

**Operation Manual  
of  
DB-8214**

**900 MHz Spread Spectrum  
Digital Cordless Telephone**

(08/19/98)

## I. Introduction of a Cordless Telephone

A cordless telephone works just like a regular telephone and, in addition, offers the mobile convenience. The communication between the handset and base is via a radio wave, so the usable range of the handset away from the base is strictly dependent upon the environment in which the telephone is used. Therefore, we recommend that the cordless telephone could not be placed near :

- \*fluorescent lights
- \*any metal constructions which would shield radio signals.
- \*another cordless telephone like yours which uses Spread Spectrum Technology.
- \*electrical appliances, which will generate electrical noise:
  - microwaves
  - TVs
  - VCRs
  - FAX machines
  - baby monitors
  - computers

In addition, to maximize the performance, user

- \*can adjust the base's antenna to get the best performance.
- \*mustn't plug other appliances with the cordless telephone by an extension cord because of the potential for interference.

## II. Important Safety Instructions

To avoid the risk of fire, electrical shock or injury of anyone, the following basic safety precautions should always be followed

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. **Don't** plug this product into the wall outlet before cleaning. **Don't** use liquid cleaners or aerosol cleaners but use a dry cloth for cleaning.
4. **Don't** use the product near water.
5. **Don't** place the product on the unstable condition. Otherwise, the product may be fell and resulted in a serious damage.
6. To provide proper ventilation, **don't** place the product on the bed, sofa or rug. In addition, **don't** place the product near a radiator or a heat register.
7. Only the type of power source indicated on the marking label can be used.
8. To avoid a trip hazard, place the cords (telephone cord and power cord)

carefully.

9. **Don't** overload wall outlets because it could result in a risk of fire or electrical shock.
10. **Don't** push any kind of objects into the product through cabinet slots because they may result in a risk of fire or electrical shock due to shorting. **Don't** spill any kind of liquid on the product.
11. To reduce the risk of electrical shock, **don't** disassemble the product. Take it to the qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly will cause electric shock if the appliance is subsequently used.
12. Unplug the product from the wall outlet and refer servicing to the qualified serviceman under the following conditions:
  - \*If the power supply cord was damaged or frayed.
  - \*If liquid was spilled into the product.
  - \*If the product was exposed to rain or water.
  - \*If the product didn't operate normally.
  - \*If the product was dropped, or the cabinet was damaged.
  - \*If the product exhibited a distinct change in performance.
13. **Don't** use the telephone in the vicinity of gas leak.
14. **Don't** attempt to unplug the telephone (or any appliances) during an electrical storm.

**CAUTION:** TO REDUCE THE RISK OF FIRE OR SOMEONE INJURY BY THE BATTERY, READ AND FOLLOW THESE INSTRUCTIONS:

1. Use only the appropriate type and size of battery pack specified in this operation manual.
2. **Don't** dispose the battery package in a fire; otherwise, the cell may explode.
3. **Don't** mutilate the battery. otherwise the corrosive electrolyte will be released to hurt your eyes or skin.
4. Handle the battery carefully to avoid the battery being shorted with conducting materials such as rings, bracelets, keys, etc.
5. Guarantee proper polarize orientation between the battery pack and battery charger.

### **III. Installation**

1. Select a location for your base to be close both a electric power outlet and a telephone outlet.

2. Plug one end of the telephone line cord into the jack on the back of the base and the other end into the jack of the wall telephone outlet.
3. Plug the power cord of the AC adaptor into the power jack of the base and the other end into the wall outlet.
4. Select, by the Tone/Pulse switch on the back of the base, either tone or pulse dialing mode to match the type of service in your area.
5. Put the battery into the handset's battery case.
6. Place the handset with the power OFF into the base in a lay-down position to charge it overnight. Make sure the base's CHARGE LED lights.
7. After the battery is fully charged, turn the power ON and then enjoy the convenience of your handset.

**Remark:** To charge a new battery, it's necessary to turn the power OFF as described at above. But, to charge the handset again after the first charging session, it isn't necessary to turn the power OFF.

**Remark:** The battery's life can be extended if it is depleted completely before being charged again.

## IV. Feature

1. Ultra long range
2. Auto-answer
3. Auto-standby
4. Auto channel scan (20 channels)
5. Auto code security (24 bits)
6. Two way page
7. Mute function
8. Out of range alert
9. Low battery alarm
10. 20 set memory (up to 16 digits per set)
11. Last number redial (32 digits)
12. Basestation LED indicators (*PHONE, PAGE, CHARGING*)
13. Handset LED indicators (*PHONE, INTERCOM, LOW BATTERY*)
14. Tone/Pulse dialing mode switchable
15. Voice/Ringer volume adjustable
16. Power on/off switchable
17. Ringer pattern programmable
18. One week standby time
19. 4-hours continuous talking time

## V. Description

### I. Handset

1. Earpiece
2. Phone LED: Goes on **solid** during a call. **Flashes** during ring being detected. **Blinks** during memory storing procedure.
3. Low battery LED: Goes on solid when the **MUTE** key is pressed. **Flashes** when the battery level is low.
4. Intercom LED: **Blinks** during page mode. Goes on **solid** during intercom mode.
5. Intercom key: To establish a link with the base.
6. Mute key: To turn off the microphone of the handset. The mute procedure will be cleared after the call is terminated
7. Dial keys: 0~9, \*, #, pause.
8. Volume up/down button: To adjust the ringer volume or earpiece volume during, respectively, standby mode or active mode.
9. Phone key: To make/answer a call. It operates as a toggle key to terminate the call.
10. Redial key: A dual-function key, either to dial the most recent dialing sequence or to generate a delay between numbers. Only one of the two functions is in effect at a given time.
11. Flash key: To generate a flash to the PSTN.
12. Memory key: To store/recall phone number in memory.
13. Negative charging contact: To charge the battery.
14. Positive charging contact: To charge the battery.
15. Serial port contact: To link the handset and basestation for calibration when the handset is parked on the base.
16. Power on/off switch: To turn the power off.
17. Antenna: Quarter wave antenna.

### II. Base

1. Speaker
2. Phone LED: **Flashes** during ring being detected. **Blinks** during memory storing procedure or handset being in use.
3. Page LED: **Blinks** during page mode. Goes on **solid** during intercom mode.
4. Charging LED: Goes on **solid** when the handset is parked.
5. Volume up/down button: To adjust the ringer volume or speaker volume during, respectively, idle mode or active mode.

6. Page key: To establish a link with the handset.
7. Positive charging contact: To charge the handset's battery.
8. Negative charging contact: To charge the handset's battery.
9. Serial port contact: To link the handset and basestation for calibration when the handset is parked.
10. DC 9V Power line: DC power supply jack.
11. Phone line jack: Telephone line jack.
12. Ringer on/off switch: To turn the ringer off.
13. Tone/Pulse switch: To switch between tone dialing and pulse dialing mode.
14. Antenna: Half wave antenna.

## VI. Operation Guide

### 1. Make a call: click **PHONE**

To make a call, you can press the **PHONE** key and, after hearing the dial tone, press the phone number sequence you want to dial.

### 2. Answer a call: click **PHONE**

When the phone is ringing, you can answer the call by lifting the handset from the base if your handset is parked on the base or by clicking the **PHONE** key on the handset if your handset isn't parked on the base.

### 3. End a call: click **PHONE**

To terminate a call, you can place the handset on the base or just press the **PHONE** key on the handset.

### 4. Page handset: click base's **PAGE** key

If you forget where you place the handset, you can locate it by clicking the base's **PAGE** key to make a series beep.

### 5. Make intercom: click handset's **InterCom** key

This feature allows you to talk softly, instead loudly, with another one near the base when you get the handset and are far from the base. You can click the handset's **InterCom** key to make intercom with the base. In addition, when base is paging handset firstly, you can also click the handset's **InterCom** key to reply the paging to make intercom between handset and base.

#### 6. Redial the last number: click **REDIAL**

Clicking the **REDIAL** key can retrieve the most recent dialing sequence (up to 32 digits) and send to the PSTN, if it's the first key after the system going off-hook.

#### 7. Generate a pause between numbers: click **REDIAL**

The **REDIAL** key can also be used, if it isn't the first key of dialing sequence, to generate a brief silent interval between numbers. This is useful for some service like long distance service. Note that clicking this key more than once can increase the length of the pause interval between numbers.

#### 8. Ringer pattern programming: click **FLASH + 1-digit**

At the idle mode, you can choose one of the four built-in ringer patterns by clicking the **FLASH** key followed by a number in the range 1-4. A number out of this range is ignored. The selected ring is programmed into both the handset and base.

#### 9. Mute function: click **MUTE**

The **MUTE** key allows you to be in one side conversation without the caller hearing you though you can still hear the caller. To retrieve the conversation, press the **MUTE** key again.

#### 10. Temporary Tone Dialing: click **\*\***

If you live in a pulse or rotary dialing area and you want to use custom services like bank service or alternate automated service which require touchtone dialing, you can change to tone dialing temporarily by clicking the **\*\*** key followed by the number to be dialed in tone mode. The phone will revert to pulse dialing mode when you hand up the phone.

#### 11. Volume control: click **VOLUME** button

The **VOLUME** button of handset or base allows you to adjust the the ringer volume of the unit locally at idle mode. In addition, the handset's **VOLUME** button allows you to adjust the volume level of the earpiece during active mode.

#### 12. Power **ON/OFF**: switch Power **ON/OFF**

To extend the battery life, you can turn the handset's **Power ON/OFF** switch to the **OFF** position for power saving when you don't want to use the handset.

It will result that your handset will not ring or beep.

### 13. FLASH

The **FLASH** key can be used to close the hook relay to support the subscribed service such as calling waiting if you has subscribed for such service from your local telephone company.

### 14. Store phone number to memory: click

#### **MEM + dialing sequence + MEM + 2-digits**

For future use, you can program 20 set memories to the telephone's non-volatile memory with up to 16 digits in each set. The initial procedure is clicking the **MEM** key followed by the dialing sequence from the set {0,1,2,3,4,5,6,7,8,9,\*,#,PAUSE}. Next, a memory location is assigned by pressing the **MEM** key followed by a 2-digits address in the range 01~20. For example, the procedure to store 555-9999 in memory location 12 is

- a. Press **MEM**
- b. Press 5559999
- c. Press **MEM**
- d. Press 12

An illegal address or excess digits will produce an error beep and reset the program to the on-hook condition.

### 15. Recall memory dialing: click **PHONE + MEM + 2-digits**

You can recall a stored sequence by clicking the **MEM** key followed by a 2-digits address in the range 01~20, when the system has been in the off-hook condition initially. An illegal address will produce an error beep and no number is recalled. If the recalled sequence contains “#”, then it will be ignored in pulse mode. In addition, recalling “\*” in pulse mode will cause a switch to tone dialing mode temporarily.

### 16. Chain dialing

As described as above, the maximum length of phone number for memory storing is 16 digits. However, on certain occasions, it may be possible to store and recall dialing sequence longer than 16 digits. Therefore, chain dialing is necessary.

To store a sequence longer than 16 digits, user can store the first sixteen digits in one memory location, and the remaining digits in another location.

To recall the entire sequence, the two parts are recalled separately in the proper



order after system has been in the off-hook condition. For example, suppose location 07 stores the sequence 5559999 and location 08 stores the sequence 1234, then a sequence 55599991234 can be recalled by pressing

**PHONE + MEM + 07 + MEM + 08**

## VII. Audible and Visual alerts

### 1. Out-of-range alert:

If the distance between handset and base is out of the cordless phone's operating range such that handset and base can't link well, a double short beeps (100ms) with 660 Hz will be generated per 16 seconds (in standby mode) or per 4 seconds (in active mode).

### 2. Low battery alarm:

If the battery level of handset is approximated to a given threshold, a single short beep (100ms) with 440Hz will be generated per 64 seconds (in standby mode) or per 16 seconds (in active mode) to indicate the user to charge the battery.

3. The **Phone LED** will light shortly when handset is parked into the cradle of base.

### 4. LED indications:

	Base		
	Phone LED	Page LED	Charging LED
<b>Solid</b>	--	InterCom	Charging
<b>Blink</b>	Mem storing/HS in use	Page	--
<b>Flash</b>	Ringling	--	--

	Handset		
	Phone LED	InterCom LED	Low Batt. LED
<b>Solid</b>	In use	InterCom	Mute
<b>Blink</b>	Mem storing	Page	--
<b>Flash</b>	Ring detecting	--	Low battery

where,

**Blink** -- the LED alternates continuously between 500ms on/off.

**Flash** -- the LED alternates continuously between 80ms on/off.