

TECOM CO., LTD.
FCC ID.: D6XIBM4900
EUT : 4 LINE NOKSU WITH CORDLESS HANDSET

Exhibit E User's Manual

Model : IBM-4900

**ADVANCED HOME/OFFICE
4 LINE TELEPHONES**

**Installation and
Operation Guide**

Please read this manual carefully prior to installing your telephone.

Table of Contents

Equipment Notes	3
Important Safety Instructions	4
Batteries: Caution	5
Getting Started	
Package Contents	6
Location of Controls and Features	7
Base	7
Display	8
Handset	8
Useful Features and Terms	9
Display Reference	10
Lights and Cadence Reference List	11
Installation	
Installing the Batteries	12
Connecting Your Telephone Lines	13
Line Cord Adapters You May Need	13
Telephone Line Connections	
Two Single-Line Jacks	14
Two 2-Line Jacks	14
Four Single-Line Jacks	15
Desk Top and Counter Top Installation	15
Adjusting Viewing Angle Brackets	16
Wall Mounting	17
Locating Base for Optimal Performance	18
Cordless Handset - Final Setup	18
Telephone Operations - Phone Set Up	
List of Systems Defaults	19
Assigning Extension Numbers	19-20
Setting the Clock and Calendar	20
Programming Tone or Pulse Mode	20
Programming Line Connection On/OFF	21
Programming Ringer ON/OFF	21
Adjusting Volume Levels	21
Area Code Programming	22

Basic Operations	
Making an Outgoing Call	23
Answering an Incoming Call	24
Hold	24
Mute	24
Last Number Redial.....	25
Auto Redial.....	25
Headset Operations.....	26
Intercom Service	
DSS Keys	27
Placing an Intercom Call.....	27
Answering an Intercom Call	28
Paging	
Paging an Individual Extension	29
Receiving an Individual Page	29
Answering an Individual Page.....	30
Paging All Extensions (Page All)	30
Answering a Page All	30
Caller ID	
The Caller ID Display	31
Using the Caller ID Log.....	31-33
Telephone Features	
Calls/Message Waiting Indicator	34
Conferencing	35
Do Not Disturb	35
Flash	35
Line Privacy.....	36
Pause	36
Speed Dial.....	36-37
Timer	38
Transfer	38
Handset Locator from Base.....	38
Care and Maintenance	39
Troubleshooting	40-41
Aastra Telecom Limited Warranty	42
Wall Mounting Template.....	43

Equipment Notes

FCC Requirements

Your BE-4900 telephone is registered with the Federal Communications Commission and is in compliance with part 15j and part 68 of the FCC Rules and Regulations. On the bottom of this equipment is a label indicating among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for the equipment. You must, upon request, provide this information to your telephone company. The REN is useful to determine the number of devices you may connect to your telephone line and still have all devices ring when your telephone number is called. In most cases (but not all areas), the sum of the REN's of all the devices connected to one line should not exceed (5) five. The telephone utilizes high sensitivity ringer circuits which will function reliably with up to twelve telephones installed.

telephone cannot be used with coin service pay service telephones.
telephone cannot be connected to a party line service.
telephone is Hearing Aid Compatible.

The telephone company may discontinue service if the telephone is determined to cause harm to the telephone network. In this case, the telephone company will:

- ▶ Notify the customer that the service is being discontinued.
- ▶ Provide the customer with the opportunity to correct the situation.
- ▶ Inform the customer of his rights to bring the complaint to the FCC.

Compatibility

Your is a cordless 'system phone', designed to work with other Bell Equipment Sonacor phones to provide advanced telephone system features.

The is a corded version of the Bell Equipment Sonacor system phones, featuring a fully integrated hands-free headset, useful LCD display, 4-line caller ID support, message waiting indicator, speakerphone, speed dial, and much more.

The BE-412 is an extremely cost-effective Bell Equipment Sonacor system phone, featuring a fully integrated hands-free headset, speakerphone as well as other advanced system features.

Visit your dealer or call TT Systems Corporation for information on these models.

Important Safety Instructions

Before using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electrical shock and injury to persons, including the following:

- ▶ Read and understand all instructions.
- ▶ Follow all warnings and instructions marked on the product.
- ▶ Unplug this product from the wall telephone jack and power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- ▶ Do not use this product near water, for example, near a bathtub, wash bowl, sink or laundry tub.
- ▶ Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- ▶ This product should never be placed near or over a radiator or heat register.
- ▶ This product should be operated only from the type of power source indicated on the marking label.
- ▶ Do not allow anything to rest on the power cord.
- ▶ Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
- ▶ Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or cause shorts that could result in the risk of fire or electric shock.
- ▶ To reduce the risk of electric shock, do not disassemble this product. Take it to a qualified serviceman when service or repair work is required.
- ▶ Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - ▶ When the power supply cord or plug is damaged or frayed.
 - ▶ If liquid has been spilled into the product.
 - ▶ If the product has been exposed to rain or water.
 - ▶ If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions.
 - ▶ If the product has been dropped or cabinet has been damaged.
 - ▶ If the product exhibits a distinct change in performance.
- ▶ Avoid using a telephone (other than a cordless type) during an electrical storm. There is risk of electric shock from lightning.
- ▶ Do not use the telephone to report a gas leak in the vicinity of the leak.

Batteries: CAUTION

- ▶ For the base of the telephone use only AA-size batteries, preferably alkaline. (batteries not included.)
- ▶ For the cordless handset use only 3.6V 600mAh Nickel Cadmium (Ni-Cd) cordless phone replacement battery packs.
- ▶ Do not dispose of the batteries in a fire. The cells may explode. Check with local codes for possible special disposal instructions.
- ▶ Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- ▶ Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.
- ▶ Do not attempt to recharge the AA-size batteries identified for use with this product. The batteries may leak corrosive electrolyte or explode.
- ▶ Charge the cordless phone battery pack provided with or identified for use with this product only in accordance with the instructions and limitations specified in this instruction manual.
- ▶ Do not attempt to rejuvenate the batteries identified for use with this product by heating them. Sudden release of the battery electrolyte may occur causing burns or irritation to eyes or skin.
- ▶ When replacing AA-size batteries, all three batteries should be replaced at the same time. Mixing fresh and discharged batteries could increase internal cell pressure and rupture the discharged batteries.
- ▶ When inserting batteries into this product, the proper polarity or direction must be observed. Reverse insertion of batteries can cause charging, and that may result in leakage or explosion.
- ▶ Remove the batteries from this product if the product will not be used for a long period of time (several months or more) since during this time the battery could leak in the product.
- ▶ Discard "dead" batteries as soon as possible since "dead" batteries are more likely to leak in a product.
- ▶ Do not store this product, or the batteries identified for use with this product, in high temperature areas. Batteries that are stored in a freezer or refrigerator for the purpose of extending shelf life should be protected from condensation during storage and defrosting. Batteries should be stabilized at room temperature prior to use after cold storage.

TABLE OF CONTENTS

I	INDICATIONS	4
1.	Indicator(s) on the Base unit	4
1.1	<i>Lamps</i>	4
1.2	<i>Lamp Cadence</i>	5
1.3	<i>Buzzer Cadence</i>	5
1.4	<i>Intercom Tone Plant</i>	5
2.	Indicator(s) on the Handset unit.....	5
II	PROGRAMMING	6
A.	Handset Unit	6
1.	Programming Headset On/Off	6
2.	Programming the Security Code	6
3.	Resetting the Headset	6
4.	Changing the Security Code	6
B.	Base Unit	6
1.	Tone/Pulse mode programming.....	6
2.	Programming Station ID Number	7
3.	Programming Ringer On/Off for CO Lines	7
4.	Programming Line Connection On/Off.....	7
5.	Set the Clock and Calendar.....	7
6.	Area code programming	8
6.1	<i>Setting the Area Code for Caller ID</i>	8
6.2	<i>Erasing the Area Code</i>	8
7.	Programming the Speed Dial	8
7.1	<i>Store Phone Numbers into Speed Dial Memory</i>	8
7.2	<i>Store the Last Number Dialed into Speed Dial Memory</i>	8
7.3	<i>Erasing the Speed Dial Memory</i>	8
8.	Back to Default value	8
III	BASIC OPERATION	10
1.	Making an Outgoing Call.....	10
2.	Answering an Incoming Call.....	10
3.	Last Number Redial.....	10
4.	Auto Redial	10
5.	Speed Dialing.....	11
6.	Hold Function	11
6.1	<i>Placing an outside call on hold</i>	11
6.2	<i>Releasing Hold</i>	11
7.	Privacy Function	11
7.1	<i>Outside Call Privacy Release</i>	11
7.2	<i>Outside Call Privacy Release Recover</i>	11
8.	Transferring a Call	11
9.	Intercom Operation	11
9.1	<i>Making an Intercom Call</i>	11
9.2	<i>Answering an Intercom Call</i>	12
9.3	<i>Paging a Specific Station</i>	12
9.4	<i>Answering a Single Page Call</i>	12
9.5	<i>Dial Intercom Call and Single Page Call Interchanging</i>	12

9.6 Voice Page All Station.....	12
9.7 Meet Me Answer to All Page.....	13
10. Conference Call.....	13
10.1 Two CO Lines Conference Call.....	13
10.2 One CO Line and Two Stations Conference Call.....	13
11. PAUSE Function.....	13
12. FLASH Function.....	13
13. MUTE Function.....	14
14. TONE Function.....	14
15. DND Function.....	14
16. Trace the Length of Phone Calls.....	14
17. Adjusting the Speaker Volume.....	14
18. Adjust the Ringer Volume of CO Line.....	15
19. Adjusting the Handset Volume.....	15
20. Adjusting the Headset Volume.....	15
21. Battery Low Display.....	15
22. Liquid Crystal Display (LCD).....	15
23. Base and Handset Interchanging.....	15
24. Searching the Handset.....	16
IV CALLER ID OPERATION.....	17
1. Incoming Caller ID Display.....	17
2. Working with Caller's list.....	18
2.1 Retrieving the list.....	18
2.2 Erasing a record on the List.....	18
2.3 Return a Call on the Caller's List.....	18
2.4 Saving a Number from Caller's List to a Speed Dial Key.....	18
3. Message Waiting.....	19
3.1 Accessing the Message Central Office.....	19
3.2 Deleting the Message Waiting Indicator.....	19
V APPENDIX A: LCD DISPLAY.....	20

! INDICATIONS

1. Indicator(s) on the Base unit

1.1 Lamps

-- SHIFT

dark: in first(lower) mode.
lit: in second(upper) mode.

-- ICM

dark: intercom link idle.
fast: you're receiving an intercom call.
lit: intercom link busy.
Wink1: you're using the intercom.

-- SPKR

dark: you're idle or in handset mode.
lit: you're in handsfree mode.

-- CO1, 2, 3, 4

lit: CO line using by other station.
dark: CO line idle.
slow: CO incoming call ring.
fast: CO line held by you.
wink1: you're using the CO line.
wink2: CO line held by other station.
wink3: CO line transferred to you by other station.

-- MUTE

dark: you aren't muted.
lit: you're muted.

-- DND

dark: you're turn off the DND.
lit: you're turn on the DND.

-- REDIAL

fast: you're using auto redial.
slow: you're in auto redial mode wait cycle.
dark: you don't use auto redial.

-- MSG/CALLS

dark: you don't have any new call.
lit: you have the new calls.
fast: some one has left message for you.

1.2 Lamp Cadence

<i>Lit:</i>	solid lit.
<i>Slow:</i>	1 sec on, 1 sec off, repeatedly.
<i>Fast:</i>	0.125 sec on, 0.125 sec off, repeatedly.
<i>Wink1:</i>	1.875 sec on, 0.125 sec off, repeatedly.
<i>Wink2:</i>	0.875 sec on, 0.125 sec off, repeatedly.
<i>Wink3:</i>	0.125 sec on, 0.875 sec off, repeatedly.

1.3 Buzzer Cadence

<i>Beep:</i>	0.25 sec on.
<i>Double beep:</i>	0.25 sec on, 0.25 sec off, 0.25 sec on, 0.25 sec off.
<i>ICM ring:</i>	0.25 sec on, 0.25 sec off, 0.25 sec on, 1.25 sec off, repeatedly.
<i>Transfer ring:</i>	1 sec on, 1sec off, repeatedly.
<i>ID-error ring:</i>	0.25 sec on, 0.25 sec off, repeatedly.

1.4 Intercom Tone Plant

<i>Dial tone:</i>	continuous tone.
<i>Busy tone:</i>	0.25 sec on, 0.25 sec off, repeatedly.
<i>DND tone:</i>	0.5 sec on, 0.5 sec off, repeatedly.
<i>Ring back tone:</i>	1 sec on, 1sec off, repeatedly.

2. Indicator(s) on the Handset unit

<i>Sync. Error:</i>	0.125 sec on, 0.375 sec off, repeatedly. (Priority 1.)	%
<i>Battery low:</i>	0.125 sec on, 0.875 sec off, repeatedly. (Priority 2.)	%
<i>Headset On:</i>	0.125 sec on, 1.875 sec off, repeatedly. (Priority 3.)	%

Note: if the headset is in standby mode, the indicator will be dark.

II PROGRAMMING

A. Handset Unit

1. Programming Headset On/Off

- In idle.
- Press [HOLD].
- Press [0] for *disable* headset, or [1] for *enable* headset.
- A beep will be heard to signal a successful programming.

Note: The default value is *disable*.

2. Programming the Security Code

- In idle.
- Press [HOLD].
- Press [#], [#].
- Enter 6 digits for new security code.
- Press [HOLD].
- A beep will be heard to signal a successful programming.

Note: The default value is *empty*.

3. Resetting the Headset

- In idle.
- Press [HOLD], [*], [HOLD].

Note: The default parameter list:

1. Security Code: *empty*.

4. Changing the Security Code

- Power-up the base unit, and be sure the S.C has been programmed in the handset.
- Press [HOLD].
- Press [#].
- Press and hold [*].
- Keep holding [*] until a confirmation beep is heard.

Note: 1. After the about 15 seconds, if you still do not get the confirmation, then it means that the changing fail.

2. The base unit can not do this operation.

B. Base Unit

1. Tone/Pulse mode programming

- Press [STORE]
- Press [0], [0]
- Press [0], [0] for *Pulse* mode, or [0], [1] for *Tone* mode.
- Press [MUTE].
- A beep will be heard to signal a successful programming.

Note: The default value is *Tone* mode.

2. Programming Station ID Number

When you use 2 or more telephones, each must be named a different station number. The same station number can't be repeated. If two of them are set to the same station number, continuous warning will occur, and it is necessary to program another station number for the ringing telephone.

- Press [STORE].
- Press [1], [0].
- Enter 2 digits XX. Where XX: 11 – 22.
- Press [MUTE].
- A beep will be heard to signal a successful programming.

Note: The default value is 11.

3. Programming Ringer On/Off for CO Lines

- Press [STORE].
- Press [2].
- Press a digit X, where X: CO Line number.
- Press [0], [0] for *Off*, or [0], [1] for *On*.
- Press [MUTE].
- A beep will be heard to signal a successful programming.

Note: The default value is *On*.

4. Programming Line Connection On/Off

- Press [STORE].
- Press [5].
- Press a digit X, where X: CO Line number.
- Press [0], [0] for *Off*, or [0], [1] for *On*.
- Press [MUTE].
- A beep will be heard to signal a successful programming.

Note: The default value is *On*.

5. Set the Clock and Calendar

The time and date appear on the display screen when the phone is not in use.

- Press [SHIFT].
- Press [SET].
- Enter 2 digits for MONTH, 01 – 12.
- Enter 2 digits for DAY, 01 – 31.
- Enter day of week, 1 – 7. 1 for SUN, 2 for MON, etc.
- Enter 2 digits for HOUR, 01 – 12.
- Enter 2 digits for MINUTE, 00 – 59.
- Enter [*] for AM, or [#] for PM.
- A beep will be heard to signal a successful programming.

Note: The default value is Jan 01 FRI 12:00 AM.

6. Area code programming

The CID area code can be up to 5 digits, and the default is empty. If a call from the same CID area code, then the area code will be deleted automatically, and won't be stored in the CID data base. So the call can be dial back as a local call without the leading area code.

6.1 Setting the Area Code for Caller ID

- Press [STORE].
- Press [7], [1].
- Key in 1 to 5 digits as the area code.
- Press [MUTE]
- A beep will be heard to signal a successful programming

6.2 Erasing the Area Code

- Press [STORE].
- Press [7], [1].
- Press [*].
- Press [MUTE].
- A beep will be heard to signal a successful programming.

7. Programming the Speed Dial

There are 24 memory locations (2 groups) to store speed dial numbers. Each memory location can store up to 24 digits, include *PAUSE*, *TONE* and *FLASH*.

7.1 Store Phone Numbers into Speed Dial Memory

- Press [STORE].
- Enter the digits to be stored.
- If you want to store second group speed dial numbers, you must press [SHIFT] now.
- Press Speed Dial Key.
- A beep will be heard to signal a successful programming.

7.2 Store the Last Number Dialed into Speed Dial Memory

- Press [STORE].
- Press [REDIAL].
- If you want to store second group speed dial numbers, you must press [SHIFT] now.
- Press Speed Dial Key.
- A beep will be heard to signal a successful programming.

7.3 Erasing the Speed Dial Memory

- Press [STORE].
- Press [*].
- If you want to erase the second group speed dial numbers, you must press [SHIFT] now.
- Press Speed Dial Key.
- A beep will be heard to signal a successful programming.

8. Back to Default value

You may clear all the programmed data, all parameters will back to the default value.

- Press [STORE].
- Press [*], [#], [*], [#].
- Press [MUTE]

- A beep will be heard to signal a successful programming.

Note: The all default item and value as follows:

1. Tone/Pulse mode: *Tone mode.*
2. Headset mode (programmed by handset): *disable.*
3. Station ID number: *11*
4. CO lines Ringer: *On.*
5. Line Connection: *On.*
6. Speaker Volume: *4th large level.*
7. Handset volume: *minimum level.*
8. Headset volume: *middle level.*
9. Ringer volume: *middle level.*
10. SPD: *empty*
11. Area Code: *empty.*
12. Calendar: *Jan 01 FRI 12:00 AM.*
13. Caller ID Database: *empty.*
14. Security code: *empty.*

!!! **BASIC OPERATION**

1. Making an Outgoing Call

- Handset Unit
 - Press [TALK].
 - An available line is automatically selected.
 - Dial desired number.

- Base Unit
 - Press [SPKR].
 - An available line is automatically selected.
 - Dial desired number.

2. Answering an Incoming Call

- Handset Unit

You may press any one of digit keys [1/2/3/4/5/6/7/8/9/0/*/#], or [TALK] key, or lift the handset from the Base unit to pick up the ringing call. %

- Base Unit
 - Press the flashing CO key to pick up the ringing call.
 - Or
 - Press [SPKR] key to pick up the ringing call automatically.

3. Last Number Redial

The telephone set will automatically remember the last phone dialed. This allows you to automatically redial last number dialed until another call is placed.

- Handset Unit
 - Take an available outside line.
 - Press [REDIAL].

- Base Unit
 - Press [REDIAL].
 - The station will pick up an available CO, and dial the stored number automatically.

4. Auto Redial

The telephone set can automatically redial a busy number up to 10 times. (*Only on the base unit*) %

- Press an idle line key on Base unit.
- Press [REDIAL] on Base unit.
- Once the called party answer or ring back tone is heard, when you lift the handset or press [SPKR] to stop auto-redial function and start to talk to the called party. %

- Note:*
1. Any other operation of the phone will stop/end the auto-redial function except [SHIFT] and [▼ VOLUME ▲].
 2. The on-line waiting time is about 30 seconds, which is the time after the phone number dialed and hangs up the time.
 3. The off-line waiting time is about 30 seconds, which is the time between the hang up and next trial.
 4. The handset unit can't do this operation.

5. Speed Dialing

- Press [SHIFT], If you want to dial second group's SPD number.
- Press Speed Dial key, the station will pick up an available line, and dial the stored number automatically.

Note: The handset unit can't do this operation.

6. Hold Function

6.1 Placing an outside call on hold

- Press [HOLD].

6.2 Releasing Hold

- Press the held CO key.

7. Privacy Function

System will always keep the line privacy, unless the line privacy had released by user.

7.1 Outside Call Privacy Release

- Press the used CO line key, a beep is heard to release line privacy.

7.2 Outside Call Privacy Release Recover

- When you want to recover the line privacy, press the used CO line key again.

Note: The handset unit can't do this operation.

8. Transferring a Call

-- Handset Unit

- On line.
- Press [HOLD] or Press [TRNSFR] (*only Model C*). %
- Dial a desired transferred station number.

-- Base Unit

- On line.
- Press [TRNSFR]. %
- Dial a desired transferred station number, or Press a *DSS* key.
- A signal beep will hear if the CO call is transferred automatically.

- Note:*
1. The transferred will hear the CO transfer ring. (Both the handset and base unit) %
 2. All station can pick up the transferred CO line.
 3. The transfer mode will be cancelled after about 10 seconds if nothing is dialed.

9. Intercom Operation

9.1 Making an Intercom Call

- Press [ICM].
- Dial desired intercom number, or *DSS* key (*only Base unit*)

- Note:*
1. If the called is *idle*, you will hear the *ring back tone*.
 2. If the called set *DND*, you will hear the *DND tone*.
 3. If the called is *busy*, you will hear the *busy tone*.

4. When you direct an intercom call to one station, any station in the system can answer the call.

9.2 Answering an Intercom Call

-- Handset Unit

- Press [*any one of the digit*] key, or [TALK] key, or [ICM] key, or lift the handset from the Base unit to pick up intercom call automatically. %

-- Base Unit

- Press [ICM] key to pick up intercom call.
- Or
- Press [SPKR] key to pick up intercom call automatically.

9.3 Paging a Specific Station

- Press [PAGE].
- Dial desired intercom number, or DSS key.

Note: The handset unit can't do this operation.

9.4 Answering a Single Page Call

A beep tone is heard to let you know a voice call is coming. The single paged set will turn on MUTE lamp.

- Press [MUTE] key.

Note: The handset unit can't do this operation.

9.5 Dial Intercom Call and Single Page Call Interchanging

-- Handset Unit

- Making an intercom call.
- Press [ICM] key again, change your intercom call to single paging call.
- Press [ICM] key again, change your single paging call to dial intercom call.

-- Base Unit

- Press [PAGE] key to change your intercom call to single paging call.
- Press [ICM] key to change your single paging call to dial intercom call.

9.6 Voice Page All Station

-- Handset Unit

- Press [PAGEALL]. (*Only Model C*)
- Or
- Press [ICM].
- Press [*].

-- Base Unit

- Press [PAGE].
- Press [*].
- Or
- Press [SHIFT].

- Press [PAGEALL] directly.

Note: Your message can be announced to all idle telephone set.

9.7 Meet Me Answer to All Page

- Press [PAGE].
- Or
- Press [SHIFT].
- Press [PAGEALL].

Note: The handset unit can't do this operation.

10. Conference Call

A telephone set already involved in a two-way conversation may invite a third party into the same conversation.

10.1 Two CO Lines Conference Call

- On line.
- Press [HOLD] and make the second CO line call.
- After third party answers, press the [CONF] key.
- Three party conferences established.

10.2 One CO Line and Two Stations Conference Call

- On line
- Press [HOLD] and make the intercom call.
- After third party answers, press the [CONF] key.
- Three party conferences established.

Note: The handset unit can't do this operation.

11. PAUSE Function

You may use the PAUSE function to make a dialing delay between digits during a call, or program the PAUSE in the speed dialing numbers for certain banking and long distance service. Each time you press PAUSE key, about 3 seconds delay occurs in the dialing sequence. You may press more one PAUSE to get a longer delay for you need.

- Press [PAUSE] key, to insert a timing delay between digits. (*Only Model C*)

Note: 1. In Model D, the [REDIAL] key will be used as a PAUSE function after telephone number(s) dialed.

2. The handset unit can't do this operation.

12. FLASH Function

The FLASH key lets you access your local telephone company's custom calling features such as call waiting or holding, and when you are notified of another call coming in, to press [FLASH] key will let you access the other call.

Note: The flash duration is 600 ms.

13. MUTE Function

The MUTE feature allows you to temporarily cut off the voice transmission to the other party, so he can not hear your voice during conversation.

- Press [MUTE] to light the MUTE lamp and your voice will not be heard by the other party.
- Press [MUTE] again to turn off the MUTE lamp and 2-way phone conversation will be restored.

Note: The handset unit can't do this operation.

14. TONE Function

If you have PULSE telephone service, the [*] key allows you to access some specialized communication services that require DTMF signaling.

- Dial the telephone number(s) in PULSE mode.
- Press [*], now dial in TONE signaling.

15. DND Function

No phone call will be ring in when this feature is activated.

%

-- Setting DND

- Press [DND] and the DND indicator will light.

-- Canceling DND

- Press [DND] again, and the DND indicator will dark.

Note: The handset unit can't do this operation.

16. Trace the Length of Phone Calls

- Establish an outside call.
- Press [SHIFT].
- Press [TIMER], the LCD display 00:00 starts to counting, and up to 59:59.
- After reaching 59:59, the LCD will start counting from 00:00 again.
- Press [SHIFT] key first, then press [TIMER] key again to stop counting or just hang up. (the display still holds for 6 seconds.)

Note: 1. The call duration will count automatically after the phone number dialed.
2. The handset unit can't do this operation.

17. Adjusting the Speaker Volume

- Press [SPKR].
- Press [▼ VOLUME ▲] key to desired volume level.

Note: 1. There are 16 levels, and the default level is the 4th large level.
2. A warning beep will be heard when the level set at minimum or maximum level.
3. The handset unit can not adjust the speaker volume.

18. Adjust the Ringer Volume of CO Line

- Idle mode.
- Press [∇ VOLUME \blacktriangle] key to desired volume level.

Note: 1. There are 3 levels (*low, middle, and high*), and the default level is *middle* level.
2. The handset unit can not adjust the ringer volume.

19. Adjusting the Handset Volume

- Press [∇ VOLUME \blacktriangle] key to desired volume level.

Note: 1. There are 3 levels (*low, middle, and high*), and the default level is *low* level.
2. After reaching high level, the handset volume will return to low level.
3. The base unit can not adjust the handset volume.

20. Adjusting the Headset Volume

- In headset mode.
- Press [∇ VOLUME \blacktriangle] key to desired volume level.

Note: 1. There are 3 levels (*low, middle, and high*), and the default level is *middle* level.
2. After reaching high level, the handset volume will return to low level.
3. The base unit can not adjust the handset volume.

21. Battery Low Display

- If battery low is detected in the base unit, the LCD on the base unit will show **BATT** %
- The battery indicator on the handset unit will be *flashing* when the handset battery low is % detected.

22. Liquid Crystal Display (LCD)

If more than one message is to be displayed at the same time, the LCD displays according to the following precedence:

- Dialed digits.
- ICM operations.
- Timer.
- Programming.
- Caller ID data.
- Normal LCD display. (BATT will be displayed if it is active)

23. Base and Handset Interchanging

-- Change from Handset to Base

- In handset mode.
- Press [SPKR].

-- Change from Base to Handset

- In Base mode.
- Put the handset back to cradle. (if necessary)
- Lift the handset.

Note: After changing to base(/handset), you can't use the handset(/base) until you change to handset(/base) from base(/handset). %

24. Searching the Handset

When the handset is missed, you can find it by this feature. %

- Press [PAGE] on the base unit. %
- Press [#] on the base unit. %
- If the handset is found, it will generate beep about 3 seconds. %

IV CALLER ID OPERATION

1. Incoming Caller ID Display

The idea is to display the phone number of the calling party before a call is answered. Four cases are handled differently follows:

-- Case 1. The Phone is idle

Approximately upon the second ring of an incoming call, the LCD will display the caller's information automatically.

1. The phone ring.
2. Display shows the name and phone number of the calling party.
3. This display will disappear and returns to date/time of the day display under 4 conditions.
 - a. Rings abandoned – The caller drops the call before the call is answered.
 - b. Another set picks up the call.
 - c. The set that picked up the call drops the call.
 - d. Another feature requiring LCD be accessed, e.g. set time.

-- Case 2.

A feature requiring LCD is accessed when the phone ringed, e.g. programming speed dial key, making an outgoing call, setting clock, etc. Note that you can always review the current call(s) using the [CALL ID] function. [CALL ID] lets the user walk through callers of all currently active calls.

1. The phone rings while the user is in the middle of programming a speed dial.
2. To view information of the caller, press [CALL ID].
3. Press [CALL ID] again to return to date/time of the day display.

-- Case 3. Simultaneous ringing on two or more lines

The caller ID feature can handle up to four calls that start ringing at exactly the same time. E.g.

1. The phone rings on two lines, line 1 and line 3.
2. Assume the phone is idle, the display shows the caller's information of an earlier ringing line. Suppose it is line 1.
3. Press [CALL ID] key, the display shows caller of the second ringing line, line 3.
4. Press [CALL ID] key again, the display return to date/time of the day.
5. Repeatedly pressing [CALL ID] key lets you view caller's information of all *active** lines, namely, line 1, line 3, date/time,...etc.

** An active line is a ringing line or a line in use.*

-- Case 4. Simultaneous ringing and calls are picked up

1. The phone ring on two lines, line 1 and line 3.
2. Phone A pick up line 1 and display caller of line 1.
3. Other phones displays caller of line 3.

In any case, the [CALL ID] key can be used to view other callers.

2. Working with Caller's list

2.1 Retrieving the list

1. Press [**▲**] or [**▶**]. The LCD displays total CID number and new call number.
- 2a. Press [**▶**]. Display shows caller's information of the first call.
- 3a. Press [**▶**]. Display shows caller's information of the second call.
- 4a. Repeatedly press [**▶**] will guide the user through the list forward.

Or, to go backward:

- 2b. Press [**▲**]. Display shows information of the previous call.
 - 3b. Repeatedly press [**▲**] will guide the user through the list backward.
 - 4b. Press [**▲**] at the 1st call leads you to top of list.
5. This display mode is either terminated by pressing keys other than [**▲**], [**▶**] or time out.

Note: --At any time during review [**▲**] shows the preceding call while [**▶**] shows the succeeding call, until top of the list is reached, then the LCD display total CID number and new call number.

--Other possible display:

"*Out of Area*": The call comes from some remote area.

"*Private*": Retrieving the caller's data is limited.

"*Unknown*": Retrieving the caller's data failed.

"*empty*": The caller's number or name of the call is empty.

2.2 Erasing a record on the List

1. Reviewing the caller's list and decided to delete a particular record.
2. Press [ERASE], the display indicates "*Deleted*".
3. Press [**▶**] to view the succeeding record or [**▲**] to view the preceding record.

Note: You can erase all CID data when you are reviewing top of the list and you press the [ERASE].

2.3 Return a Call on the Caller's List

1. When reviewing the caller's list, the user decides to return the call.
2. Pick up a CO line and dial some leading digits for a long distant call. (*if necessary*)
3. Press [SHIFT] key first to light the *SHIFT* lamp.
4. Press [DIAL], and the number is automatically dialed.
5. The display shows the number digit by digit as it is dialed.
6. Proceed as making a phone call.

2.4 Saving a Number from Caller's List to a Speed Dial Key

1. When reviewing the caller's list, the user decides to save the number onto a *SPD* key.
2. Press [STORE] key.
3. Press [**▲**] or [**▶**] to indicate storing a record from caller's list.
4. Press [SHIFT] key. (*if necessary*)
5. Press a *SPD* key and a short confirmation tone will be given.

Note: You can manual insert some leading digits before you press the [**▲**] or [**▶**].

3. Message Waiting

If you subscribe to a voice mail service from your telephone company, the *CALL/MSG* led will be flashing when someone has left message for you.

3.1 Accessing the Message Central Office

1. Pick up a CO line.
2. Dial the number for your voice mail service.
3. Enter your password.
4. Operate the feature code as the procedure given by Telephone Company.

3.2 Deleting the Message Waiting Indicator

The Telephone Company will send data to remove the indicator when the entire messages are accessed.

Or, you can remove the indicator by yourself all the message.

1. Press the [ERASE] to try to remove the indicator.
2. Press the [ERASE] again to confirm and delete the indicator.

----- END -----

V APPENDIX A: LCD DISPLAY

This product uses a 2*16 Dot Matrix LCD.

1. Normal

```
JAN 01 SU 01:01A  
EXT 11
```

2. Dialing

If you dial 12345, then the LCD displays:

```
12345  
00:00
```

If you dial more than 15 digits, all the digits will be shifted to left.
For example: Dial 12345678901234567

```
. . 5678901234567  
00:00
```

3. Programming

Example: If you program the tone dial mode, the LCD display:

```
STORE  
0001
```

4. Caller ID

I. The phone is idle.

```
JAN 01 SU 01:01A  
EXT 11
```

↓ Line2 ring.

```
L2:2126665377  
JOHN SMITH
```

↓ Call dropped.

```
JAN 01 SU 01:04A  
EXT 11
```

II. You can review the current calls using the [CALL ID] key.

↓ Press [CALL ID].

```
L1:901026501  
MARY BROWN
```

↓ Press [CALL ID].

```
JAN 01 SU 01:01A  
EXT 11
```

Press [CALL ID]