer off
1.

—

Incoming/Outgoing Call Log

Displaying the Incoming Call Log
[In standby mode]
1. [←]
2. [▲]/[▼]: "Incoming Log" → OK

Note
• If "Missed Calls" is displayed on the LCD in standby mode, select "Missed Call" at step 2.

Displaying the Outgoing Call Log
[In standby mode]
1. Call Log
2. [▲]/[▼]: "Outgoing Log" → OK

Note
• If "Missed Calls" is displayed on the LCD in standby mode, select "Missed Call" at step 2.
Making a call using the Incoming/Outgoing Call Log
See “Using the Incoming/Outgoing Call Log”, Page 27.

Storing an item using the Incoming/Outgoing Call Log
See “Storing an Item Using the Incoming or Outgoing Call Log”, Page 37.

Deleting Items in the Incoming Call Log
[When the Incoming Call Log is displayed]
1. [△]/[∇]: Select the desired item. → Menu
2. [△]/[∇]: "Delete"*1 → OK
3. [△]/[∇]: "Yes" → OK
*1 You can select "Delete All" instead to delete all items.

Deleting Items in the Outgoing Call Log
[When the Outgoing Call Log is displayed]
1. [△]/[∇]: Select the desired item. → Menu
2. [△]/[∇]: "Delete"*1 → OK
3. [△]/[∇]: "Yes" → OK
*1 You can select "Delete All" instead to delete all items.

Setting the Password
The telephone password is not set by default. You must register a password (4 digits) before use. You cannot use the following features without setting a password:
• Phonebook lock (See “Locking the Local Phonebook”, Page 40).

Note
• To avoid unauthorized access to this product:
  - Set a password that is random and cannot be easily guessed.
  - Change the password regularly.
• Make a note of the password so that you will not forget it.

To set
[In standby mode]
1. Menu
2. [△]/[∇]: "Basic Settings" → OK
3. [△]/[∇]: "Other Option" → OK
4. [△]/[∇]: "Change Password" → OK
5. Enter a new password (4 digits [0–9]).
6. Verify the password by entering it again as in step 5.

Selecting the Display Language
You can select the language displayed on your LCD.
Before Operating the Telephones

[In standby mode]
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Display Option" → OK
4. [▲]/[▼]: "Language" → OK
5. [▲]/[▼]: Select a language. → OK

- For a list of the languages that can be selected, see “Display Option”, Page 63.

Entering Characters

You can enter characters and digits using the dialing keys. You can select one of the character modes by pressing the Right Soft Key while entering a name. The function icon above the soft key displays the current character mode. For available characters, see “Character Mode Table”, Page 59. To change the character mode while editing a name in the Phonebook, press the Right Soft Key.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Character Mode Transition</th>
</tr>
</thead>
<tbody>
<tr>
<td>KX-HDV230NE, KX-HDV230X, KX-HDV230SX</td>
<td></td>
</tr>
<tr>
<td>ABC (Latin)</td>
<td>0-9 (Numeric)</td>
</tr>
<tr>
<td>♣ A♣ B♣ (Greek)</td>
<td>AAA (Extended 1)</td>
</tr>
<tr>
<td>♣ AAA♣ (Extended 2)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KX-HDV230RU</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A♣ B♣ (Cyrillic)</td>
<td>0-9 (Numeric)</td>
</tr>
<tr>
<td>♣ A♣ B♣ (Latin)</td>
<td>AAA (Extended 1)</td>
</tr>
<tr>
<td>♣ AAA♣ (Extended 2)</td>
<td></td>
</tr>
</tbody>
</table>

Example: To enter "Anne" in Latin Mode.
2 → [▲] → Α → 6 → 6 → [▲] → Α → 6 → 6 → [▲] → 3 → 3
- To switch between uppercase and lowercase, press Α.
- To enter a character located on the same dialing key as the previous character, move the cursor by pressing the Navigator Key ↑, then enter the desired character.
- If you enter a different character by mistake, press the Navigator Key [▲] or [▼] to highlight the character, press Clear to delete it, then enter the correct character.
- To clear an entire line, press Clear for more than 1 second.
- To move the cursor, press the Navigator Key [▲], [▼], [▲] or [▼].
Basic Operation

Going off- and on-hook

There are several ways to go off-hook and on-hook:

- Using the corded handset
- Using the //[SP-PHONE], /[HEADSET], [CANCEL] key
- Using the soft key

Going off-hook

In this manual, when you see the phrase "off-hook", you can do any of the following:

- Lift the corded handset off its cradle.
- Press //[SP-PHONE] while the corded handset is on its cradle. This enables hands-free mode.
- Press /[HEADSET] when using a headset.
- Press the corresponding function key to select a line.*1

*1 When a function key is assigned as a Line key, this feature is available.

Going on-hook

In this manual, when you see the phrase "on-hook", you can do any of the following:

- Replace the corded handset on its cradle.
- Press //[SP-PHONE], [CANCEL] when you are in hands-free mode.
- Press /[HEADSET], [CANCEL] when using a headset.
- Press [CANCEL].
Making Calls

You can confirm that the number was dialed correctly before calling (Predialing) by entering the number, then going off-hook.

To clear an entire number while predialing, press Clear for more than 1 second.

If an outside call is received from a phone number stored in the Phonebook, the number and name of the caller will be displayed in the call log.

To cancel dialing, press [CANCEL].

To insert a 3 second pause between phone numbers, press *1. It is useful when you want to operate voice mail service without listening to pre-recorded announcement, for example. Repeat as needed to create longer pauses.

*1 This soft key is displayed only when configured on the telephone. Contact your administrator for further information.

Basic Calling

Calling by Dialing

1. In standby mode, go off-hook.
2. Dial the outside party’s number.
3. Call
4. Go on-hook to end the call.

Note

You can use a specific line by pressing a function key assigned to a line (see “Changing the Function Keys (Program Keys and DSS Keys)”, Page 45) or by using the Line Status screen (see “Checking the Line Status”, Page 42).

To dial a new number without going on-hook, follow the procedure below.

1. Menu
2. [▲]/[▼]: "Flash/Recall"
3. OK

Predialing

In standby mode, you can start dialing while still on-hook. After dialing the number, go off-hook to begin the call.

Easy Dialing

Making a call using the redial list

The last phone number dialed is stored in the redial list (32 digits max.).

[In standby mode]
1. ●/REDIAL
2. Go off-hook.
Hot Key Dialing

You can assign a phone number to each number key and then access the desired phone number by simply pressing and holding the assigned number key.
1. Press and hold the dialing key (0–9) assigned as a Hot Key for more than 1 second.
2. Go off-hook.

Note
• While the Hot Key’s information is displayed, you can press [▲] or [▼] to select another Hot Key number.
• If Hot Key dialing is set to "Auto", a Hot Key number can also be dialed by pressing and holding the assigned dialing key for a specified number of seconds. For details, see “Selecting the Type of Hot Key Dialing”, Page 45.
• For details about assigning Hot Keys, see “Assigning Hot Keys From Phonebook”, Page 44.

Using the Hot Line

If your administrator has configured this function, you can make a call to a registered phone number automatically. Contact your administrator for further information.

[In standby mode]
1. Go off-hook.

Using the Incoming/Outgoing Call Log

Using the Incoming Call Log

[In standby mode]
1. [▲]
2. [▲]/[▼]: "Incoming Log" → OK
3. [▲]/[▼]: Select an incoming call log.
4. Go off-hook.

Note
• If "Missed Calls" is displayed on the LCD in standby mode, you can select "Missed Call" at step 2 to select a number to call.

Using the Outgoing Call Log

[In standby mode]
1. Call Log
2. [▲]/[▼]: "Outgoing Log" → OK
3. [▲]/[▼]: Select an outgoing call log.
4. Go off-hook.

Note
• If "Missed Calls" is displayed on the LCD in standby mode, you can select "Missed Call" at step 2 to select a number to call.

Using the Phonebook

Using the Local Phonebook

[In standby mode]
1.  

27
Making Calls

2. [▲]/[▼]: "Phonebook" → OK

3. Enter the name or the first character(s) of the desired name. → OK

4. [▲]/[▼]: Select the desired item. → [ENTER]

5. [▲]/[▼]: Select the desired phone number.

6. Go off-hook.

*1 If only Local Phonebook is permitted, this step is skipped.
*2 If you push and hold [▲]/[▼], the next/previous items will be displayed automatically.

Note

- If the Local Phonebook is not permitted, this feature cannot be used. Contact your administrator for further information.
- For details about making a call using the Phonebook, see “Searching for an Item in the Local Phonebook”, Page 39.

Using the Remote Phonebook

[In standby mode]

1. 

2. [▲]/[▼]: "Remote Phonebook" → OK

3. Enter the name or the first character(s) of the desired name. → OK

4. [▲]/[▼]: Select the desired item. → OK

5. Press [▲] or [▼] to select the desired phone number.

6. Go off-hook.

*1 If only Remote Phonebook is permitted, this step is skipped.
*2 If you push and hold [▲]/[▼], the next/previous items will be displayed automatically.

Note

- If the Remote Phonebook is not permitted, this feature cannot be used. Contact your administrator for further information.
- For details about making a call using the Remote Phonebook, see “Searching for an Item in the Remote Phonebook”, Page 41.

Making a Multicast Voice Paging call

When you make a paging call, the voice will be heard through the speaker phone of the other telephones.

[In standby mode]

1. 

2. [▲]/[▼]: "Paging"*1 → OK

3. [▲]/[▼]: Select a desired channel group. → OK

*1 Paging is available only when the feature is enabled. Contact your administrator for further information.
Receiving Calls

- You can select the ringer for each type of incoming call. See “Incoming Option”, Page 61.
- You can also use Auto Answer to answer a call. See “Answer Option”, Page 61.
- The volume of the ringer can be adjusted, or turned off. See “Adjusting the Ringer Volume or Turning the Ringer Off”, Page 22.
- If you attach a headset while receiving an incoming call, ringing will be heard from the speaker.
- Up to 24 calls can be received at the same time. The 25th caller will hear a busy tone.

Caller ID

If an outside call that contains Caller ID information (a caller’s name and telephone number) is received, this information will be logged in the incoming call log and displayed on the LCD.
If a call from a number matching a number entered in the phonebook is received, the name registered in the phonebook for that number will be displayed along with the number.
If caller information is sent by the phone system and there is also information stored in the phonebook for the same number, the information stored in the phonebook will be displayed.

Answering Calls

To answer an incoming call
1. Go off-hook.*1
   *1 When the handset is already off-hook, press and release the hook switch.

Note
- When a call is received while another call is on hold, pressing and releasing the hook switch will answer the call.

To answer an incoming call on a specific line
1. Press the corresponding function key.

Note
- When a function key is assigned as a Line key, this feature is available.
- Line keys with incoming calls will be flashing blue rapidly.
- You can select the ringer pattern for each type of incoming call. For details, see “Incoming Option”, Page 61.

To answer an incoming call when receiving multiple incoming calls
1. [Line]
2. [▲]/[▼]: Select an incoming call. → [Answer]
3. Go off-hook.

To reject an incoming call
1. While an incoming call is ringing, press [Reject].
2. The call will be rejected, and the telephone will return to standby mode.

Note
- Calls from specific numbers can be automatically rejected. For details, see “Incoming call barring (Caller ID service users only)”, Page 47.
Receiving Calls

Hands-free Mode

In hands-free mode, you can talk and hear the other party in a conversation without using the handset. This mode is useful for performing other tasks during a conversation, such as writing.

Enabling hands-free mode

If you press `SP-PHONE` in standby mode, you can enable hands-free mode. During a conversation using a headset, you can enable hands-free mode by pressing `SP-PHONE`.

Canceling hands-free mode

You can cancel hands-free mode in one of the following ways:

- During a conversation in hands-free mode, go off-hook.
- While you are talking in hands-free mode and a headset is attached to the unit, press `HEADSET` to continue the conversation using the headset.

Training Mode

In training mode, you can hear the other party in a conversation from both a headset and the handset. This mode is useful for training an operator. While the operator talks to the other party on the headset, a trainer also can listen to the other party on the handset and teach the operator how to respond to the caller.

Starting training mode

[During a conversation using a headset]
1. Go off-hook by lifting the handset off its cradle.
2. Press `HEADSET` to start training mode.

Ending training mode

1. Replace the handset on its cradle.
   The conversation will continue using the headset.
During a Conversation

Transferring a Call (Call Transfer)

You can transfer a call to another destination (extension or outside party).

To transfer
2. Dial the party you want to transfer to. → Call
3. Wait until the other party answers to announce the transfer.
4. Go on-hook.

Note
- To return to the call before the transfer destination answers, press [CANCEL].

To do a blind transfer
1. Press Blind 1 during a conversation.
2. Dial the party you want to transfer to. → Call

*1 If blind transfers are not permitted, this soft key is not displayed. Contact your administrator for further information.

Holding a Call

You can put a call on hold by holding the call at your extension.

Holding

To hold the current call
1. [HOLD]

Note
- When a function key is assigned as a Line key, if you press a Line key other than the one for the current call, the call is put on hold or is disconnected depending on the Automatic Call Hold settings. For details, contact your phone system dealer/service provider.

To retrieve a call on hold at your line

[When one line is on hold]
1. [HOLD]

[When two or more lines are on hold]
1. [HOLD]
2. [▲]/[▼]: Select a line on hold. → OK

Note
- When a call is received while another call is on hold, pressing and releasing the hook switch will answer the call.
- If a function key is assigned as a Line key, and a call is on hold on that line, you can retrieve the call on hold by following the step below.
  1. Press the corresponding function key.
**During a Conversation**

**Holding in a System Parking Zone (Call Park)**

You can use this feature as a transferring feature.

When Call Park is permitted, the Park soft key is displayed. However, the Call Park feature number must be set beforehand. Also, depending on your phone system, you may need to enter a parking zone number to retrieve a parked call. The feature depends on your phone system. Contact your administrator for further information.

**To set**

1. Press Park during a conversation.

**To retrieve (Call Park Retrieve)**

[In standby mode]

1. Enter the Call Park Retrieve feature number.
2. Go off-hook.

**Note**

- Depending on the telephone system, the Park soft key might blink to show that the line has a parked call. In this case, you can retrieve the call by pressing the blinking Park soft key. However, to retrieve a parked call using the soft key, the Call Park Retrieve feature number must be set beforehand. Contact your administrator for further information.

**Talking to Two Parties Alternately (Call Splitting)**

When talking to one party while the other party is on hold, you can swap the calls back and forth (alternately).

**To alternate between the parties leaving one party on hold temporarily**

2. Dial the other party’s extension number.
3. After talking to the other party, press Line.
4. [△]/[▼]: Select the original party. → OK
5. Talk to the party.

**Three-party Conference**

During a conversation, you can add an additional party to your call and establish a conference call.

**Note**

- Your phone system may support advanced conference features, such as conference calls with four or more parties. In this case, the procedures for handling a conference call may be different from those explained in this section. For details, contact your phone system dealer/service provider.

**Making a Conference Call**

1. Press △/[CONF] during a conversation.
2. Dial the party you want to add to the conversation. → Call
3. △/[CONF]

**Removing a Party from the Conference**

During a conference, you can remove other parties from the conference. However, this operation is available only during conference calls you initiate.

1. During a conference call, press △/[HOLD].

32
2. Press \:\([\text{HOLD}]\) again to show the conference parties on hold.
3. \([\text{A}]/[\text{V}]\): Select the party to remove. → OK
4. Talk to the party and go on-hook to end the call.
5. Go off-hook and talk to the remaining party.

### Ending a Conference Call

To end the conference call, go on-hook.

### Mute

You can disable the microphone or the handset to consult privately with others in the room while listening to the other party on the phone through the speaker or the handset.

**To set/cancel**

1. \([\text{MUTE/AUTO ANS}]\)

**Note**

- When the \([\text{MUTE}]\) icon is blinking on the LCD, Mute is on.
- During Mute, even if you switch from/to speakerphone, Mute will continue.
- During Mute, even if you connect/disconnect a headset, Mute will continue.

### Call Waiting

During a conversation, if a second call arrives, you will hear a call waiting tone. You can answer the second call by disconnecting or holding the current call. This is an optional telephone company service. You can receive a call waiting tone and the caller’s information. For details, contact your phone system dealer/service provider.

**To disconnect the current call and then talk to the new party**

1. Go on-hook.
2. Go off-hook.

**To hold the current call and then talk to the new party**

1. \([\text{Answer}]\)

**Note**

- You can also answer the call by pressing \:\([\text{HOLD}]\).

### Off-hook Monitor

During a two-party conversation with the corded handset, you can allow other people to listen to the conversation through the speaker while you continue the conversation using the corded handset.

**To start/To cancel**

1. Press \([\text{SP-PHONE}]\) during a conversation.

**Note**

- When off-hook monitor is active, replacing the corded handset to its cradle enables hands-free mode.
**Call Forwarding/Do Not Disturb**

You can have incoming calls automatically forwarded to another destination. You can also have incoming calls rejected (Do Not Disturb).

**To access the FWD/DND settings**

1. **Menu**

2. [▲]/[▼]: "Fwd/DND" → **OK**

3. If the unit has multiple lines, press [▲] or [▼] to select the desired line. → **OK**

4. [▲]/[▼]: Select the type of FWD or DND setting to apply. → **OK**
   
   The settings are as follows:
   - **DND**: Enable Do Not Disturb
     (All incoming calls are automatically rejected.)
   - **Fwd(All)**: Enable Forward All Calls
     (All incoming calls are forwarded.)
   - **Fwd(Busy)**: Enable Forward Busy
     (Incoming calls are forwarded only when your extension is in use.)
   - **Fwd(NA)**: Enable Forward No answer
     (An incoming call is forwarded if you do not answer the call within a certain amount of time.)

5. If a Forward setting is selected, enter a new forward destination number, or confirm and modify a previously set forward destination number. → **OK**

**Note**

- When Call Forwarding and/or Do Not Disturb is enabled, **←** and/or **→** appears on the display in standby mode.

**Listening to Voice Mail Messages**

When you receive a voice message, "Voice MSG" is displayed. You can check your new messages by accessing your mailbox.

**[In standby mode]**

1. Press and hold [istence]/MESSAGE].

2. [▲]/[▼]: Select the line on which [istence] is displayed. → **OK**

**Note**

- Step 2 is not necessary if only one line is configured on the telephone.
Using the Phonebook

The KX-HDV230 has 2 types of phonebook.
1. Local Phonebook
   This Phonebook is stored in the telephone.
2. Remote Phonebook
   If your telephone company provides the remote phonebook service, you can use it. For details, contact your phone system dealer/service provider.

<table>
<thead>
<tr>
<th>Action</th>
<th>Local Phonebook</th>
<th>Remote Phonebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storing new items</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Editing stored items</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Deleting store items</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Searching the phonebook by name</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Searching the phonebook by category</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Phone numbers for each item</td>
<td>Up to 5</td>
<td>Up to 5*1</td>
</tr>
<tr>
<td>Private Ring</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Locking the phonebook</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*1 This number depends on the service being used.
Using the Local Phonebook

You can store up to 500 phone numbers in the telephone along with names for easy access. You can also set unique ringer patterns for different categories to identify incoming calls. All Phonebook items are stored in alphabetical order. For security purposes, you can lock the Phonebook.

- To search for an item in the Phonebook, see “Searching for an Item in the Local Phonebook”, Page 39.
- To refer to another phonebook that can contain more than 500 items, see “Using the Remote Phonebook”, Page 41.

Note

- We recommend that backups are made of the phonebook data, in case the data becomes unrecoverable due to product malfunction.
- A single entry (i.e., name) can have multiple phone numbers. Since the phonebook capacity is limited by the number of stored phone numbers, storing multiple phone numbers in an entry decreases the maximum number of entries.
- In addition, if your phone service provider supports the following phonebook data, you can download it via the network.
  - In a name that exceeds 24 characters, the exceeding characters will be deleted.
  - Phone numbers that exceed 32 digits are invalid.

Private Ring

You can organize entries in the Phonebook into one of 9 Private Ring Categories. It is possible to set a different ringer pattern*1 for each category. When the displayed Caller ID*2 matches a phone number or name stored in the Phonebook, the telephone rings according to the Private Ring Category settings.

*1 For Ringer patterns, see “Incoming Option”, Page 61.
*2 For Caller ID information, see “Caller ID”, Page 29.

Storing an Item in the Local Phonebook

Storing a New Item
[In standby mode]

1. Menu
2. [A]/[v]: "New Phonebook" → OK
3. Enter a name (max. 24 characters). → OK
4. [A]/[v]: Select a phone number type (1 to 5). → OK
5. Enter the phone number (max. 32 digits). → OK
6. Repeat steps 4 and 5 to add additional phone number types.
7. [A]/[v]: "Category Off" → OK
8. Select a category. → OK
9. To select a default number for the entry, press [A] or [v] to select "Default TEL No". → OK
10. [A]/[v]: Select the number to use as the default number. → OK
11. Save

Note

- Steps 7 and 8 can be omitted if you do not want to assign a category.
Steps 9 and 10 can be omitted if you do not want to assign a default number. (The first number entered for an entry will automatically be assigned as the default number.)

The valid digits are "0" through "9", "G", "B", "J", "P".

If an item with the same name and number exists, the new information added will be merged with the existing item.

To enter characters, see “Entering Characters”, Page 24.

Storing an Item Using the Dialing

You can dial a number first and then add it as a phonebook entry.

**[In standby mode]**

1. Dial a number.
2. 
3. Enter a name (max. 24 characters). → OK
4. [△]/[▼]: Select a phone number type (1 to 5). → OK
5. Edit the phone number if desired. → OK
6. Repeat steps 4 and 5 to add additional phone number types.
7. [△]/[▼]: "Category Off" → OK
8. Select a category. → OK
9. To select a default number for the entry, press [△] or [▼] to select "Default TEL No" → OK
10. [△]/[▼]: Select the number to use as the default number. → OK
11. Save

**Note**

- Steps 7 and 8 can be omitted if you do not want to assign a category.
- Steps 9 and 10 can be omitted if you do not want to assign a default number. (The first number entered for an entry will automatically be assigned as the default number.)
- The valid digits are "0" through "9", "G", "B", "J", "P".
- If an item with the same name and number exists, the new information added will be merged with the existing item.
- To enter characters, see “Entering Characters”, Page 24.

Storing an Item Using the Incoming or Outgoing Call Log

You can add a number listed in the Incoming or Outgoing Call Log to the Local Phonebook.

**[In standby mode]**

1. Display the incoming or outgoing call log. For details, see Page 22.
2. [△]/[▼]: Select the desired item. → Menu
3. [△]/[▼]: "Save Phonebook" → OK
4. Edit the name if desired. → OK
5. [△]/[▼]: Select a phone number type (1 to 5). → OK
6. Edit the phone number if desired. → OK
7. Repeat steps 5 and 6 to add additional phone number types.
8. [△]/[▼]: "Category Off" → OK
9. Select a category. → OK
10. To select a default number for the entry, press [△] or [▼] to select "Default TEL No" → OK
**Using the Phonebook**

11. [△]/[▼]: Select the number to use as the default number. → OK

12. Save

**Note**

- Steps 8 and 9 can be omitted if you do not want to assign a category.
- Steps 10 and 11 can be omitted if you do not want to assign a default number. (The first number entered for an entry will automatically be assigned as the default number.)
- The valid digits are "0" through "9", "*", "#", and "P".
- If an item with the same name and number exists, the new information added will be merged with the existing item.
- To enter characters, see “Entering Characters”, Page 24.

---

**Editing a stored item in the Local Phonebook**

**Editing a Stored Item**

[In standby mode]

1. Menu

2. [△]/[▼]: "Phonebook" → OK

3. Enter the name or the first character(s) of the desired name. → OK

4. [△]/[▼]: Select the desired name, phone number, category or default telephone number. → Menu

5. [△]/[▼]: "Edit" → OK

6. Edit the data as necessary. → OK

7. Repeat step 4 to 6 and edit the items you want to change.

8. Save

*1 Depending on your service provider, there are cases where this menu does not appear. In this case, step 2 is skipped.

**Note**

- To change a character or digit, press [▼] or [▲] to highlight it, press Clear to delete it, and then enter the new character or digit.
- To clear an entire line, press and hold Clear for more than 1 second.
- To move the cursor to the left or right, press [▼] or [▲], respectively.
- For details about entering characters, see “Entering Characters”, Page 24.

---

**Editing Category Names**

You can edit the names of the categories in the phonebook.

[In standby mode]

1. Menu

2. [△]/[▼]: "Basic Settings" → OK

3. [△]/[▼]: "Display Option" → OK

4. [△]/[▼]: "Category Name" → OK

5. [△]/[▼]: Select the desired category number (1–9). → OK

6. Enter a name for the category (max. 13 characters). → OK

7. Repeat steps 5 and 6 for each category name to edit.
Deleting a Stored Item in the Local Phonebook

Deleting a Stored Item

[In standby mode]

1. 
2. [▲][▼]: "Phonebook"*1 → OK
3. Enter the name or the first character(s) of the desired name. → OK
4. [▲][▼]: Select the desired item.
5. Menu
6. [▲][▼]: "Delete Number" → OK *2
7. [▲][▼]: "Yes" → OK

*1 Depending on your service provider, there are cases where this menu does not appear. In this case, step 2 is skipped.
*2 To delete all items, select "Delete All No." instead of "Delete Number".

Searching for an Item in the Local Phonebook

You can search for an item in the phonebook by following the steps below.

Searching by Name

You can also search for an item in the phonebook by entering a name:

[In standby mode]

1. 
2. [▲][▼]: "Phonebook"*1 → OK
3. Enter the name or the first character(s) of the desired name. → OK
4. [▲][▼]: Select the desired item. → [ENTER] *2
5. [▲][▼]: Select the desired phone number.
6. To make a call, go off-hook.

*1 If only Local Phonebook is permitted, this step is skipped.
*2 If you push and hold [▲][▼], the next/previous items will be displayed automatically.

Searching by Category

If items in the phonebook have been assigned categories, you can search by category.

[In standby mode]

1. 
2. [▲][▼]: "Phonebook"*1 → OK
3. #
4. [▲][▼]: Select a category. → OK
5. Enter the name of the item in the category. → OK
6. [▲][▼]: Select the desired item.
7. To make a call, go off-hook.

*1 If only Local Phonebook is permitted, this step is skipped.
Searching by pressing Dial Keys

You can also search for an item in the phonebook by pressing multiple dial keys when the phonebook list is displayed:

1. Press the dial keys to enter the first character(s) of the desired name in accordance with the character tables.*1 → OK

*1 For details about the characters assigned to the dial keys, see the following table.

<table>
<thead>
<tr>
<th>Suffix</th>
<th>NE/X/SX</th>
<th>NE/X/SX</th>
<th>RU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keys</td>
<td>ABC (Latin)</td>
<td>АВГ (Greek)</td>
<td>АБВ (Cyrillic)</td>
</tr>
<tr>
<td>1</td>
<td>Г→ґ→Х→1</td>
<td>Г→ґ→Х→1</td>
<td>А→Б→В→Г→ґ→Х→1</td>
</tr>
<tr>
<td>2</td>
<td>А→В→С→2</td>
<td>А→В→Г→2</td>
<td>Г→Д→Е→Е→2→А→В→С→2</td>
</tr>
<tr>
<td>3</td>
<td>Д→Е→F→3</td>
<td>Δ→Ε→Ζ→3</td>
<td>Ζ→Θ→Ι→Ω→З→Δ→Ε→F→3</td>
</tr>
<tr>
<td>4</td>
<td>G→H→І→4</td>
<td>Н→Θ→І→4</td>
<td>Κ→Λ→М→4→G→H→І→4</td>
</tr>
<tr>
<td>5</td>
<td>J→K→L→5</td>
<td>Κ→Λ→М→5</td>
<td>Н→О→Ν→5→J→K→L→5</td>
</tr>
<tr>
<td>6</td>
<td>M→N→O→6</td>
<td>Ν→Ο→Ο→6</td>
<td>Ρ→Ι→Ο→6→M→N→O→6</td>
</tr>
<tr>
<td>7</td>
<td>P→Q→R→S→7</td>
<td>Π→Ρ→Σ→7</td>
<td>У→Φ→Χ→7→Ρ→Q→R→S→7</td>
</tr>
<tr>
<td>8</td>
<td>T→U→V→8</td>
<td>Τ→Υ→Φ→8</td>
<td>Ц→Ч→Ш→8→Τ→У→V→8</td>
</tr>
<tr>
<td>9</td>
<td>W→X→Y→Z→9</td>
<td>Х→Ψ→Ω→9</td>
<td>Щ→Ъ→Ы→9→W→X→Y→Z→9</td>
</tr>
<tr>
<td>0</td>
<td>0→Space</td>
<td>0→Space</td>
<td>Э→Ю→Я→0→Space</td>
</tr>
</tbody>
</table>

- Pressing a key repeatedly will cycle through the characters associated with that key. For example, to enter the letter "C" in Latin Mode, press 2 3 times.
- The illustrations of the keys in the table may differ in appearance from the actual keys on the telephone.

Example: To enter "ANNE" in Latin Mode.

2 → 6 → 6 → [•] → 6 → 6 → 3 → 3

Note
- Availability depends on your phone system. Contact your administrator for further information.

Locking the Local Phonebook

You can lock/unlock the phonebook while in standby mode. If no password has been set, you cannot lock the phonebook. For details about setting the password, see "Setting the Password", Page 23.

Locking/Unlocking the Phonebook

To lock
1. Press and hold for more than 2 seconds. will be displayed.*1

To unlock
1. Press and hold for more than 2 seconds.
2. Enter your password.*2
3. To return to standby mode, press [CANCEL].

Unlocking the Phonebook Temporarily
1. 
2. Enter your password.*2
Using the Remote Phonebook

You can refer to the Remote Phonebook in addition to the Local Phonebook, if the Remote Phonebook is available.

Note
We recommend setting this feature with your administrator. Contact your administrator for further information.

Searching for an Item in the Remote Phonebook

Searching by Name

[In standby mode]

1. OK
2. "Remote Phonebook" → OK
3. Enter the name or the first character(s) of the desired name. → OK
4. [▲]/[▼]: Select the desired item. → OK
5. [▲]/[▼]: Select the desired phone number.
6. To make a call, go off-hook.

*1 If only Remote Phonebook is permitted, this step is skipped.
*2 If you push and hold [▲]/[▼], the next/previous items will be displayed automatically.

ECO Mode

Enabling this mode reduces the amount of electricity consumed by the unit.

Note
• When ECO mode is enabled, the "Link Speed" setting (Page 67) changes as follows:
  – Link Speed: "10M/Full"
  – PC port cannot be used
• When the ECO mode setting is changed, the unit will restart.
• When ECO mode is enabled, [ECO] is displayed while the unit is in standby mode.

Setting ECO Mode

[In standby mode]

1. Menu
2. "ECO Mode" → OK
3. "On" → OK
*1 To disable ECO mode, select "Off" (default).
Checking the Line Status

You can check the status of each line (up to 6 lines) on the main LCD.

Checking the Line Status

[In standby mode]
1. Menu
2. [▲]/[▼]: "Line Status" → OK
3. [▲]/[▼]: Select the line whose status you want to check. → OK
4. Press [CANCEL] to end checking the line status or press OK to perform an action on the line. See "Line status indication" below for details.

[During a conversation]
1. Line
2. [▲]/[▼]: Select the line whose status you want to check. → OK
3. Press [CANCEL] to end checking the line status or press OK to perform an action on the line. See "Line status indication" below for details.

Note
• When a function key is assigned as a Line Status key, you can press that function key to display the line status screen.

Line status indication

<table>
<thead>
<tr>
<th>Status Display</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free*1</td>
<td>The line is idle. Action: seize the line for dialing.</td>
</tr>
<tr>
<td>In Use</td>
<td>The line is on a call. Action: none.</td>
</tr>
<tr>
<td>Line On Hold*2</td>
<td>The line is on hold. Action: retrieve the call on hold.</td>
</tr>
<tr>
<td>Incoming Call*2</td>
<td>The line is receiving a call. Action: answer the call.</td>
</tr>
<tr>
<td>Recall*2</td>
<td>The line is receiving a Hold Recall signal. Action: answer the call.</td>
</tr>
<tr>
<td>&lt;x&gt; In Use*3</td>
<td>A shared line is in use at another unit. Action: join the call</td>
</tr>
<tr>
<td>&lt;x&gt; Line On Hold*3</td>
<td>A shared line is on hold at another unit. Action: retrieve the call on hold</td>
</tr>
</tbody>
</table>

*1 The following icons are also displayed if the corresponding feature is enabled.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td>Call Forwarding</td>
</tr>
<tr>
<td>☑</td>
<td>Do Not Disturb</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Making an anonymous call</td>
</tr>
<tr>
<td></td>
<td>Block anonymous calls</td>
</tr>
</tbody>
</table>

*2 When the line is in this state, call information is also displayed.
*3 If the shared line is set, <x> (index number) is also displayed. We recommend setting this with your administrator. Contact your administrator for further information.
Customizing the Telephone

Changing the Telephone’s LCD Display

You can change what is displayed on the telephone’s LCD while the telephone is in standby mode.

1. **Menu**

2. **[▲]/[▼]: "Basic Settings" → OK**

3. **[▲]/[▼]: "Display Option" → OK**

4. **[▲]/[▼]: "Standby Display" → OK**

5. **[▲]/[▼]: Select the desired item. → OK**

Hot Keys

By assigning phone numbers to dial keys, you can make a call by pressing and holding a dial key.

• “Hot Key Dialing”, Page 27

Assigning Hot Keys From Phonebook

You can assign a phone number stored in the Local Phonebook to a key to be used as a Hot Key.

1. In standby mode, press and hold a dial key (0–9) for more than 1 second.

2. **Menu**

3. **[▲]/[▼]: "Copy from P.book". → OK**

4. Enter the desired name. → OK

5. **[▲]/[▼]: Select a number → OK**

6. “Save” → OK

Note

• For details about searching for an item in the phonebook, see “Searching for an Item in the Local Phonebook”, Page 39.

Editing Hot Keys

1. In standby mode, press and hold a dial key (0–9) for more than 1 second.

2. **Menu**

3. **[▲]/[▼]: "Edit" → OK**

4. Edit the Hot Key Name, if necessary. → OK

5. Edit the Hot Key Number, if necessary. → OK

6. “Save” → OK

Deleting a Hot Key

1. In standby mode, press and hold the dialing key assigned as a Hot Key for more than 1 second.°1

2. **Menu**

3. **[▲]/[▼]: "Delete" → OK °2**

4. **[▲]/[▼]: "Yes" → OK**
*1 While the Hot Key’s information is displayed, you can press [▲] or [▼] to select another Hot Key number.

*2 To delete all items, select "Delete All" instead of "Delete".

Selecting the Type of Hot Key Dialing

You can select one of 2 types of Hot Key Dialing for each assigned Hot Key.
1. In standby mode, press and hold a dial key (0–9) for more than 1 second.
2. [Menu]
3. [▲]/[▼]: "Automatic Call" → OK
4. "Manual"/"Auto" → OK
   - Manual: Press and hold the dialing key (0–9) assigned as a Hot Key for more than 1 second, and then go off-hook. For details, see “Hot Key Dialing”, Page 27.
   - Auto: Pressing and holding an assigned Hot Key for the set number of seconds will dial that Hot Key’s assigned number immediately.

Note
- To select the number of seconds before the call is automatically made, see "Hot Key Time" in “Key Option”, Page 62.

Changing the Function Keys (Program Keys and DSS Keys)

Each of the function keys can be assigned one of the following functions.

Note
- In addition to the Line function, other functions can be assigned to individual lines. However, only lines that have been set up in advance can be selected.

- One Touch Dial
  Used to dial a previously set phone number with one touch.

- BLF (Busy Lamp Field)
  Used to transfer calls to the extension assigned to the key while receiving an incoming call or during a conversation. The LED of a BLF key also shows the current status of the extension assigned to the key.

<table>
<thead>
<tr>
<th>Status</th>
<th>Color</th>
<th>Light pattern</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Red</td>
<td>Off</td>
<td>Available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On</td>
<td>Unavailable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quick Flashing</td>
<td>Ringing</td>
</tr>
</tbody>
</table>

Note
- More than 48 BLF keys can be programmed, but LED status indication is available only up to 48 keys.
- Line
  Used to seize a line in order to make or receive a call. The color of each key’s LED indicates the status of the line.
### Customizing the Telephone

<table>
<thead>
<tr>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td><strong>Light pattern</strong></td>
</tr>
<tr>
<td>Blue</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slow Flashing</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quick Flashing</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slow Flashing</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Off</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **ACD**
  
  Used to log in/log out of an Automatic Call Distribution Group, or change the phone’s status from unavailable → wrap up → available.
  
  The color of each key’s LED indicates the status of the key.

### Line Status

Used to confirm the status of each line. This allows the function key to work as a Line key such as seizing a line in order to make or receive a call.

### Call Forward

Used to forward incoming calls to the extension assigned to the key.

### Phonebook

Used to open the phonebook.

### Call History

Used to open the incoming/outgoing call log.

### Simultaneous Ring

Enables parallel ringing. Up to 10 locations can be specified to ring simultaneously when you receive a call.

<table>
<thead>
<tr>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td><strong>Light pattern</strong></td>
</tr>
<tr>
<td>Blue</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>Off</td>
</tr>
</tbody>
</table>

- **Hospitality**

  Used to log in/log out of the Call Center Hoteling Event.
Transfer
Used to transfer a call to the extension assigned to the key with confirmation during a conversation.

Blind Transfer
Used to transfer a call to the extension assigned to the key without confirmation during a conversation.

Conference
Used to establish a multiple-party conversation (conference).

Directed Call Pickup
Used to answer an incoming call arriving at the specified telephone number.

Call Park
Used to park a call or to retrieve a parked call (Call Parking).

*1 This item can be used only when the feature is enabled. Contact your administrator for further information.

*2 This item can be selected when the list is registered on the telephone. Contact your administrator for further information.

[In standby mode]
1. Menu
2. [△]/[▼]: "Basic Settings" → OK
3. [△]/[▼]: "Key Option" → OK
4. [△]/[▼]: "Program Key" → OK
5. [△]/[▼]: Select the key to change. → OK
6. [△]/[▼]: Select the new item to assign. → OK

Note
You can also assign a function by pressing the desired function key for 3 or more seconds.

Block anonymous calls
This feature allows the unit to reject calls when the unit receives a call without phone number. The default setting is “Off”.

IMPORTANT
- We recommend setting with your administrator. Contact your administrator for further information.
- This feature is not available on shared lines.

1. Menu
2. [△]/[▼]: "Basic Settings" → OK
3. [△]/[▼]: "Call Settings" → OK
4. [△]/[▼]: "Block Anonymous" → OK
5. [△]/[▼]: Select a desired line. → OK
6. [△]/[▼]: "On"/"Off" → OK

Incoming call barring (Caller ID service users only)
This feature allows the unit to reject calls from specified phone numbers that you do not want to answer such as junk calls.

When a call is received, the unit does not ring while the caller is being identified. If the phone number matches an entry in the call barred list, the unit rejects the call.
Storing unwanted callers
You can store up to 30 phone numbers in the call barred list by using the caller list or by entering the
numbers directly.
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Call Settings" → OK
4. [▲]/[▼]: "Block Caller ID" → OK
5. [▲]/[▼]: Select a blank line. → Menu
6. [▲]/[▼]: "Edit" → OK
7. Enter the phone number (32 digits max.). → OK

Editing the phone numbers to reject
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Call Settings" → OK
4. [▲]/[▼]: "Block Caller ID" → OK
5. [▲]/[▼]: Select a desired phone number. → Menu
6. [▲]/[▼]: "Edit" → OK
7. Enter the phone number. → OK

Deleting the phone numbers to reject
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Call Settings" → OK
4. [▲]/[▼]: "Block Caller ID" → OK
5. [▲]/[▼]: Select a desired phone number. → Menu
6. [▲]/[▼]: "Delete Number"*1 → OK
7. [▲]/[▼]: "Yes" → OK
*1 To delete all items, select "Delete All No." instead of "Delete Number".

Making an anonymous call
Before making a call, specify the following:

IMPORTANT
• We recommend setting with your administrator. Contact your administrator for further information.
1. Menu
2. [▲]/[▼]: "Basic Settings" → OK
3. [▲]/[▼]: "Call Settings" → OK
4. [▲]/[▼]: "Anonymous Call" → OK
5. [▲]/[▼]: Select a line. → OK
### Changing the Basic Settings

**To select the main item in standby mode**

1. **Menu**
2. ▲/▼: "Basic Settings" → OK
3. ▲/▼: Select the main item. → OK

<table>
<thead>
<tr>
<th>Main Item</th>
<th>Sub Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming Option</td>
<td>Ringer Volume</td>
<td>Ringer Type</td>
</tr>
<tr>
<td>Talk Option</td>
<td>Speaker Volume</td>
<td>Handset Volume</td>
</tr>
<tr>
<td>Answer Option</td>
<td>Auto Ans Device</td>
<td>Auto Ans Delay</td>
</tr>
<tr>
<td>Key Option</td>
<td>Program Key</td>
<td>Soft Key Edit</td>
</tr>
<tr>
<td></td>
<td>Hot Key Time</td>
<td></td>
</tr>
<tr>
<td>Display Option</td>
<td>Language</td>
<td>Backlight</td>
</tr>
<tr>
<td></td>
<td>Standby Display</td>
<td>Category Name</td>
</tr>
<tr>
<td></td>
<td>Time Format</td>
<td></td>
</tr>
<tr>
<td>Key Tone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call Settings</td>
<td>Block Anonymous</td>
<td>Anonymous Call</td>
</tr>
<tr>
<td></td>
<td>Anywhere*¹</td>
<td>Remote Office*¹</td>
</tr>
<tr>
<td></td>
<td>System Lock</td>
<td></td>
</tr>
<tr>
<td>Other Option</td>
<td>Change Password</td>
<td>Embedded Web</td>
</tr>
</tbody>
</table>

*¹ This item is displayed only when the feature is enabled. Contact your administrator for further information.

### Changing the System Settings

**IMPORTANT**

- The feature depends on your phone system. Contact your administrator for further information.

**[In standby mode]**

1. **Menu**
2. ▲/▼: "System Settings" → OK
3. ▲/▼: Select the main item. → OK

<table>
<thead>
<tr>
<th>Main Item</th>
<th>Sub Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Line Status</td>
<td>Firmware Version</td>
</tr>
<tr>
<td>IPv4 Settings</td>
<td>IPv4 Settings</td>
<td>IPv6 Settings</td>
</tr>
<tr>
<td>LLDP</td>
<td>VLAN</td>
<td></td>
</tr>
<tr>
<td>Network Settings</td>
<td>IP Mode Select</td>
<td>IPv4 Settings</td>
</tr>
<tr>
<td></td>
<td>LLDP</td>
<td>VLAN</td>
</tr>
</tbody>
</table>
## Customizing the Telephone

<table>
<thead>
<tr>
<th>Main Item</th>
<th>Sub Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Settings</td>
<td>Set Time &amp; Date&lt;sup&gt;*&lt;/sup&gt;</td>
<td>Page 67</td>
</tr>
<tr>
<td></td>
<td>Authentication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access Code</td>
<td></td>
</tr>
<tr>
<td>Xsi Setting&lt;sup&gt;*&lt;/sup&gt;</td>
<td>UC Setting&lt;sup&gt;*&lt;/sup&gt;</td>
<td>Restart</td>
</tr>
<tr>
<td>DSS Restart</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>*</sup> Availability depends on your phone system. Contact your administrator for further information.

<sup>*</sup> This item is displayed only when the feature is enabled. Contact your administrator for further information.

### Web User Interface Programming

The product provides a Web-based interface for configuring various settings and features, including some that are not programmable directly. The following list contains some useful features that are programmable through the Web user interface.

- Contact your administrator for further information.
- **Language Settings (IP Phone/Web)**
- **User Password (for access to Web user interface)**
- **Default Line for Outgoing**
- **Call Rejection Phone Numbers**
- **Call Features**
  - Enable Anonymous Call
  - Enable Block Anonymous Call
  - Enable Do Not Disturb
  - Enable Call Forwarding Always
  - Forwarding Number (Always)
  - Enable Call Forwarding Busy
  - Forwarding Number (Busy)
  - Enable Call Forwarding No Answer
  - Forwarding Number (No Answer)
  - Ring Counts (No Answer)
- **Hotline Number**
- **Flexible Key Setting**
- **Phonebook Import and Export**
- **DSS Console**

### Note

- Each time you want to access the Web user interface, you must enable Web programming (Embedded Web). See “Other Option”, Page 64.
Installation and Setup

Note

- Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation.

WARNING

- To reduce the risk of fire or electric shock, do not overload AC outlets and extension cords.
- Completely insert the AC adaptor/power plug into the AC outlet. Failure to do so may cause electric shock and/or excessive heat resulting in a fire.
- Regularly remove any dust, etc. from the AC adaptor/power plug by pulling it from the power outlet, then wiping with a dry cloth. Accumulated dust may cause an insulation defect from moisture, etc. resulting in a fire.

Attaching the Stand

Attach the stand to the desk phone.
1. Insert the stand into the slots located in the unit.
2. Gently rotate the stand in the direction indicated until it is fixed.

KX-HDV230 stand
**Installation and Setup**

**KX-HDV20 (option) stand**

**Adjusting the Stand Position**

Push the PUSH marks in the direction indicated, with both hands, and tilt and slide the stand until it becomes fixed in the desired position.

- **Lowering the stand**

- **Raising the stand**
Removing the Stand

Tilt the stand in the direction indicated while pushing the PUSH marks with both hands.

Attaching the Optional KX-HDV20 to the Unit

The optional KX-HDV20 has 20 DSS keys, and it adds 40 function keys (20 keys × 2 pages) to the unit. These keys can be used to seize a line to make or receive a call or to perform a feature that has been assigned to the key.

1. Remove the stand from both the KX-HDV230 and KX-HDV20. See “Removing the Stand”, Page 53.
2. Insert the tabs of the KX-HDV20 into the designated openings in the base, and then slide the KX-HDV20 in the direction of the arrow.
3. Fasten the KX-HDV20 to the unit with the included screw.
4. Attach the stand to both the KX-HDV230 and the KX-HDV20. See “Attaching the Stand”, Page 51.
   Or, if the unit will be mounted on a wall, perform wall mounting. See “Wall Mounting”, Page 56.
5. Connect the KX-HDV20 to the unit with the included cable. See “Connections (including optional KX-HDV20)”, Page 54.
6. Turn on the KX-HDV230.
Note

- Up to 5 KX-HDV20 units can be connected to the product. However, if you mount the product on a wall, only one KX-HDV20 unit can be used.

Connections (including optional KX-HDV20)

Connect the Ethernet cable, the Handset Cord and the AC adaptor (Option) to the unit.

*1 Connection cable
   Connect the connection cable as shown in the illustration.

*2 PoE HUB

*3 Optional AC adaptor

*4 Optional EHS headset
   For up-to-date information about EHS headsets that have been tested with this unit, refer to the following web site:
   [http://www.panasonic.net/pcc/support/sipphone/](http://www.panasonic.net/pcc/support/sipphone/)
*5 Optional headset
For up-to-date information about headsets that have been tested with this unit, refer to the following web site:
http://www.panasonic.net/pcc/support/sipphone/

- The initial setting for the IP address is "DHCP—Auto". For information about your network environment, contact your administrator. For details, see “Network Settings”, Page 66.

When selecting Ethernet cables (not included)
- Use flexible cables without jack covers. Do not use cables with a hard coating that may tear or crack when bent.
To prevent damage to the cables, use cables that do not protrude from the bottom of the base.
Connect the cables as shown in the following illustration.

*1 60 mm (2 3/8 in) or less
- Use a straight CAT 5e (or higher) Ethernet cable (not included) that is 6.5 mm (1/4 in) in diameter or less.

When connecting to a switching hub
- If PoE is available, an AC adaptor is not needed.
- This unit complies with the PoE Class 2 standard.

When connecting a PC
- The PC port does not support PoE for connected devices.

When connecting cables and the AC adaptor
- Pass the Ethernet cable and the AC adaptor cord under the stand.
Wall Mounting

The KX-HDV230 and up to 5 optional KX-HDV20 units can be mounted on a wall.

**IMPORTANT**

- Make sure that the wall and the fixing method are strong enough to support the weight of the unit. (See “Specifications”, Page 69.)

1. Insert the tabs of the wall mounting adaptor into the designated openings in the base, and then slide the wall mounting adaptor in the direction of the arrow until it clicks.

   **KX-HDV230**

   ![Wall mounting adaptor insertions](image)

   **With optional KX-HDV20**

   ![Wall mounting adaptor insertions with optional KX-HDV20](image)

   **For 2nd to 5th KX-HDV20**

   Remove the screw from the DSS cover of the KX-HDV20, and then slide the cover up to remove it.

   ![Removing DSS cover](image)

2. Fasten the wall mounting adaptor to the base with the included small screw.
   (Recommended torque: 0.4 N·m [4.08 kgf·cm/3.54 lbf·in] to 0.6 N·m [6.12 kgf·cm/5.31 lbf·in])

3. Connect the AC adaptor, handset cord, Ethernet cables, and connection cable as necessary.

4. Drive the large screws into the wall either 83 mm (3 1/4 in) or 100 mm (3 15/16 in) apart, and mount the unit on the wall.
If you will mount additional KX-HDV20 units, connect the connection cable for the next unit to the unit you are attaching.

For 2nd to 5th KX-HDV20

*1 Ethernet cables
Installation and Setup

*2 EHS headset cable
*3 AC adaptor
*4 40 mm (1 37/64 in) or less
*5 Washer
*6 Drive the screw to this point
*7 83 mm (3 1/4 in) or 100 mm (3 15/16 in)
*8 Connection cable
   Connect the connection cable as shown in the illustration.
*9 179 mm (7 1/16 in)
*10 111 mm (4 3/8 in)

• You can find a wall mounting template at the end of this manual.

Hooking the Handset

To Hook the Handset During a Conversation
1. Hook the handset over the top edge of the unit.

To Lock the Handset Hook when the Unit is Wall Mounted
1. Remove the handset hook from the slot.
2. Turn it up-side-down.
3. Slide the handset hook back into the slot until it locks.
4. Handset is safely hooked when it is in the cradle.

Updating the software

Your phone system dealer may offer new features and improve its software version from time to time. Contact your administrator for further information.
## Appendix

### Character Mode Table

**KX-HDV230 (Suffix: NE/X/SX)**

<table>
<thead>
<tr>
<th>Keys</th>
<th>ABC (Latin)</th>
<th>0–9 (Numeric)</th>
<th>ABΓ (Greek)</th>
<th>AÄÄ (Extended 1)</th>
<th>SSŞ (Extended 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Space Ḥ &amp; ’ ( ) *, -. / 1</td>
<td>1</td>
<td></td>
<td>Space Ḥ &amp; ’ ( ) *, -. / 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ABC 2</td>
<td>2</td>
<td>ABΓ 2</td>
<td>Α Α Α Α Α Α</td>
<td>Α Α Α Α Α Α</td>
</tr>
<tr>
<td></td>
<td>abc 2</td>
<td></td>
<td>αβγ 2</td>
<td>α α α α α</td>
<td>α α α α α</td>
</tr>
<tr>
<td>3</td>
<td>DEF 3</td>
<td>3</td>
<td>ΔΕΖ 3</td>
<td>ΔΕΕΕΕΕΕΕΕΕΕΕ</td>
<td>ΔΕΕΕΕΕΕΕΕΕΕ</td>
</tr>
<tr>
<td></td>
<td>def 3</td>
<td></td>
<td>δεζ 3</td>
<td>δδεεεεεεεεε</td>
<td>δδεεεεεεεε</td>
</tr>
<tr>
<td>4</td>
<td>GHI 4</td>
<td>4</td>
<td>ΗΘΙ 4</td>
<td>ΑΓΗΙΙΙΙΙΙΙ</td>
<td>ΑΓΗΙΙΙΙΙΙΙ</td>
</tr>
<tr>
<td></td>
<td>ghi 4</td>
<td></td>
<td>ηθι 4</td>
<td>ηηηηηηηηη</td>
<td>ηηηηηηηηη</td>
</tr>
<tr>
<td>5</td>
<td>JKL 5</td>
<td>5</td>
<td>ΚΛΜ 5</td>
<td>ΤΤΤΤΤΤΤ</td>
<td>ΤΤΤΤΤΤΤ</td>
</tr>
<tr>
<td></td>
<td>jkl 5</td>
<td></td>
<td>κλμ 5</td>
<td>κκκκκκκκ</td>
<td>κκκκκκκκ</td>
</tr>
<tr>
<td>6</td>
<td>MNO 6</td>
<td>6</td>
<td>ΝΞΟ 6</td>
<td>ΝΝΝΝΟΟΟΟ</td>
<td>ΝΝΝΝΟΟΟΟ</td>
</tr>
<tr>
<td></td>
<td>mno 6</td>
<td></td>
<td>νξο 6</td>
<td>ννννννννν</td>
<td>ννννννννν</td>
</tr>
<tr>
<td>7</td>
<td>PQRS 7</td>
<td>7</td>
<td>ΠΡΣ 7</td>
<td>ΡΡΡΡΡΡΡΡΡ</td>
<td>ΡΡΡΡΡΡΡΡΡ</td>
</tr>
<tr>
<td></td>
<td>pqr s 7</td>
<td></td>
<td>πρσ 7</td>
<td>ππππππππ</td>
<td>ππππππππ</td>
</tr>
<tr>
<td>8</td>
<td>TUV 8</td>
<td>8</td>
<td>ΤΥΦ 8</td>
<td>ΤΤΤΤΤΤΤΤΤ</td>
<td>ΤΤΤΤΤΤΤΤΤ</td>
</tr>
<tr>
<td></td>
<td>tuv 8</td>
<td></td>
<td>τυφ 8</td>
<td>τττττττττ</td>
<td>τττττττττ</td>
</tr>
<tr>
<td>9</td>
<td>WXYZ 9</td>
<td>9</td>
<td>ΧΨΩ 9</td>
<td>ΧΧΧΧΧΧΧΧΧ</td>
<td>ΧΧΧΧΧΧΧΧΧ</td>
</tr>
<tr>
<td></td>
<td>wxyz 9</td>
<td></td>
<td>χψω 9</td>
<td>χχχχχχχχχ</td>
<td>χχχχχχχχχ</td>
</tr>
<tr>
<td>0</td>
<td>Space ! ? &quot; &quot; ; + = &lt;&gt; 0</td>
<td>0</td>
<td></td>
<td>Space ! ? &quot; &quot; ; + = &lt;&gt; 0</td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>$ % &amp; @ € £ #</td>
<td>#</td>
<td></td>
<td>$ % &amp; @ € £</td>
<td></td>
</tr>
</tbody>
</table>

- Press **#** before or after entering a character to change between uppercase and lowercase.
- Pressing a key repeatedly will cycle through the characters associated with that key. For example, to enter the letter “C” in Latin Mode, press **2** 3 times.
- Characters that are entered using the **#** key (for example, “$”) cannot be entered when searching the phonebook. See “Searching for an Item in the Local Phonebook”, Page 39.
The illustrations of the keys in the table may differ in appearance from the actual keys on the telephone.

**KX-HDV230 (Suffix: RU)**

<table>
<thead>
<tr>
<th>Keys</th>
<th>ABB (Cyrillic)</th>
<th>0–9 (Numeric)</th>
<th>ABC (Latin)</th>
<th>AÅÅ (Extended 1)</th>
<th>SŠŠ (Extended 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>А Б В Space</td>
<td>1</td>
<td>А А А А А А</td>
<td>А А А А В С C C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>өөөөөөөөөөө</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Г Д Е Е 2</td>
<td>2</td>
<td>А В В В В В</td>
<td>А А А А В С 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>гдее2</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ж З И Й 3</td>
<td>3</td>
<td>А В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>жзиий3</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>К Л М 4</td>
<td>4</td>
<td>А В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>клм4</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Н О П 5</td>
<td>5</td>
<td>А В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ноп5</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Р С Т 6</td>
<td>6</td>
<td>А В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>рст6</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>У Ф Х 7</td>
<td>7</td>
<td>В В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>уфх7</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Ц Ч Ш 8</td>
<td>8</td>
<td>В В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>цчш8</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Щ Ь Ъ Ы Я Space !?&quot;9</td>
<td>9</td>
<td>В В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>щьъьыя Space !?&quot;9</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Э Ю Я Space ..',; (0)</td>
<td>0</td>
<td>В В В В В В</td>
<td>А А А А А А</td>
<td></td>
</tr>
<tr>
<td></td>
<td>эюя Space ..',; (0)</td>
<td></td>
<td>В В В В В В</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>$ % &amp; @ £ £</td>
<td>#</td>
<td>$ % &amp; @ £ £</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix

- Pressattlespacekeybeforeroafterenteringacharacter tochangewithinbetweenuppercaselandlowercase.
- Pressingakeyrepeatedly will cycle through the characters associated with that key. For example, to enter the letter "C" in Latin Mode, press 2 3 times.
- Pressingakeyrepeatedly will cycle through the characters associated with that key. For example, to enter the letter "E" in Cyrillic Mode, press 2 3 times.
- Characters that are entered using the # key (for example, "$") cannot be entered when searching the phonebook. See “Searching for an Item in the Local Phonebook”, Page 39.
- The illustrationsofthekeysinthetable may differ in appearance from the actual keys on the telephone.

Basic Settings Menu Layout

Incoming Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ringer Volume</td>
<td>Adjusts the ringer volume</td>
<td>□ Level 1–8</td>
<td>Level 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Off</td>
<td></td>
</tr>
<tr>
<td>Ringer Type</td>
<td>Ringer Pattern</td>
<td>□ Ringtone 1–32</td>
<td>Ringtone 1</td>
</tr>
<tr>
<td>• Line 1–6</td>
<td>Selects the ringtone for each type of call.*1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Private Ring (Category 1–9)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 The preset melodies in this product are used with permission of © 2010 Copyrights Vision Inc.
*2 The default ringtone for each line corresponds to the line number. For example, the default for line 3 is ringtone 3.

Talk Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker Volume</td>
<td>Adjusts the speaker volume.</td>
<td>Level 1–8</td>
<td>Level 5</td>
</tr>
<tr>
<td>Handset Volume</td>
<td>Adjusts the handset volume.</td>
<td>Level 1–8</td>
<td>Level 5</td>
</tr>
<tr>
<td>Headset Volume</td>
<td>Adjusts the headset speaker volume.</td>
<td>Level 1–8</td>
<td>Level 5</td>
</tr>
</tbody>
</table>

Answer Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Ans Device</td>
<td>Selects the types of devices that can be answered by Auto Answer.</td>
<td>□ Speaker Phone □ Headset</td>
<td>Speaker Phone</td>
</tr>
<tr>
<td>Auto Ans Delay</td>
<td>Selects the number of seconds before a call is automatically answered when Auto Answer is turned on.</td>
<td>0s–20s</td>
<td>6s</td>
</tr>
</tbody>
</table>
## Key Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
</table>
| Program Key                  | Assigns a function to each program key.                                     | □ One Touch Dial  
□ BLF  
□ Line  
□ ACD*1  
□ Login  
□ Wrap Up  
□ Line Status  
□ Call Forward  
□ Phonebook  
□ Call History  
□ Simultaneous Ring  
□ Hospitality  
□ Transfer  
□ Blind Transfer  
□ Conference  
□ Directed Call Pickup  
□ Call Park  
□ Park  
□ Park Retrieve                                                                       | Not stored       |
| Soft Key Edit                | Edits the soft keys in the following situations.                            | □ Default  
□ Function Key  
□ Fwd/DND*2  
□ Flash/Recall*3  
□ Incoming Log  
□ Outgoing Log  
□ Phonebook  
□ Call Park*1*3  
□ Pause*1  
□ Paging*1*2  
□ Hot Key Dial*2                                                                 | Not stored       |
| Soft Key Name                | Edits the names of the soft keys in the following situations.                | Max. 5 characters                                                                                                                        | Not stored       |
| Hot Key Time                 | Selects the number of seconds before a call is automatically made when a Hot Key assigned to "Auto" is pressed and held. | 1s–20s                                                                                                                                   | 2s               |

*1 Displayed only when configured on the telephone.  
*2 Displayed only when "Standby" is selected.  
*3 Displayed only when "Talking" is selected.
## Display Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>Selects the display language. Up to 10 languages can be downloaded from the server or Web as necessary. Contact your administrator for further information.</td>
<td>Suffix: NE/X/SX&lt;br&gt;Auto&lt;br&gt;English&lt;br&gt;Deutsch&lt;br&gt;Español&lt;br&gt;FRANÇAIS&lt;br&gt;Italiano&lt;br&gt;Svenska&lt;br&gt;Nederlands&lt;br&gt;Português&lt;br&gt;Čeština</td>
<td>Auto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suffix: RU&lt;br&gt;Auto&lt;br&gt;English&lt;br&gt;РУССКИЙ&lt;br&gt;Українська</td>
<td>Auto</td>
</tr>
<tr>
<td>Backlight</td>
<td>Turns the LCD backlight on or off. If &quot;Auto&quot; or &quot;On&quot; is selected, set the brightness of the backlight from Level 1–6.</td>
<td>Auto&lt;br&gt;On&lt;br&gt;Off</td>
<td>Auto</td>
</tr>
<tr>
<td>LCD Contrast</td>
<td>Adjusts the contrast of the backlight of the LCD.</td>
<td>Level 1–6</td>
<td>Level 3</td>
</tr>
<tr>
<td>Standby Display</td>
<td>Selects what is shown on the display while in standby mode.</td>
<td>Phone Number&lt;br&gt;Phone No&amp;Name&lt;br&gt;Off</td>
<td>Phone Number</td>
</tr>
<tr>
<td>Category Name</td>
<td>Edits the names of the categories.</td>
<td>Max. 13 characters x Category (1–9)</td>
<td>Not stored</td>
</tr>
<tr>
<td>Date Format</td>
<td>Selects the format for the date shown on the display in standby mode.</td>
<td>DD-MM-YYYY&lt;br&gt;MM-DD-YYYY</td>
<td>DD-MM-YYYY</td>
</tr>
<tr>
<td>Time Format</td>
<td>Selects the format for the time shown on the display in standby mode.</td>
<td>12H&lt;br&gt;24H</td>
<td>24H</td>
</tr>
</tbody>
</table>

## Key Tone

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Tone</td>
<td>Turns the key tone on or off.</td>
<td>On&lt;br&gt;Off</td>
<td>On</td>
</tr>
</tbody>
</table>
## Call Settings

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Anonymous</td>
<td>Specifies whether or not to block incoming anonymous calls.</td>
<td>Line 1–6 On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Anonymous Call</td>
<td>Specifies whether or not to make outgoing anonymous calls.</td>
<td>Line 1–6 On, Off</td>
<td>Off</td>
</tr>
<tr>
<td>Block Caller ID</td>
<td>Edits/deletes the phone numbers to reject incoming calls.</td>
<td>–Edit, –Delete Number, –Delete All No.</td>
<td>Not stored</td>
</tr>
<tr>
<td>Anywhere*1</td>
<td>Specifies/edits the Xsi’s Anywhere settings.</td>
<td>–Anywhere<em>2 On, Off, Name, Phone Number</em>3</td>
<td>—</td>
</tr>
<tr>
<td>Remote Office*1</td>
<td>Specifies the Xsi’s Remote Office setting.</td>
<td>–Remote Office On, Off, Phone Number*3</td>
<td>—</td>
</tr>
<tr>
<td>SimultaneousRing*1</td>
<td>Specifies the Xsi’s Simultaneous Ring setting.</td>
<td>–SimultaneousRing On, Off, Phone Number*3</td>
<td>—</td>
</tr>
<tr>
<td>System Lock</td>
<td>Selects whether to lock the Call Settings menu.</td>
<td>On*4, Off</td>
<td>Off</td>
</tr>
</tbody>
</table>

*1 If the Xsi’s service is available, you can select this item. Contact your administrator for further information.

*2 Displayed only when editing.

*3 In a phone number that exceeds 32 digits, the exceeding digits will not be displayed.

*4 Password is required (4 digits).

## Other Option

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Password<em>1</em>2</td>
<td>Changes the telephone password (4 digits) used for unlocking the Phonebook.</td>
<td>Enter Old Password.<em>3</em>4 Enter New Password. Verify New Password.</td>
<td>Not registered</td>
</tr>
<tr>
<td>Embedded Web</td>
<td>Selects whether the web function and the logging function are available or not.</td>
<td>On, Off</td>
<td>Off</td>
</tr>
</tbody>
</table>

*1 To avoid unauthorized access to this product:
- Set a password that is random and cannot be easily guessed.
- Change the password regularly.

*2 Make a note of the password so that you will not forget it.
*3  If a password has not already been set, you can skip the first step.
*4  For details about setting the password, see “Setting the Password”, Page 23.
## System Settings Menu Layout

### Status

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Status</td>
<td>Displays the line status.</td>
<td>Registered/Registering/ (NULL)</td>
<td>—</td>
</tr>
<tr>
<td>Firmware Version</td>
<td>Displays the firmware version of the telephone.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>IP Mode</td>
<td>Displays the IP network mode.</td>
<td>IPv4/IPv6/IPv4&amp;IPv6</td>
<td>—</td>
</tr>
<tr>
<td>IPv4 Settings</td>
<td>Displays information about IPv4 settings.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>IPv6 Settings</td>
<td>Displays information about IPv6 settings.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>MAC Address</td>
<td>Displays the MAC address of the telephone.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>LLDP</td>
<td>Displays the LLDP status.</td>
<td>On/Off</td>
<td>—</td>
</tr>
<tr>
<td>VLAN</td>
<td>Displays the VLAN ID and priority.</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*1 If this item is not set, “0.0.0.0” is displayed. If the telephone is not connected to the network, “…” is displayed.

*2 If this item is not set, “0::0” is displayed. If the telephone is not connected to the network, “::” is displayed.

### Network Settings

<table>
<thead>
<tr>
<th>Sub Item</th>
<th>Description</th>
<th>Setting</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Mode Select</td>
<td>Changes the network settings of the telephone. Current settings are displayed as a highlight.</td>
<td>—IPv4, —IPv6, —IPv4&amp;IPv6</td>
<td>IPv4</td>
</tr>
<tr>
<td>IPv4 Settings</td>
<td>Specifies the IPv4 settings.</td>
<td>□ DHCP</td>
<td>DHCP–Auto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Auto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Manual</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Static</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ DNS 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ DNS 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ DNS 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ DNS 2</td>
<td></td>
</tr>
<tr>
<td>Sub Item</td>
<td>Description</td>
<td>Setting</td>
<td>Default</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>IPv6 Settings</td>
<td>Specifies the IPv6 settings.</td>
<td>☐ DHCP</td>
<td>DHCP–Auto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Auto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Manual</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ RA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ DNS 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ DNS 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Static</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ IP Address</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Prefix</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Default Gateway</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ DNS 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ DNS 2</td>
<td></td>
</tr>
<tr>
<td>LLDP</td>
<td>Specifies the LLDP settings.</td>
<td>☐ PC Port</td>
<td>VLAN ID: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ VLAN ID</td>
<td>Priority: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Priority</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ On</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Off</td>
<td></td>
</tr>
<tr>
<td>VLAN</td>
<td>Specifies the VLAN settings.</td>
<td>☐ Enable VLAN</td>
<td>Enable VLAN:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ IP Phone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ VLAN ID</td>
<td>VLAN ID: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Priority</td>
<td>Priority: 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ PC</td>
<td>PC:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ VLAN ID</td>
<td>VLAN ID: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Priority</td>
<td>Priority: 0</td>
</tr>
<tr>
<td>Link Speed</td>
<td>Specifies the Ethernet PHY mode settings.</td>
<td>☐ IP Phone</td>
<td>Auto</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Auto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 100M/Full</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 100M/Half</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 10M/Full</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 10M/Half</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ PC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Auto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 100M/Full</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 100M/Half</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 10M/Full</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ 10M/Half</td>
<td></td>
</tr>
<tr>
<td>System Settings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub Item</td>
<td>Description</td>
<td>Setting</td>
<td>Default</td>
</tr>
<tr>
<td>Set Time &amp; Date*1</td>
<td>Specifies the time and date of the telephone.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Authentication</td>
<td>Specifies the ID and password for HTTP authentication.</td>
<td>—ID*2</td>
<td>Not stored</td>
</tr>
<tr>
<td></td>
<td></td>
<td>—Password*2</td>
<td></td>
</tr>
<tr>
<td>Sub Item</td>
<td>Description</td>
<td>Setting</td>
<td>Default</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Access Code*3</td>
<td>Specifies the access code to access the redirect server.</td>
<td>Max. 16 characters</td>
<td>Not stored</td>
</tr>
<tr>
<td>Xsi Setting*4</td>
<td>Specifies the ID and password for the Xsi service.</td>
<td>Line 1–6</td>
<td>Not stored</td>
</tr>
<tr>
<td></td>
<td></td>
<td>–ID*2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>–Password*2</td>
<td></td>
</tr>
<tr>
<td>UC Setting*4</td>
<td>Specifies the ID and password for the Broadsoft UC service (IM&amp;P).</td>
<td>–ID*2</td>
<td>Not stored</td>
</tr>
<tr>
<td></td>
<td></td>
<td>–Password*2</td>
<td></td>
</tr>
<tr>
<td>Restart*5</td>
<td>Restart the unit.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>DSS Restart*5</td>
<td>Restart any connected DSS units.</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*1 Availability depends on your phone system. Contact your administrator for further information.
*2 Max. 128 characters
*3 This item is displayed only during initial setup.
*4 This item is displayed only when the feature is enabled. Contact your administrator for further information.
*5 The unit will restart even if it is being accessed through the Web user interface or on a call.
## Specifications

### KX-HDV230

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Supply</strong></td>
<td>AC adaptor / PoE (IEEE 802.3af)</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>PoE</td>
</tr>
<tr>
<td>Stand-by: approx. 3.1 W (ECO mode off), approx. 2.9 W (ECO mode on)</td>
<td></td>
</tr>
<tr>
<td>Talking: approx. 3.2 W (ECO mode off), approx. 3.0 W (ECO mode on)</td>
<td></td>
</tr>
<tr>
<td><strong>AC Adaptor</strong></td>
<td>Stand-by: approx. 2.8 W (ECO mode off), approx. 2.1 W (ECO mode on)</td>
</tr>
<tr>
<td>Talking: approx. 2.9 W (ECO mode off), approx. 2.2 W (ECO mode on)</td>
<td></td>
</tr>
<tr>
<td><strong>Maximum Power Consumption</strong></td>
<td>Approx. 4.2 W</td>
</tr>
<tr>
<td><strong>Operating Environment</strong></td>
<td>0 °C (32 °F) to 40 °C (104 °F)</td>
</tr>
<tr>
<td><strong>Ethernet Port</strong></td>
<td>LAN: 1 (RJ45), PC: 1 (RJ45)</td>
</tr>
<tr>
<td><strong>Ethernet Interface</strong></td>
<td>10Base-T/100Base-TX/1000Base-T (Auto / 100MB-FULL / 100MB-HALF / 10MB-FULL / 10MB-HALF) Auto MDI / MDIX</td>
</tr>
<tr>
<td><strong>Wideband Codec</strong></td>
<td>G.722</td>
</tr>
<tr>
<td><strong>Narrowband Codec</strong></td>
<td>G.711a-law / G.711µ-law / G.729a</td>
</tr>
<tr>
<td><strong>Multiple Line</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>LCD Display</strong></td>
<td>Monochrome graphical</td>
</tr>
<tr>
<td><strong>LCD Size</strong></td>
<td>132 x 64 pixels, 4 lines (main LCD)</td>
</tr>
<tr>
<td></td>
<td>160 x 384 pixels, 12 lines (self-labeling LCD)</td>
</tr>
<tr>
<td><strong>LCD Backlight</strong></td>
<td>6 levels (Always On/Automatic/Always Off)</td>
</tr>
<tr>
<td><strong>VoIP Connection Method</strong></td>
<td>SIP</td>
</tr>
<tr>
<td><strong>Speaker</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Microphone</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Headset Jack</strong></td>
<td>1 (RJ9)</td>
</tr>
<tr>
<td><strong>EHS Jack</strong></td>
<td>1 (ø3.5 mm [1/8 in], for EHS only)</td>
</tr>
<tr>
<td><strong>Dimensions (Width x Depth x Height; stand attached)</strong></td>
<td>&quot;High&quot; position: 252 mm x 179 mm x 188 mm (9.9 in x 7.1 in x 7.4 in)</td>
</tr>
<tr>
<td></td>
<td>&quot;Low&quot; position: 252 mm x 178 mm x 154 mm (9.9 in x 7.4 in x 6.1 in)</td>
</tr>
<tr>
<td><strong>Weight (with handset, handset cord and stand)</strong></td>
<td>1030 g (2.28 lb)</td>
</tr>
</tbody>
</table>

### KX-HDV20

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Supply</strong></td>
<td>Power is supplied from the KX-HDV230.</td>
</tr>
</tbody>
</table>
### Appendix

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>Stand-by: approx. 0.5 W</td>
</tr>
<tr>
<td>Maximum Power Consumption</td>
<td>Approx. 1.5 W</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>0 °C (32 °F) to 40 °C (104 °F)</td>
</tr>
<tr>
<td>LCD Display</td>
<td>Monochrome graphical</td>
</tr>
<tr>
<td>LCD Size</td>
<td>160 × 384 pixels, 12 lines</td>
</tr>
<tr>
<td>LCD Backlight</td>
<td>6 levels (Always On/Automatic/Always Off)</td>
</tr>
</tbody>
</table>
| Dimensions (Width × Depth × Height; stand attached) | "High" position:  
110 mm × 176 mm × 178 mm  
(4.3 in × 6.9 in × 7.0 in)  
"Middle" position:  
110 mm × 176 mm × 154 mm  
(4.3 in × 6.9 in × 6.1 in)  
"Low" position:  
110 mm × 175 mm × 121 mm  
(4.3 in × 6.9 in × 4.8 in) |
| Weight (with stand)           | 430 g (0.95 lb)                                    |

* The KX-HDV20 can be used only when the KX-HDV230 is receiving power from the optional AC adaptor.
# Troubleshooting

## Common Issues and Solutions

### General Use

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The display is blank.</td>
<td>The unit is not receiving power.</td>
<td>The unit is not designed to function when there is a power failure. Make sure that the device supplying PoE is receiving power and that the Ethernet cable is properly connected. If an AC adaptor is connected, confirm that the AC adaptor is connected and receiving power.</td>
</tr>
<tr>
<td>The display is not shown well.</td>
<td>The display’s contrast is too low.</td>
<td>Adjust the display’s contrast.</td>
</tr>
<tr>
<td>The unit is not performing properly.</td>
<td>Cables or cords are not connected properly.</td>
<td>Check all connections.</td>
</tr>
<tr>
<td></td>
<td>Your connection settings are incorrect.</td>
<td>• Consult your administrator to confirm that your settings are correct. • If the problem persists, consult your dealer.</td>
</tr>
<tr>
<td></td>
<td>An error has occurred.</td>
<td>Restart the unit.</td>
</tr>
<tr>
<td>I cannot hear a dial tone.</td>
<td>—</td>
<td>Confirm that the LAN cable is properly connected.</td>
</tr>
<tr>
<td>I cannot cancel the phonebook lock.</td>
<td>The password you entered was incorrect.</td>
<td>Enter the correct password.</td>
</tr>
<tr>
<td>I forgot my password.</td>
<td>—</td>
<td>Consult your administrator or dealer.</td>
</tr>
<tr>
<td>The date and time are not correct.</td>
<td>—</td>
<td>Adjust the date and time of the unit.</td>
</tr>
<tr>
<td>The Message/Ringer lamp is lit.</td>
<td>You received a voice message while you were on the phone or away from your desk.</td>
<td>Check the voice message.</td>
</tr>
<tr>
<td>The KX-HDV20 will not turn on.</td>
<td>The KX-HDV230 is receiving power via Power-over-Ethernet (PoE).</td>
<td>Connect the KX-HDV230 to an AC power outlet using the optional AC adaptor.</td>
</tr>
</tbody>
</table>

### Making and Receiving Calls

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>I cannot make calls.</td>
<td>The phone number was entered incorrectly.</td>
<td>• Confirm that you have entered the phone number of the other party correctly. • Consult your administrator or dealer.</td>
</tr>
</tbody>
</table>
## Appendix

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
</table>
| The phonebook list is being imported or exported. | | ● Wait a few minutes for the operation to complete.  
● Confirm with your administrator or dealer. |
| I cannot make long distance calls. | Your telephone service does not allow you to make long distance calls. | Make sure that you have subscribed to your telephone company’s long distance service. |
| The unit does not ring when a call is received. | The ringer is turned off. | Press the [+ ] volume key while a call is being received, or change the ringer volume setting. |
| While talking to an outside party, the line is disconnected. | Your phone system/service may impose a time limit on outside calls. | Consult your dealer to extend the time limit, if necessary. |

### Sound Quality

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The other party cannot hear my voice.</td>
<td>The unit is muted.</td>
<td>Press MUTE/AUTO ANS to turn off the mute feature.</td>
</tr>
<tr>
<td>If you are using the speakerphone, objects may be obstructing the microphone.</td>
<td></td>
<td>Do not obstruct the unit’s microphone during calls. Keep your hands, as well as common objects such as folders, cups, and coffee pots away from the unit during calls.</td>
</tr>
<tr>
<td>Sound cuts out; I can hear myself through the speaker.</td>
<td>You are too far away from the microphone.</td>
<td>Try speaking closer to the microphone.</td>
</tr>
</tbody>
</table>
| The environment is not suited to speakerphone calls. | | ● Do not use the unit within 2 m (6 ft 7 in) of projectors, air conditioning devices, fans, or other audible or electrical noise emitting devices.  
● If using the unit in a room with windows, close the curtains or blinds to prevent echoes.  
● Use the unit in a quiet environment. |
| The unit was moved during a call. | Do not move the unit while on a call. |
| Objects are obstructing the microphone. | Do not obstruct the unit during calls. Keep your hands, as well as common objects such as folders, cups, and coffee pots away from the unit during calls. |
### Issue

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The other party is using a half-duplex speakerphone.</td>
<td>If the other party is using a half-duplex speakerphone, sound may cut out occasionally during calls. For best performance, the other party should use a full-duplex speakerphone.</td>
</tr>
</tbody>
</table>

### Phonebook List

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>I cannot add or edit entries to the phonebook list.</td>
<td>The phonebook list is full.</td>
<td>Delete any unnecessary entries. The maximum number of entries in the phonebook list is 500.</td>
</tr>
</tbody>
</table>
## Error Messages

During operation, error messages might appear on the unit. The following table lists these messages and possible causes and solutions.

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error:001 Check LAN cable.</td>
<td>The LAN cable is not connected.</td>
<td>Check all connections.</td>
</tr>
<tr>
<td>Error:002 IP Address Collision</td>
<td>The unit's network settings are incorrect.</td>
<td>Consult your system administrator or dealer.</td>
</tr>
<tr>
<td>Error:002 IP Address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error:003 Not Registered</td>
<td>Failed to register to SIP server.</td>
<td>Consult your system administrator or dealer.</td>
</tr>
<tr>
<td>Memory Full</td>
<td>The Phonebook is full and cannot store the new item.</td>
<td>Remove unnecessary data in the Phonebook and try again.</td>
</tr>
<tr>
<td>No Entries</td>
<td>When trying to view the Phonebook: No items have been stored. See “Storing an Item in the Local Phonebook”, Page 36. When trying to view the Incoming or Outgoing Call Log: No logs have been stored.</td>
<td></td>
</tr>
<tr>
<td>Need Repair</td>
<td>Device fault.</td>
<td>Contact your phone system dealer/service provider.</td>
</tr>
</tbody>
</table>
| Phonebook Error                | The memory became full during a phonebook download.      | ● Remove unnecessary data in the phonebook, or consult your administrator regarding the number of items being downloaded.  
● This message disappears if you access the phonebook. |
WALL MOUNTING TEMPLATE 1
(KX-HDV230, optionally with 1 attached KX-HDV20)

1. Drive the screws into the wall as indicated.
2. Hook the unit onto the screw heads.

**Note:**
Make sure to set the print size to correspond with the size of this page. If the dimensions of the paper output still deviate slightly from the measurements indicated here, use the measurements indicated here.
WALL MOUNTING TEMPLATE 2
(For mounting 2 or more KX-HDV20 units)
1. Drive the screws into the wall as indicated.
2. Hook the unit onto the screw heads.

Note:
Make sure to set the print size to correspond with the size of this page. If the dimensions of the paper output still deviate slightly from the measurements indicated here, use the measurements indicated here.