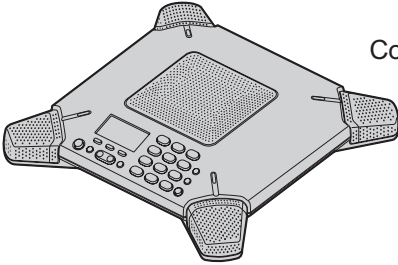


Panasonic®

Operating Instructions

Conference Recording Speakerphone System

Model No. **KX-TS730**



This unit is compatible with Caller ID. To use this feature, you must subscribe to the appropriate service offered by your service provider.

Please read these Operating Instructions before using the unit and save for future reference.

For assistance, visit our website: <http://www.panasonic.com> for customers in the U.S.A. or Puerto Rico.

Table of Contents

Introduction

Accessory information	3
Important safety instructions	4
For best performance	5

Preparation

Connections	6
Controls and displays	7
Controls	7
Setting the unit before use	8
Setting the dialing mode	8

Making/Answering Calls

Making calls	9
PAUSE button (for PBX/long distance service users)	9
Answering calls	10
Useful features during a call	10
MUTE button	10
Flash button	10
For Call Waiting service users	10
Temporary tone dialing (for rotary/pulse service users)	10

Phonebook

Using the phonebook	11
Adding items to the phonebook	11
Calling someone in the phonebook	12
Editing items in the phonebook	13
Erasing an item in the phonebook	13
Erasing all items in the phonebook	13
Chain dial feature	13

Caller ID Service

Using Caller ID service	14
Caller list	14
Viewing the caller list and calling back	14
Editing a caller's phone number before calling back	15
Storing caller information into the phonebook	16
Erasing caller information	16

Programmable Settings

Programming via direct commands	17
Direct commands chart	17
Programming using the function keys	18

Ringer settings	19
Ringer volume	19
Ringer tone	19
Display options	19
LCD contrast	19
Display language	19
Telephone settings	20
Flash time	20
Other options	20
Caller ID Number Auto Edit	20
Key tone	20

Recording a conversation

Recording a conversation	21
Playing back a recorded conversation	21

Useful Information

Display messages	23
Troubleshooting	23
General use	23
Programmable settings	23
Making/answering calls	23
Phonebook	24
Caller ID	25
Power failure	25
FCC and other information	26
Specifications	27

Index

Index	28
Warranty	29
Customer services	31

Thank you for purchasing a Panasonic Conference Recording Speakerphone System.

We recommend keeping a record of the following information for future reference.

Serial No. _____ Date of purchase _____
(found on the bottom of the unit)

Name and address of dealer _____

Attach your purchase receipt here.

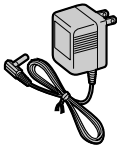
Accessory information

Included accessories

- To order replacement accessories, call 1-800-332-5368.
TTY users (hearing or speech impaired users) can call 1-866-605-1277.

No.	Accessory items	Order number	Quantity
①	AC adaptor	PQLV10Y	1
②	Telephone line cord	PQJA10075Z	1
③	Interface cable	PQJA10170Z	1
④	Interface box	PQLP10265Z	1

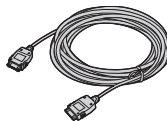
①



②



③



④



Important safety instructions

When using this unit, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from power outlets before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit near water, for example near a bathtub, wash bowl, kitchen sink, etc.
5. Place the unit securely on a stable surface. Serious damage and/or injury may result if the unit falls.
6. Do not cover slots and openings on the unit. They are provided for ventilation and protection against overheating. Never place the unit near radiators, or in a place where proper ventilation is not provided.
7. Use only the power source marked on the unit. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
8. Do not place objects on the power cord. Install the unit where no one can step or trip on the cord.
9. Do not overload power outlets and extension cords. This can result in the risk of fire or electric shock.
10. Never push any objects through slots in this unit. This may result in the risk of fire or electric shock. Never spill any liquid on the unit.
11. To reduce the risk of electric shock, do not disassemble this unit. Take the unit to an authorized service center when service is required. Opening or removing covers may expose you to dangerous voltages or other risks.

Incorrect reassembly can cause electric shock when the unit is subsequently used.

12. Unplug this unit from power outlets and refer servicing to an authorized service center when the following conditions occur:
 - A. When the power cord is damaged or frayed.
 - B. If liquid has been spilled into the unit.
 - C. If the unit has been exposed to rain or water.
 - D. If the unit does not work normally by following the operating instructions. Adjust only controls covered by the operating instructions. Improper adjustment may require extensive work by an authorized service center.
 - E. If the unit has been dropped or physically damaged.
 - F. If the unit exhibits a distinct change in performance.
13. During thunderstorms, avoid using telephones except cordless types. There may be a remote risk of an electric shock from lightning.
14. Do not use this unit to report a gas leak, when in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

CAUTION:

Installation

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.

- Do not touch the plug with wet hands.
- The AC adaptor is used as the main disconnect device. Ensure that the AC outlet is installed near the unit and is easily accessible.

WARNING:

- To prevent the risk of fire or electrical shock, do not expose this product to rain or any type of moisture.
- Unplug this unit from power outlets if it emits smoke, an abnormal smell or makes an unusual noise. These conditions can cause fire or electric shock. Confirm that smoke has stopped and contact the Panasonic Call Center at 1-800-211-PANA (7262).

For best performance

Environment

- Keep the unit away from electrical noise generating devices, such as fluorescent lamps and motors.
- The unit should be kept free from excessive smoke, dust, high temperature and vibration.
- The unit should not be exposed to direct sunlight.
- Do not place heavy objects on top of the unit.
- When you leave the unit unused for a long period of time, unplug this unit from power outlet.
- The unit should be kept away from heat sources such as heaters, kitchen stoves, etc. It should not be placed in rooms where the temperature is less than 5 °C (41 °F) or greater than 40 °C (104 °F). Damp basements should also be avoided.

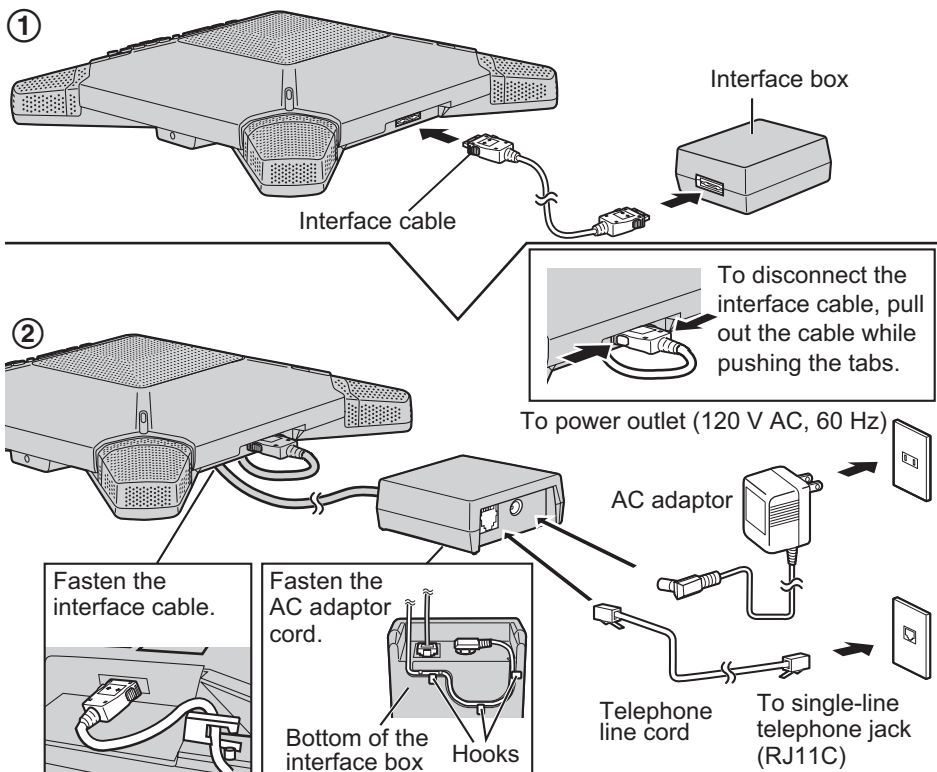
Routine care

- Wipe the outer surface of the unit with a soft cloth. Do not use benzine, thinner or any abrasive powder.

Operation

- At the beginning of a call, both parties should speak alternately. This enables the unit to adapt to its environment and let both parties speak effectively.
- Do not move the unit while it is in use.
- Keep your hands away from the unit during calls.
- Keep files, cups, coffee pots, etc., away from the unit.
- Use the unit in a quiet room.
- This unit is designed to be used in a room that is no more than 380 square feet in area.

Connections

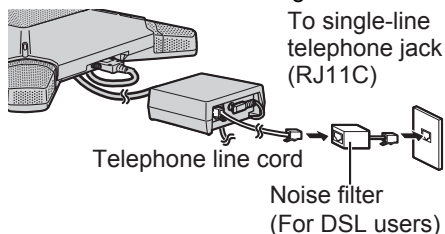


Note:

- Use only provided Panasonic AC adaptor PQLV10 (9V/850 mA) for proper product operation. In case of power outage, this product will not work.
- The AC adaptor must remain connected at all times. (It is normal for the adaptor to feel warm during use.)
- The AC adaptor should be connected to a vertically oriented or floor-mounted AC outlet. Do not connect the AC adaptor to a ceiling-mounted AC outlet, as the weight of the adaptor may cause it to become disconnected.

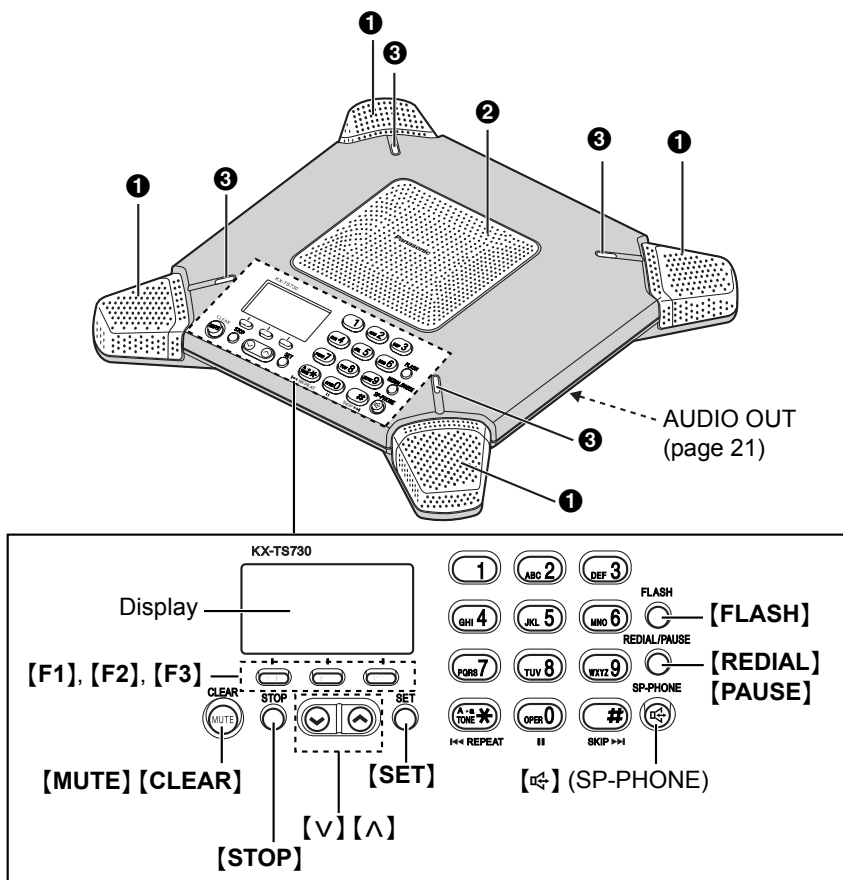
If you subscribe to an DSL service

- Please attach a noise filter (contact your DSL provider) to the telephone line between the interface box and the telephone line jack in the event of the following:
 - Noise is heard during conversations.
 - Caller ID features (page 14) do not function properly.



Controls and displays

Controls

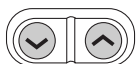


1 Microphone

2 Speaker

3 IN USE Indicator

Using the [V] and [^] keys




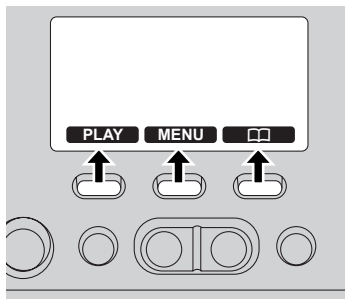
- The keys work as the speaker volume keys (page 9).
- Pressing the keys allows you to scroll through function menu (page 18).
- Pressing the keys allows you to enter the caller list (page 14).

Preparation

Function keys ([F1], [F2], [F3])


By pressing a function key, you can select the function displayed directly above it.


- The functions displayed will vary depending on how you are using the unit.
- When a function does not appear or  is displayed above a function key, the function key will not work.



- In these operating instructions, function key names are written inside brackets, the same way as the unit keys.

Example:

Unit keys: , **[STOP]**, etc.

Function keys: **[PLAY]**, **[MENU]**, **[**], etc.

Setting the unit before use

Setting the dialing mode

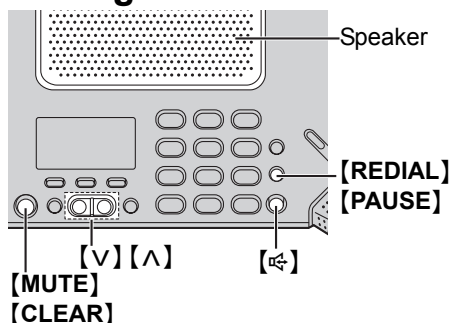
If you cannot make calls, change this setting depending on your telephone line service.

“**Tone**” (default): For tone dial service.

“**Pulse**”: For rotary pulse dial service.

- 1** Press **[MENU]** (**[F2]** key), then press **[#]**, **[1]**, **[2]**, **[0]**.
- 2** Press **[1]** (Pulse) or **[2]** (Tone).
- 3** Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Making calls



- 1 Press **[CALL]**.
 - IN USE indicators will light in green.
- 2 Dial the phone number.
- 3 When finished talking, press **[CALL]**.

Note:

- At the beginning of a call, both parties should speak alternately. This enables the unit to adapt to its environment and let both parties speak effectively.
- If the other party has difficulty hearing you, press **[V]** to decrease the speaker volume.
- Use the unit in a quiet room.

To adjust the speaker volume

While using the speakerphone, press **[V]** or **[^]** repeatedly. 16 levels (high to low) are available. "Receiver volume" is displayed.

To dial after confirming the entered number

- 1 Enter the phone number.
 - To correct a digit, press **[CLEAR]**. Enter the correct number.
 - If a pause is required when dialing, press **[PAUSE]** where needed.
 - To cancel, press and hold **[CLEAR]** until the entered phone number disappears.

- 2 Press **[CALL]** or **[CALL]** (**[F1]** key).
- 3 When finished talking, press **[CALL]** to hang up.

To redial the last number dialed

- 1 Press **[CALL]**.
- 2 Press **[REDIAL]**.

To make a call using the redial list

The last 10 phone numbers dialed are stored in the redial list.

- 1 Press **[REDIAL]**.
 - The last number dialed will be displayed.
- 2 Press **[V]** or **[^]** repeatedly to display the desired number.

OR

 Press **[REDIAL]** repeatedly to display the desired number.
 - To delete the displayed item, press **[ERASE]** (**[F1]** key).
 - To exit the list, press **[STOP]**.
- 3 Press **[CALL]** or **[CALL]** (**[F3]** key).

PAUSE button (for PBX/long distance service users)

A pause is sometimes required when making calls using a PBX or long distance service.

For example, if you need to dial the line access number "9" when making outside calls with a PBX:

- 1 Press **[9]**.
- 2 Press **[PAUSE]**, then dial the phone number.
- 3 Press **[CALL]** or **[CALL]** (**[F1]** key).

Note:

- A 3.5 second pause is inserted each time **[PAUSE]** is pressed. Press repeatedly to insert longer pauses.

Answering calls

When a call is being received, the IN USE indicators flash.

- 1 Press **[📞]**.
- 2 When finished talking, press **[📞]**.

Adjusting the ringer volume

4 levels (high/medium/low/off) are available. To change the ringer volume setting, see page 19.

OR

While a call is being received, press **[V]** or **[^]** repeatedly to select the desired volume.

Useful features during a call

MUTE button

You can mute your voice during a conversation. While mute is turned on you will be able to hear the other party, but the other party will not be able to hear you.

To mute your voice, press **[MUTE]**.

- “-Mute-” will be displayed and the IN USE indicators will light in red.
- To return to the conversation, press **[MUTE]**.

Flash button

Pressing **[FLASH]** allows you to use special features of your host PBX such as transferring an extension call, or accessing optional telephone services such as Call Waiting.

Note:

- To change the flash time, see page 20.

For Call Waiting service users

To use Call Waiting, you must subscribe to Call Waiting service from your telephone service provider.

This feature allows you to receive calls while you are already talking on the phone. If you receive a call while on the phone, you will hear a Call Waiting tone.

Press **[FLASH]** to answer the 2nd call.

- The 1st call is put on hold while you answer the 2nd call.
- To switch between calls, press **[FLASH]**.

Note:

- Please contact your telephone company for details and availability of this service in your area.
- This unit does not support Call Waiting with Caller ID service (Call Waiting Caller ID display).

Temporary tone dialing (for rotary/pulse service users)

You can temporarily switch the dialing mode to tone when you need to access touch tone services (for example, answering services, telephone banking services, etc.).

Press **[*]** (TONE) before entering access numbers which require tone dialing.

Note:

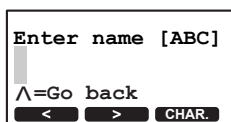
- The dialing mode will return to pulse when you hang up.

Using the phonebook

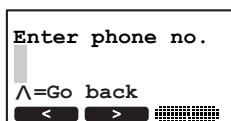
The phonebook allows you to make calls without having to dial manually. You can add 100 names and phone numbers to the phonebook and search for phonebook entries by name.

Adding items to the phonebook

- Press **[□□]** (**[F3]** key).
 - The display shows the number of items in the phonebook.
- Press **[ADD]** (**[F1]** key).
- Enter the name (max. 16 characters. See "Available character entries" for details).



- Press **[SET]**.
- Enter the phone number (max. 32 digits).



- If a pause is required when dialing, press **[PAUSE]** where needed (page 9).
- Press **[SET]** or **[SAVE]** (**[F3]** key).
 - To add other items, repeat from step 2.
 - If you want to change the name and/or number, see page 13.

- Press **[STOP]**.
 - When "Λ=Go back" is displayed, you can go back to the previous screen by pressing **[Λ]**.

Available character entries

2 character entry modes (Alphabet character and Extended character) are available. To change the current character entry mode, press **[CHAR.]** (**[F3]** key) on the enter name screen.

- When Alphabet character mode is selected, "[ABC]" is displayed on the enter name screen. When Extended character mode is selected, "[AÄÅ]" is displayed.
- To change between uppercase and lowercase (A→a), press **[*]**.

Alphabet character table

Key	Characters
[0]	0 Space
[1]	# & ' () * , - . / 1
[2]	A B C 2 a b c 2
[3]	D E F 3 d e f 3
[4]	G H I 4 g h i 4
[5]	J K L 5 j k l 5
[6]	M N O 6 m n o 6
[7]	P Q R S 7 p q r s 7
[8]	T U V 8 t u v 8
[9]	W X Y Z 9 w x y z 9
[#]	#

Extended character table

Key	Characters
[0]	0 Space
[1]	# & ' () * , - . / 1
[2]	A B C À Á Â Ã Ä Å Æ Ç 2 a b c à á â ã ä å æ ç 2

Phonebook

Key	Characters
[3]	DEFÈÉÊËË 3 defèéêëë 3
[4]	GHIÎÏÎÏÏÏ 4 ghiîïîïîï 4
[5]	JKL 5 jkl 5
[6]	MNOÑÒÓÔÕÖø*1 6 mnoñòóôõöø*1 6
[7]	PQRSŜ*1 ß 7 pqrsŜ*1 ß 7
[8]	TUVÚÚÚÛÛÛ 8 tuvùúúûûû 8
[9]	WXYZŴ*1 9 wxyzŴ*1 9
[#]	#

*1 The same letter as capital (or small) will be displayed.

To enter character or number

The dial keys can be used to enter characters. To enter a character, press the appropriate dial key, repeatedly if necessary. To enter another character that is located on the same dial key, first press [>] ([F2] key) to move the cursor to the next space.

To edit/correct a mistake

Press [<] ([F1] key) or [>] ([F2] key) to move the cursor to the character or number you wish to erase, then press [CLEAR]. Enter the appropriate character or number.

Note:

- Press and hold [CLEAR] to erase all characters or numbers.

Calling someone in the phonebook

Phonebook items can be searched for alphabetically by scrolling through the phonebook items.

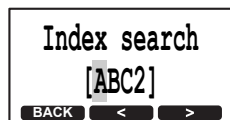
- 1 Press [] ([F3] key).
- 2 Press [v] or [^] to scroll the phonebook items.
 - To exit the phonebook, press [STOP].
- 3 Press [CALL] ([F1] key) or [☎].

To search for a name by initial

- 1 Press [] ([F3] key).
- 2 Press the dialing button ([0] to [9], [#], or [*]) which corresponds to the first letter you are searching for (see the character table, page 11).
Example: "LISA"
Press [5] repeatedly to display any name with the initial "L".
 - If there is no item corresponding to the letter you selected, the next item will be displayed.
- 3 Press [v] repeatedly to display the desired item.
 - To exit the phonebook, press [STOP].
 - To dial the displayed number, press [CALL] ([F1] key) or [☎].

To search using [SEARCH]

- 1 Press [] ([F3] key).
- 2 Press [SEARCH] ([F3] key).



Example: "SAM"
Press [v] five times.
Press [>] ([F3] key) three times.

- 3 Press [SET].

- 4 Press **[V]** or **[^]** repeatedly to display any name with the initial "S".
 - To dial the displayed number, press **[CALL]** (**[F1]** key) or **[☎]**.

Editing items in the phonebook

- 1 Search the item you want to edit.
- 2 Press **[MENU]** (**[F2]** key).
- 3 Press **[SELECT]** (**[F3]** key) at "Edit".
- 4 Edit the name if necessary. See the character table on page 11 for character entry.
- 5 Press **[SET]**.
- 6 Edit the phone number if necessary.
- 7 Press **[SET]** or **[SAVE]** (**[F3]** key).
 - To edit other items, repeat from step 1.
- 8 Press **[STOP]**.

Erasing an item in the phonebook

- 1 Search the item you want to erase.
- 2 Press **[MENU]** (**[F2]** key).
- 3 Press **[V]** or **[^]** to select "Erase".
- 4 Press **[SELECT]** (**[F3]** key).
- 5 Press **[YES]** (**[F2]** key).
 - To cancel erasing, press **[NO]** (**[F1]** key).
 - To erase other items, repeat from step 1.
- 6 Press **[STOP]**.

Erasing all items in the phonebook

- 1 Press **[☐☐]** (**[F3]** key).

- 2 Press **[MENU]** (**[F2]** key).
- 3 Press **[SELECT]** (**[F3]** key) at "All erase".
 - "All erase?" will be displayed.
- 4 Press **[YES]** (**[F2]** key).
 - To cancel erasing, press **[NO]** (**[F1]** key).
- 5 Press **[STOP]**.

Chain dial feature

This feature allows you to dial phone numbers from the phonebook while you are on a call.

Example: Using a long distance calling card

- ① Dial from the phonebook:
1-800-012-3456 (Calling card access number).
- ② When prompted, dial from the phonebook:
1234 (Calling card PIN).
- ③ When prompted, dial from the phonebook:
1-555-012-3456 (the person you want to call).

- 1 **During an outside call**, press **[☐☐]** (**[F3]** key).
- 2 Display the desired item. (See page 12 for a search.)
- 3 Press **[CALL]** (**[F1]** key).
 - Repeat from step 1 to dial other numbers.

Note:

- When storing a calling card access number and your PIN in the phonebook as one phonebook item, press **[PAUSE]** to add pauses after the number and PIN as necessary (page 9).
- If you have rotary or pulse service, you need to press **[*]** before pressing **[☐☐]** (**[F3]** key) in step 1 to change the dialing mode temporarily to tone.

Using Caller ID service

This unit is Caller ID compatible. To use Caller ID features, you must subscribe to Caller ID service from your telephone service provider.

Caller ID features

When an outside call is being received, the calling party's name or telephone number will be displayed.

BROWN, NANCY 1-555-666-7777

Caller information for the last 50 different callers will be logged in the caller list, allowing you to return missed calls. Caller information is stored by the most recent call to the oldest.

- When Caller ID information is received and it matches a phone number stored in the phonebook, the stored name will be displayed and logged in the caller list. (**Personalized name display**)
- If the unit cannot receive caller information, the following will be displayed:
 - “**Out of area**”: The caller dialed from an area which does not provide Caller ID service.
 - “**Private caller**”: The caller requested not to send caller information.
 - “**Long distance**”: The caller called you long distance.
- If the unit is connected to a PBX system, caller information may not be received properly. Consult your PBX supplier.

Note:

- Please contact your telephone service provider for details and availability of this service in your area.

Caller list

Caller information for the last 50 different callers will be logged in the caller list. You can use this list to return missed calls.

- Caller information includes caller names and phone numbers, the date and time of calls, and the number of times the caller called.

Missed calls

If a call is not answered, the unit treats the call as a missed call. The number of missed calls is shown on the display. This lets you know if you should view the caller list to see who called while you were out.

Viewing the caller list and calling back

- 1** Press **[MENU]** (**[F2]** key), then press **[SELECT]** (**[F3]** key) or **[SET]**.
 - You can use **[V]** or **[^]** to enter the caller list.
- 2** Press **[v]** to search from the most recent call, or press **[^]** to search from the oldest call.
 - To exit the caller list, press **[STOP]**.
- 3** Press **[CALL]** (**[F1]** key) or **[☎]**.

Note:

- Calling back will not be possible if the caller information does not include a phone number.
- In some cases, you may have to edit the number before dialing. (For example, you may have to delete “1” and the area code. See page 15.)

Displayed symbols

- If the same caller calls more than once, it will be displayed with the number (“x2” to “x9”). Only the date and time of the most recent call will be stored.
- A ✓ is displayed next to items which have already been viewed or answered.

Editing a caller’s phone number before calling back

You can edit a phone number in the caller list by removing its area code and/or the long distance code “1”.

- 1 Press [V] or [^] to enter the caller list.
- 2 Press [V] or [^] repeatedly to display the desired item.
- 3 Press [EDIT] ([F2] key) repeatedly until the phone number is shown in the desired format.
Each time you press [EDIT] ([F2] key), the phone number will be rearranged into one of 3 patterns.

- ① Local phone number

Example:

321-5555

- ② Area code – Local phone number

Example:

555-321-5555

- ③ 1 – Area code – Local phone number

Example:

1-555-321-5555

- 4 Press [CALL] ([F1] key) or [☎] to call back.

Caller ID number auto edit feature

Once you call back an edited number (see “Editing a caller’s phone number before calling back”), the unit can automatically edit other incoming phone number, which comes from that same area code, each time you receive a call.

For example, you can use this feature to set the unit to ignore the area code of callers in your area code, so that you can call these local numbers using caller information without dialing the area code. To activate this feature, you must edit an item in the caller list (see “Editing a caller’s phone number before calling back”), then call that number. After that, calls from that caller’s area code will be edited automatically.

This feature can be turned on or off (page 20). The default setting is ON.

Note:

- The unit can remember up to 4 area codes to be edited. Phone numbers from the 4 most recently edited area codes will be automatically edited.
- This feature will not be activated until edited numbers are called back.
- If you move to another area, you can turn this feature off to erase previously edited area codes. To use this feature again, turn it on and reprogram the area codes you want to edit once again.

Caller ID Service

Storing caller information into the phonebook

Items in the caller list can be stored into the phonebook.

- 1 Press **[V]** or **[^]** to enter the caller list.
- 2 Press **[V]** or **[^]** repeatedly to display the desired item.
 - To edit the number, press **[EDIT]** (**[F2]** key) repeatedly until the number is shown in the desired format (page 15, step 3).
- 3 Press **[SAVE]** (**[F3]** key).
 - If there is no name information for the caller, “**Enter name**” will be displayed.
 - ① Enter the name if necessary (page 11, step 3).
 - ② Press **[SET]**.
 - ③ Press **[SET]** or **[SAVE]** (**[F3]** key).
 - To continue storing other items, repeat from step 2.
- 4 Press **[STOP]** to exit.

Note:

- If the caller information in the caller list does not include a phone number, you cannot store it in the phonebook.

Erasing caller information

Erasing a selected item

- 1 Press **[V]** or **[^]** to enter the caller list.
- 2 Press **[V]** or **[^]** repeatedly to display the desired item.
- 3 Press **[CLEAR]**.
 - To erase other items, repeat from step 2.
 - To exit the caller list, press **[STOP]**.

Erasing all items

Make sure that you have no missed calls.

- 1 Press **[V]** or **[^]** to enter the caller list.
- 2 Press **[ERASE]** (**[F1]** key).
 - “**All erase?**” will be displayed.
 - To cancel erasing, press **[NO]** (**[F1]** key).
- 3 Press **[YES]** (**[F2]** key).

Programming via direct commands

You can program features using “direct commands”– special codes that take you directly to the feature you wish to program and allow you to select the desired setting. There is no need to scroll through the unit’s sub-menus.

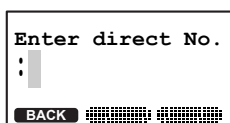
Details of each feature can be found on the corresponding pages.

Important:

- Before programming, make sure the unit is not being used.

1 Press **[MENU]** (**[F2]** key).

2 Press **[⇄]**.



3 Enter the desired feature code (shown below).

4 Enter the desired setting code (shown below).

- This step may vary depending on the feature being programmed.

5 Press **[SAVE]** (**[F3]** key).

6 Press **[STOP]** to exit programming mode.

Note:

- If the unit beeps 5 times, you entered an invalid code. Enter the correct code.
- If you make a mistake or enter the wrong code, press **[CLEAR]**.

Direct commands chart

Note:

- The default settings are indicated by *.

Feature	Feature code	Setting code	Page
Ringer volume	[1] [6] [0]	[1] : Low [2] : Medium [3] : High* [0] : Off	page 19
Ringer tone	[1] [6] [1]	[1] – [3] : Tone pattern 1*–3	page 19
LCD contrast	[1] [4] [5]	[1] – [6] : Level 1–6 (Default: 3)	page 19
Key tone	[1] [6] [5]	[1] : On* [0] : Off	page 20
Caller ID number auto edit	[2] [1] [4]	[1] : On* [0] : Off	page 20
Set dial mode	[1] [2] [0]	[1] : Pulse [2] : Tone*	page 8

Programmable Settings

Feature	Feature code	Setting code	Page
Set flash time	[1] [2] [1]	[1]: 900 ms [2]: 700 ms* [3]: 600 ms [4]: 400 ms [5]: 300 ms [6]: 250 ms [7]: 200 ms [8]: 160 ms [9]: 110 ms [0]: 100 ms [*]: 90 ms [†]: 80 ms	page 20
Change language	[1] [1] [0]	[1]: English* [2]: Spanish	page 19

Programming using the function keys

You can program features using the functions keys ([F1], [F2] and [F3] keys). For your reference, a chart of all programmable functions is printed below. Details for each item can be found on the corresponding pages.

Important:

- Before programming, make sure the unit is not being used.

- 1 To begin programming, press [MENU] ([F2] key).
- 2 Press [V] or [^] to scroll through the main menu.
- 3 Press [SELECT] ([F3] key) to select the desired main menu item.
- 4 Press [V] or [^] to scroll through the sub-menu.
- 5 Press [SELECT] ([F3] key) to select the desired sub-menu item.
- 6 Press [V] or [^] repeatedly to select the desired setting.
- 7 Press [SAVE] ([F3] key) to save the new setting.
- 8 Press [STOP] to exit programming mode.

Note:

- The default settings are indicated by *.

Main menu	Sub-menu	Option	Reference page for programming
Caller list			page 14
Ringer setting	Ringer volume	Low, Medium, High*, Off	page 19
	Ringer tone	pattern 1*–3	page 19
Initial setting	LCD contrast	Level 1–6 (Default: 3)	page 19
	Key tone	On*, Off	page 20
	Caller ID edit	On*, Off	page 20
	Set dial mode	Pulse, Tone*	page 8
	Set flash time	900 ms, 700 ms*, 600 ms, 400 ms, 300 ms, 250 ms, 200 ms, 160 ms, 110 ms, 100 ms, 90 ms, 80 ms	page 20
	Change language	English*, Spanish	page 19

During programming:

- To exit programming, press **[STOP]** at any time.
- You can press **[SET]** instead of pressing **[SELECT]** (**[F3]** key) and **[SAVE]** (**[F3]** key).
- To go back to the previous menu, press **[BACK]** (**[F1]** key).
- A ✓ indicates the current setting.

Ringer settings

Ringer volume

4 levels (high/medium/low/off) are available.

- 1** Press **[MENU]** (**[F2]** key), then press **[⇦]**, **[1]**, **[6]**, **[0]**.
- 2** Press **[1]** to **[3]**, or **[0]** to select the desired setting.
[1]: Low **[2]**: Medium
[3]: High **[0]**: Off
- 3** Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Ringer tone

You can change the ringer tone heard when an outside call is received. There are 3 tones.

- 1** Press **[MENU]** (**[F2]** key), then press **[⇦]**, **[1]**, **[6]**, **[1]**.
- 2** Press **[1]** to **[3]** (Tone pattern 1 to 3).
- 3** Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Display options

LCD contrast

You can adjust the unit display contrast. There are 6 levels.

- 1** Press **[MENU]** (**[F2]** key), then press **[⇦]**, **[1]**, **[4]**, **[5]**.
- 2** Press **[1]** to **[6]** (Level 1 to 6).
- 3** Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Display language

You can select either “English” or “Español” as the display language.

- 1** Press **[MENU]** (**[F2]** key), then press **[⇦]**, **[1]**, **[1]**, **[0]**.
- 2** Press **[1]** (English) or **[2]** (Spanish).
- 3** Press **[SAVE]** (**[F3]** key) or **[GUARDAR]**, then press **[STOP]**.

Note:

- If you select a language you cannot read, press **[MENU]** (**[F2]** key) **[⇦]** **[1]** **[1]** **[0]** **[1]** **[SAVE]** (**[F3]** key) to change the display language to English.

Telephone settings

Flash time

The flash time depends on your telephone exchange or host PBX.

- 1 Press **[MENU]** (**[F2]** key), then press **[#]**, **[1]**, **[2]**, **[1]**.
- 2 Press **[0]** to **[9]**, **[*]** or **[#]** to select the desired setting.
[1]: 900 ms **[2]**: 700 ms
[3]: 600 ms **[4]**: 400 ms
[5]: 300 ms **[6]**: 250 ms
[7]: 200 ms **[8]**: 160 ms
[9]: 110 ms **[0]**: 100 ms
[*]: 90 ms **[#]**: 80 ms

(ms=milliseconds)

- 3 Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Note:

- The setting should stay at 700 ms unless pressing **[FLASH]** fails to pick up the Call Waiting call.
- If the unit is connected via a PBX, certain PBX functions (call transferring, etc.) may not work correctly. Consult your PBX supplier for the correct setting.

Other options

Caller ID Number Auto Edit

You can turn the Caller ID number auto edit feature (page 15) on or off.

- 1 Press **[MENU]** (**[F2]** key), then press **[#]**, **[2]**, **[1]**, **[4]**.
- 2 Press **[1]** (On) or **[0]** (Off).
- 3 Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Key tone

You can select whether or not key tones are heard when keys are pressed. Includes confirmation tones and error tones.

- 1 Press **[MENU]** (**[F2]** key), then press **[#]**, **[1]**, **[6]**, **[5]**.
- 2 Press **[1]** (On) or **[0]** (Off).
- 3 Press **[SAVE]** (**[F3]** key), then press **[STOP]**.

Recording a conversation

The total recording capacity is about 120 minutes. A maximum of 64 items can be recorded.

- If 64 items have been recorded, conversation recording memory will become full even if the total recording time is less than 120 minutes.

1 Press **[REC.]** (**[F1]** key), while talking.

- When recording starts, the remaining recording time will be displayed in minutes for about 3 seconds. “-2way recording-” will be displayed while recording.
- If the remaining recording time is less than 6 minutes, the IN USE indicators will flash slowly in amber and green, and the remaining time will be displayed as shown below:

Remaining time	Display
less than 6 minutes	→ Remaining:5min
less than 5 minutes	→ Remaining:4min
less than 4 minutes	→ Remaining:3min
less than 3 minutes	→ Remaining:2min
less than 2 minutes	→ Remaining:1min
less than 1 minute*1	→ Remaining:0min

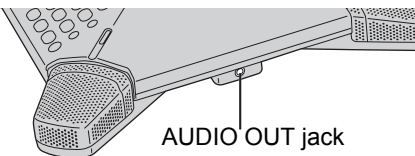
*1 When recording starts, the remaining recording time will be displayed in seconds for about 3 seconds.

- If mute is on, the IN USE indicators flash in red.

2 To stop recording, press **[STOP]**.

- If memory becomes full, “**Memory full**” will be displayed. To record additional conversations, erase unnecessary conversations.

Using the AUDIO OUT jack



- Conversations are also routed through the AUDIO OUT jack. This allows you to connect recording equipment (cassette recorder, computer, etc.) and record

conversations without using the unit's recording memory.

- Recorded conversations are also routed through the AUDIO OUT jack during playback.
- Connect “AUX IN” or “LINE IN” jack of recording equipment using an optional audio cable with a 3.5 mm mono plug.

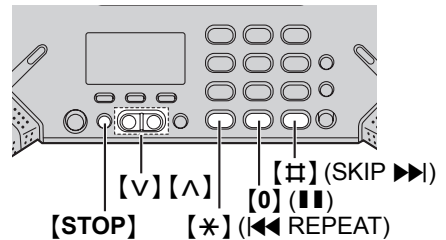
Many states have imposed regulations on the manner in which 2-way telephone conversations may be recorded, so you should inform the other party that the conversation is being recorded. Consult your telephone service provider for further information.

• For Call Waiting service users

If you receive a call during recording, perform the following to answer the 2nd call:

- If you do not want to record the 2nd call, press **[STOP]**, then press **[FLASH]**.
- If you want to record the 2nd call, press **[FLASH]**. The unit continues recording.

Playing back a recorded conversation



When conversations have been recorded, “**00**” and the total number of recorded conversations are displayed while the unit is in standby mode.

Press **[PLAY]** (**[F1]** key).



Recording a conversation

- The unit will play back the new recorded conversations.
- When you have no new recorded conversations, the unit will play back all recorded conversations.
- If the unit has no recorded conversations, the display will show “No recordings”, and the unit will go back to standby mode.

Note:

- The current conversation number (for example, “#1”) is displayed during playback.

During playback

Key	Command
[FF] ([F3] key)	Change fast-forward speed (four times or sixty times normal speed), each time you press [FF] <ul style="list-style-type: none"> • If [PLAY] ([F2] key) is pressed during fast-forwarding, playback will be resumed at normal speed. • The selected speed will flash on the display (“x4” or “x60”).
[REW] ([F1] key)	Change rewind speed (four times or sixty times normal speed), each time you press [REW] <ul style="list-style-type: none"> • If [PLAY] ([F2] key) is pressed during rewinding, playback will be resumed at normal speed. • The selected speed will flash on the display (“x4” or “x60”).

Key	Command
[*] ([<<])	Repeat conversation <ul style="list-style-type: none"> • If [*] ([<<]) is pressed within the first 2 seconds, the previous conversation will be played. • If [*] ([<<]) is pressed during playback of the first conversation, the first conversation will be repeated.
[#] ([>>])	Skip conversation
[0] ([])	Pause playback <ul style="list-style-type: none"> • To resume playback, press [PLAY] ([F2] key). • To stop playback completely, press [STOP].
[STOP]	Stop playback

To adjust the speaker volume

Press **[^]** or **[v]** repeatedly during playback. 8 levels (high to low) are available. “Receiver volume” is displayed.

Erasing a specific conversation


- 1 Press **[ERASE]** (**[F2]** key) while listening to the conversation you want to erase.
- 2 Press **[SELECT]** (**[F3]** key) at “Individual erase”.
 - The display shows “Erased”, then the next one will be played.

Erasing all conversation

- 1 Press **[ERASE]** (**[F2]** key) while listening to the conversation.
- 2 Press **[v]** or **[^]** to select “All erase”.
- 3 Press **[SELECT]** (**[F3]** key).
 - The display shows “All Erased”.

Display messages

One of the following messages will be displayed in the condition described below.

Display message	Cause & solution
Phonebook full	<ul style="list-style-type: none"> There is no space to store new items in the phonebook. Erase unnecessary items (page 13).
No items stored	<ul style="list-style-type: none"> Your phonebook, redial list or caller list is empty.
 Memory full	<ul style="list-style-type: none"> Conversation recording memory is full. Erase unnecessary items (page 22).

Troubleshooting

General use

Problem	Cause & solution
The unit does not work.	<ul style="list-style-type: none"> Check the connections (page 6). Unplug the unit's AC adaptor or Interface cable to reset the unit. Reconnect the adaptor or interface cable and try again.
I cannot hear a dial tone.	<ul style="list-style-type: none"> Confirm that the telephone line cord is connected (page 6). Disconnect the unit from the telephone line and connect a known working telephone. If the working telephone operates properly, contact our service personnel to have the unit repaired. If the working telephone does not operate properly, contact your telephone company.

Programmable settings

Problem	Cause & solution
I cannot program items.	<ul style="list-style-type: none"> Do not pause for over 1 minute while programming.
While programming, the unit starts to ring.	<ul style="list-style-type: none"> A call is being received. Answer the call and start again from the beginning after a call is finished.

Making/answering calls

Problem	Cause & solution
Noise is heard while talking.	<ul style="list-style-type: none"> If your unit is connected to a telephone line with DSL service, we recommend connecting a noise filter between the unit and the telephone line jack (page 6). Contact your DSL provider for details. If your unit is near noisy equipment such as computers or fans, you may not be able to hear easily the other party's voice. Turn off noisy equipment on both parties.

Useful Information

Problem	Cause & solution
Short silences, echoes, or speech cuts occur.	<ul style="list-style-type: none">● At the beginning of a call, both parties should speak alternately. This enables the unit to adapt to its environment and let both parties speak effectively.● Do not move the unit while it is in use.● Keep your hands away from the unit during calls.● Keep files, cups, coffee pots, etc., away from the unit.● The other party's phone might not be full duplex. For best sound quality, the other party should use a handset phone or full duplex speakerphone.● Use the unit in a quiet room.
The other party's voice is muffled or sounds "in a well".	<ul style="list-style-type: none">● Speak closer to the unit.● If your room has glazed windows, we recommend that you draw a curtain or pull a blind.
I cannot make a call.	<ul style="list-style-type: none">● The dialing mode may be set incorrectly. Set the dial mode (page 8) to match the type of telephone service you have (tone or pulse).
I cannot redial by pressing [REDIAL] .	<ul style="list-style-type: none">● If the last number dialed was more than 48 digits long, the number will not be redialed correctly.● If you press [REDIAL] after you have entered the phone number, this button functions as the [PAUSE] button. To redial, press [⇨], then press [REDIAL], or press [REDIAL], select desired phone number by pressing [V] or [^], then press [⇨] or [CALL].
I cannot make long distance calls.	<ul style="list-style-type: none">● Make sure that you have long distance service.

Phonebook

Problem	Cause & solution
I cannot store an item in the phonebook.	<ul style="list-style-type: none">● You cannot store an item in the phonebook while the unit is in speakerphone mode, or while listening to recorded conversations.● Do not pause for over 1 minute while storing.
While storing an item in the phonebook, the unit starts to ring.	<ul style="list-style-type: none">● A call is being received. Answer the call and start again from the beginning after a call is finished.
The display exits the phonebook while searching.	<ul style="list-style-type: none">● The unit automatically exits after 1 minute of inactivity.

Caller ID

Problem	Cause & solution
The unit does not display the caller's name and/or phone number.	<ul style="list-style-type: none"> ● You have not subscribed to Caller ID service. Contact your telephone service provider to subscribe. ● If your unit is connected to any additional telephone equipment such as Caller ID box or wireless telephone jack, disconnect the unit from the equipment and plug the unit directly into the wall jack. ● If your unit is connected to a telephone line with DSL service, we recommend connecting a noise filter between the unit and the telephone line jack (page 6). Contact your DSL provider for details. ● The name display service may not be available in some areas. Contact your telephone service provider for details. ● Other telephone equipment may be interfering with this unit. Disconnect the other equipment and try again. ● The caller requested not to send caller information (page 14). ● Generally caller information is displayed from the 2nd ring. ● If the unit is connected to a PBX system, caller information may not be received properly. Consult your PBX supplier.
The caller list/incoming phone numbers are not edited automatically.	<ul style="list-style-type: none"> ● The Caller ID number auto edit feature is turned off. Turn it on and try again (page 20). ● You need to call back the edited number to activate Caller ID number auto edit.
I cannot dial the phone number edited in the caller list.	<ul style="list-style-type: none"> ● The phone number you dialed might have an incorrect edited pattern (for example, the long distance "1" or the area code is missing). Edit the phone number with another pattern (page 15).
The display exits the caller list while searching.	<ul style="list-style-type: none"> ● The unit automatically exits after 1 minute of inactivity.

Power failure

Problem	Cause & solution
The unit will not function.	<ul style="list-style-type: none"> ● This product is not designed to make calls in the event of a power failure.

FCC and other information

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:ACJ----- . If requested, this number must be provided to the telephone company.

- Registration No
.....(found on the bottom of the unit)
- Ringer Equivalence No.
(REN).....0.1B

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will

notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact a Factory Servicenter or other Authorized Servicer. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Specifications

Speakerphone unit

Operating environment:

5 °C – 40 °C (41 °F – 104 °F)

Dimensions:

Approx. height 64 mm x width 279 mm x depth 279 mm (2¹⁷/₃₂" x 11" x 11")

Mass (Weight):

Approx. 970 g (2.14 lb.)

Audio Out:

Typical: Approx. –3 dBm (at 10 kΩ),
0.03 mW

Maximum: Approx. 0 dBm (at 10 kΩ),
0.06 mW

ø3.5 mm mono mini jack

Power consumption:

Standby: Approx. 4.0 W

Maximum: Approx. 7.0 W

Power supply:

AC adaptor (120 V AC, 60 Hz)

Interface box

Dimensions:

Approx. height 32 mm x width 67 mm x depth 76 mm (1¹/₄" x 2⁵/₈" x 3")

Mass (Weight):

Approx. 60 g (0.13 lb.)

Note:

- Design and specifications are subject to change without notice.
- The illustrations in these instructions may vary slightly from the actual product.

Index

- A** Accessories: 3
 - Answering calls: 10
 - Audio output: 21
- C** Caller ID number auto edit: 15, 20
 - Caller ID service: 14
 - Caller list
 - Calling back: 14
 - Editing: 15
 - Erasing: 16
 - Storing: 16
 - Viewing: 14
 - Call waiting tone: 10
 - Chain dial: 13
 - Controls: 7
- D** Display language: 19
 - Display messages: 23
- F** FCC and other information: 26
 - Flash button: 10
 - Flash time: 20
 - Function keys: 8
 - Function menu
 - Direct commands: 17
 - Table: 18
- I** Installation
 - AC adaptor: 6
 - Interface box: 6
 - Interface cable: 6
 - Telephone line cord: 6
- K** Key tone: 20
- L** LCD contrast: 19
- M** Making calls: 9
 - Memory capacity: 21
 - Mute: 10
- P** Pause: 9, 13
 - Personalized name display: 14
 - Phonebook
 - Adding: 11
 - Calling: 12
 - Editing: 13
 - Erasing: 13
 - Power failure: 6, 25
 - Pulse service: 10
- R** Recording a conversation: 21
 - Recording time: 21
 - Redial: 9
 - Redial list: 9
 - Ringer tone: 19
 - Ringer volume: 19
 - Rotary service, tone dialing: 10
- S** Safety instructions: 4
 - Specifications: 27
 - Sp-phone: 9
- T** Troubleshooting
 - Caller ID: 25
 - General use: 23
 - Making/answering calls: 23
 - Phonebook: 24
 - Power failure: 25
 - Programmable settings: 23
 - TTY: 3
- V** Volume control: 9, 22
- W** Warranty: 29

Warranty

PANASONIC CONSUMER
ELECTRONICS COMPANY, DIVISION
OF PANASONIC CORPORATION OF
NORTH AMERICA
One Panasonic Way,
Secaucus, New Jersey 07094

PANASONIC PUERTO RICO, INC.
San Gabriel Industrial Park,
Ave. 65 de Infantería, Km. 9.5,
Carolina, Puerto Rico 00985

Panasonic Telephone Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Parts

One (1) Year

Labor

One (1) Year

During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" Limited Warranty period, there will be no charge for parts. You must mail-in your product during the Limited Warranty period. This Limited Warranty excludes both parts and labor for batteries, antennas, and cosmetic parts (cabinet). This Limited Warranty only applies to products purchased and serviced in the United States or Puerto Rico. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new.

Mail-In Service

For assistance in the continental U.S.A. in obtaining repairs please ship the product to:

Panasonic Services Company Customer Servicenter

4900 George McVay Drive Suite B Door #12 McAllen, TX 78503

For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

When shipping the unit carefully pack, include all accessories, and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone number where you can be reached.

IF REPAIR IS NEEDED DURING THE LIMITED WARRANTY PERIOD THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty Limits And Exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, or rental use of the product, or service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY. (As examples, this excludes damages for lost time, lost calls or messages, cost of having someone remove or re-install an installed unit if applicable, travel to and from the servicer. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the Limited Warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

Customer services

Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/consumersupport>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at: 1-800-211-PANA (7262),
Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

TTY users (hearing or speech impaired users) can call 1-877-833-8855.

Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pasc.panasonic.com>

or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only)

(Monday - Friday 9 am to 8 pm, EST.)

Panasonic Services Company

20421 84th Avenue South, Kent, WA 98032

(We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

TTY users (hearing or speech impaired users) can call 1-866-605-1277.

Service in Puerto Rico

Panasonic Puerto Rico, Inc.

San Gabriel Industrial Park, Ave. 65 de Infantería, Km. 9.5,

Carolina, Puerto Rico 00985

Phone (787)750-4300, Fax (787)768-2910

If you need assistance with setup or operation;

- 1** Visit our website: <http://www.panasonic.com/consumersupport>
- 2** Contact us via the web at: <http://www.panasonic.com/contactinfo>
- 3** Call us at: 1-800-211-PANA (7262)
TTY users (hearing or speech impaired users) can call 1-877-833-8855.

When you ship the product;

- Carefully pack your unit, preferably in the original carton.
- Attach a letter, detailing the symptom, to the outside of the carton.
- Send the unit to Panasonic Services Company Customer Servicer, prepaid and adequately insured.
- Do not send your unit to Panasonic Consumer Electronics Company listed below or to executive or regional sales offices. These locations do not repair consumer products.

Copyright:

This material is copyrighted by Panasonic Communications Co., Ltd., and may be reproduced for internal use only. All other reproduction, in whole or in part, is prohibited without the written consent of Panasonic Communications Co., Ltd.
© 2005 Panasonic Communications Co., Ltd. All Rights Reserved.

**Panasonic Consumer Electronics Company,
Division of Panasonic Corporation of North America**
One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Puerto Rico, Inc.
San Gabriel Industrial Park, Ave. 65 de Infantería, Km. 9.5,
Carolina, Puerto Rico 00985