

PANTECH PN-320

Digital CDMA2000 1X Handheld Portable Telephone

Welcome to the world of Wireless Developed by top engineers and equipped with Qualcomm MSM6100. With PN-320, you now have the highest speed and the largest bandwidth that supports the most up-to-date data applications and services. Moreover, its intuitive and user friendly GUI brings complicated applications such as web browsing, data services, right at your fingertips.

Among its many advanced features, the T9 input mode makes it much easier to enter letters. In addition, the VR (Voice Recognition) makes it more user friendly, with proven technologies including:

- Full graphic display of 9 text input lines and 1 icon line with variable font size.
- Easy to dial through the VR feature.
- Easy to enter letters through the T9 text input mode.
- Enhanced for web browsing & data services (i.e.; wireless internet Downloads, WAP browser)
- GUI & Animation display compliant with CDMA2000 1X.
- Full graphic main display - 260K color TFT LCD.
- Mobile Camera (VGA 330K Pixel)
- Navigation Key and 22 keys aligned for more convenience.
- Sophisticated features of speaker phone, and voice recognition.
- Additional services including text messaging, Web browsing on top of authentication, call forwarding, call transfer, call waiting.

Important Information

This PN-320 user guide contains very important information about how to properly use the phone. So please read this manual thoroughly, pay attention to the warranty on the back page and be alert to the exclusions and limitations of your warranty, which are related to the unauthorized use of components.

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 U.S. Patent No. 4,901,307 U.S. Patent No. 5,056,109 U.S. Patent No. 5,099,204 U.S. Patent No.
 5,101,501 U.S. Patent No. 5,103,459 U.S. Patent No. 5,107,225 U.S. Patent No. 5,109,390."

Chapter 1

BEFORE USING YOUR PHONE

Please read and fully understand this manual before using your phone.

This chapter addresses your phone, its keys and display icons, and covers the charging and proper use of the battery.

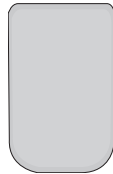
- Inside the Package
- Handset Description
- Function Keys
- Display Indicators
- Using the Battery
- Charging the Battery
- Battery Information

INSIDE THE PACKAGE

This package should include all items pictured below. If any are missing or different, immediately contact the retailer where you purchased the phone.



Handset



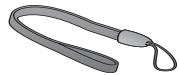
Standard Battery



User Manual



Travel Charger

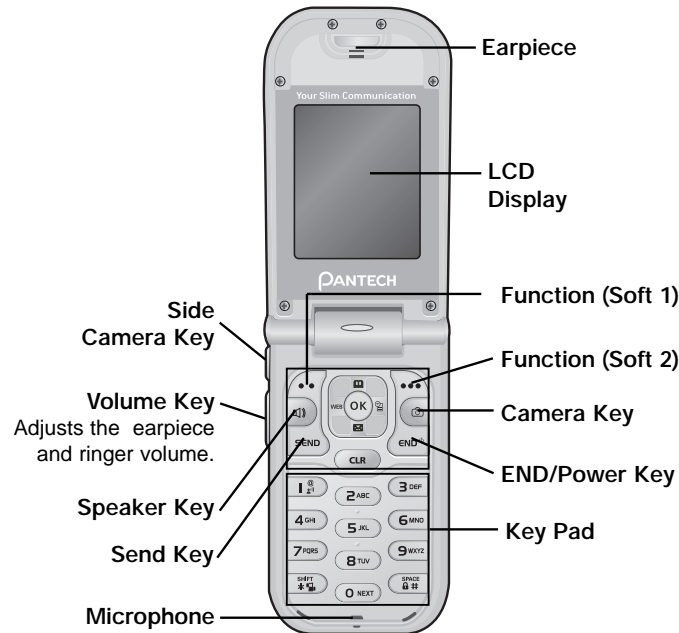
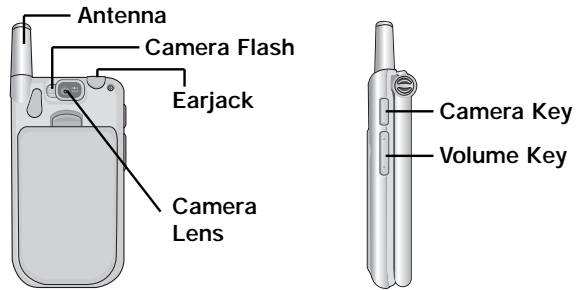


Hand strap

NOTE: Immediately report any product defects or missing items to the place of purchase.

HANDSET DESCRIPTION

The PN-320 weighs 3.89 oz. and the dimensions are 1.82" x 3.56" x 0.92".



FUNCTION KEYS



SEND KEY: Press to make or receive a call. Press and hold to turn on Voice Recognition mode.



END KEY: Press to turn the phone on, to terminate a call or to return to the initial page. Press and hold to turn off the phone.



NAVIGATION KEY:
In Idle Mode - Press up to access the Phone Book, down to access the Messaging Menu, right to access Get It Now and left to access Mobile Web.

Inside the menu - Within a menu, use to scroll through menu options. To select an option, press .



SOFT KEY: (Left Key) Press to access the main menu or function displayed on the bottom line. (Right Key) Press to access your contacts. Press to access the function displayed on the bottom line.



LOCK KEY: Press and hold to enter lock mode.



INTERNATIONAL CALL: Press and hold until “+” is displayed. “+” sign in front of phone number is required for making international calls.



CLR KEY: Press to clear a digit from the display, to return to the previous page, or to enable speaker phone mode.

DISPLAY INDICATORS



Signal Strength

Current signal strength - the more lines, the stronger the signal.



Roaming

Phone is out of home area.



Service Indicator

Indicates call is in progress, indicates the phone cannot receive a signal from the system.



Message

Text, Voice, Urgent, Web Alerts messages.



Digital Mode

Phone is in the digital service area.



Battery

Battery charging level - the more blocks, the stronger the charge.



Mute

Phone is mute during a call.



Ringer Mode

Appears when the ringer is set as a ringer mode.



Emergency Call

Blinks when an emergency call is in progress.



ScratchPad













Displays when the scratchpad is in use during a call.



Auto Answer

Phone is in answering machine mode.

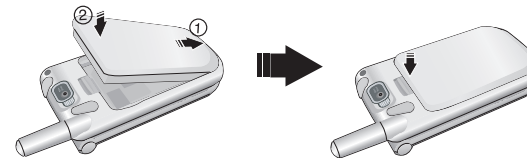
DISPLAY INDICATORS

- 
Alarm to Schedule
 Appears when either an plan or an alarm is set.
- 
Dormant
 Indicates the phone is in disconnection condition while on "Server Connection".
- 
Speaker Phone
 Phone is in speaker phone mode.
- 
Data Only
 Receives an async. call as a voice call.
- 
GPS Icon
 Indicates the Location Service of your phone is disabled/enabled.
- 
1X
 Phone is in the 1x service area.
- 
Network
 Phone is in the progress of "UP Browser".
- 
TTY
 TTY mode is active.
- 
Voice Privacy
 "Voice Privacy" mode.
- 
Phone Lock
 Phone is locked.
- 
Ear Jack
 A headset is connected.
- 
Secure
 Phone is in "Secure" mode.

USING THE BATTERY

INSTALLING THE BATTERY

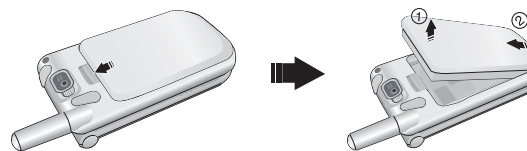
1. **1** Place the battery on the back of the handset and slide into place. **2** Push the battery down until it locks into place. **3** Battery lock latch automatically locks into place.



NOTE: Make sure the battery is securely placed to avoid slipping off during a call.

REMOVING THE BATTERY

1. **1** Slide the latch over to the right, lift up the battery and **2** remove the battery from the handset.

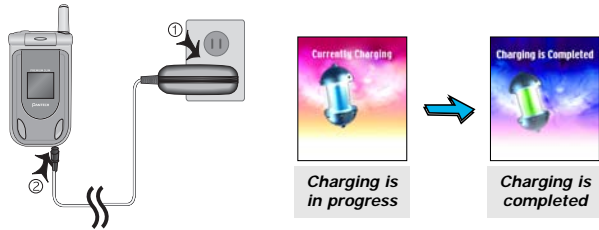


NOTE: If the battery is not correctly placed in the battery compartment, the handset will not turn on and/or the battery may detach during use.

CHARGING THE BATTERY

POWER CONNECTION

1. Plug the AC charger into a standard outlet.



NOTE:

1. The times in the following tables are for a new battery. Usage and Standby times may decrease over time.
2. Fully charge the battery before using - it is not charged when purchased.
3. It is more efficient to charge the battery with the phone turned off.

CHARGING THE BATTERY

BATTERY STANDBY TIMES

The operating time is subject to your handset usage and configuration.

	CDMA
STD 840 mAh	Up to 190 hours
EXT 1430 mAh	Up to 320 hours

BATTERY TALK TIMES

The operating time is subject to your handset usage and configuration.

	DCS	PCS
STD 840 mAh	Up to 195 minutes	Up to 190 minutes
EXT 1430 mAh	Up to 330 minutes	Up to 320 minutes

NOTE: These times are for a new battery. Usage and standby time may decrease over time.

BATTERY INFORMATION

Do's

- Only use the battery and charger approved by the manufacturer.
- Only use the battery for its original purpose.
- Try to keep batteries in a temperature between 41°F (5°C) and 95°F (35°C).
- If the battery is stored in temperatures above or below the recommended range, give it time to warm up or cool down before using.
- Completely drain the battery before recharging. It may take one to four days to completely drain.
- Store the discharged battery in a cool, dark, and dry place.
- Purchase a new battery when its operating time gradually decreases after fully charging.
- Properly dispose of the battery according to local laws.

Don'ts

- Don't attempt to disassemble the battery – it is a sealed unit with no serviceable parts.
- Don't accidentally short circuit the battery by carrying it in your pocket or purse with other metallic objects such as coins, clips and pens. This may critically damage the battery.
- Don't leave the battery in hot or cold temps. Otherwise, it could significantly reduce the capacity and lifetime of the battery.
- Don't dispose of the battery into a fire.

Chapter 2


BASIC OPERATION

This chapter addresses the phone's basic functions including menus, volume levels, and call features.

- Using the Phone
- Using the Main Menu
- Menu Summary
- Basic Functions
- Functions During a Call
- Making an Emergency Call


USING THE PHONE

TURNING THE PHONE ON

1. Press and hold  until your "Power On" logo appears and the melody begins to play.

- If "Password" appears on the display, enter your 4-digit password to unlock your phone.
- The default password is the last 4 digits of your phone number.

TURNING THE PHONE OFF





1. Press and hold  until "Power Off" animation appears.

- NOTE:**
1. Immediately change or recharge the battery when "Low Battery Warning Power Off" appears on the display. Memory may possibly be damaged if the phone turns off due to the battery completely draining.
 2. Turn the phone off before removing or replacing the battery.
If the phone is on, unsaved data may be lost.

USING THE MAIN MENU

ACCESSING THE MENU

Your phone can be customized via the menu. Each function can be accessed by scrolling with the Navigation Key or by pressing the number that corresponds with the menu item.

1. To access the menu from the idle screen, press  [MENU].
2. To scroll through the menu, press the Navigation Key up and down.
3. To return to the previous page, press  .
To exit the current menu and return to the idle mode, press  .
4. To enter a function when its main page is displayed, press  [OK].

● Hotkey

In idle mode, move the Navigation Key as follows to access these functions:

- Upward movement: Phone Book
- Downward movement: Messaging
- Rightward movement: Get It Now
- Leftward movement: Mobile Web

If you are in a second-level menu, you may also navigate to the next or previous second-level menu by pressing the Navigation Key right or left.

MENU SUMMARY

PHONE BOOK

- ▶ 1 : Find
- 2 : Add New
- 3 : Group
- 4 : Speed Dial
- 5 : Msg. Group
- 6 : My Phone #

RECENT CALLS

- ▶ 1 : All Calls
- 2 : Missed Calls
- 3 : Received Calls
- 4 : Dialed Calls
- 5 : Call Timers

MESSAGING

- ▶ 1 : New Msg
- 2 : Voice Mail
- 3 : Inbox
- 4 : Sent
- 5 : Web Alerts
- 6 : Draft
- 7 : Quick Text
- 8 : Erase All

- 9 : Settings

- 1 : Last Call
- 2 : All Calls
- 3 : Home Calls
- 4 : Roam Calls
- 5 : Cumulative Calls

- 1 : New Text Msg
- 2 : New Pix Msg

- 1 : All Folder
- 2 : Inbox
- 3 : Sent
- 4 : Draft
- 5 : Web Alerts
- 1 : Auto Save
- 2 : Auto Erase
- 3 : Auto Receive
- 4 : Default CB#
- 5 : Voice CB#
- 6 : Remind
- 7 : Signature
- 8 : Direct View
- 9 : Entry Mode
- 10 : Block or Unblock

MENU SUMMARY

GET IT NOW

- ▶ 1 : Get It Now Access Shop
- Settings
- Help

MOBILE WEB

- ▶ 1 : Connect Web

MEDIA GALLERY

- ▶ 1 : Picture 1 : Wallpapers
- 2 : Tones 2 : Ringtones
- 3 : Images
- 4 : Shuffle

SETTINGS

- ▶ 1 : Sounds 1 : Ringer Type
- 2 : Volume
- 3 : Alerts
- 4 : Roam Ringer
- 5 : Tone Length
- 2 : Display 1 : Menu Style
- 2 : Graphics
- 3 : Sub Screen
- 4 : Greeting Message
- 5 : Backlight
- 3 : Data Svc. 1 : Connection
- 4 : Security
- 1 : Phone Lock
- 2 : Restrict
- 3 : Change Code
- 4 : Special #'s
- 5 : Erase All
- 6 : Reset Phone
- 5 : Others 1 : Answer Options
- 2 : Auto Retry
- 3 : Language
- 4 : Voice Privacy
- 5 : TTY Mode
- 6 : Location

MENU SUMMARY

- 6 : System
 - 1 : Set Mode
 - 2 : Nam Setting
 - 3 : PRL ID
 - 4 : ERI Banner
- 7 : Phone Info
 - 1 : S/W Version
 - 2 : H/W Version
 - 3 : Get It Now Version
- 8 : Airplane Mode

UTILITIES

- ▶ 1 : Voice Tools
 - 1 : Voice Memo
 - 2 : Voice Dial
 - 3 : Train Words
 - 4 : Voice Setting
- 2 : Schedule
 - 1 : Add New Plan
 - 2 : View Plan List
- 3 : Alarm
 - 1 : Alarm 1
 - 2 : Alarm 2
 - 3 : Alarm 3
- 4 : Memo Pad
- 5 : Calculator
- 6 : World Clock
- 7 : Stop Watch

CAMERA



- ▶ 1 : Take Picture
- 2 : Picture Gallery


BASIC FUNCTIONS

MAKING A CALL



1. Enter a phone number.

- **To modify the phone number you have entered:**

- To erase one digit at a time, press .
- To erase the entire number, press and hold .

2. Press .


The indicator, , appears on the display.

- **If "CALL FAILED" appears on the display or the line is busy, press  or .**

- **If you activate the "AUTO RETRY" function, the phone will automatically retry for the number of times you have selected. (Refer to page 74)**

- **If the number you're calling is stored in the phone book, the name and number will appear when the call is placed.**

- **There is another way to make a call through the VR mode, which is called "VAD (Voice Activated Dialing)". Please refer to page 88 (Voice Service) for details on making calls using VAD.**




3. To end a call, press .



NOTE: Please refer to page 34 for more details about storing a phone number.

BASIC FUNCTIONS

PAUSE FEATURE


You can dial or save a phone number with pauses for use in the automated systems where you need to enter a credit card number, a social security number, or other numbers. This feature will be convenient when you are linked to an ARS (Advanced Record System).

1. To insert a pause, enter a phone number then press  [MENU]. Select either a Hard Pause ("P" appears) or a Timed Pause ("T" appears).
2. Press  to dial the number and  to store the number.

- **Hard Pause:** When connected to the ARS, it will not progress to the next number until you press  or .
- **Time Pause:** When connected to the ARS, it automatically progresses to the next number after three seconds.







SPEAKER PHONE


The speaker phone feature allows you to hear audio through the speaker and talk without holding the phone.


1. To activate the speaker phone when the phone is in idle mode, answering mode, or calling mode, press and hold .
2. The phone returns to normal (speaker phone off) after ending or call or when the phone is turned off and back on.

BASIC FUNCTIONS

ANSWERING A CALL

1. To answer a call, press any key except , , ,  or . To enable a call, press .




● **In the Settings menu, you can select either "Any Key" or "Send Key" to answer a call. If "Send Key" is selected, the phone can only be answered by pressing .** See page 75 for more information.

2. To end the call, press .

NOTE: In Auto Answer Mode, a call is automatically answered after a preset number of rings. See page 76 for more details.

3-WAY CALL FUNCTION

With 3-Way Calling, you can talk to two people at the same time. When using this feature, the normal airtime rates will be applied for each of the two calls.



1. Enter the number you wish to call then press .
2. Once you have established the connection, enter the second number you wish to call then press .
3. When you're connected to the second party, press  again to begin your 3-Way call.

NOTE: If one of the people you called hangs up during your call, you and the remaining caller stay connected. If you initiated the call and are the first to hang up, all three callers are disconnected.

BASIC FUNCTIONS

CALL WAITING FUNCTION





Notifies you of an incoming call when you're on a call by sounding a beep and displaying the caller's phone number on the screen.

1. To answer another call while on the phone press . This places the first call on hold.
2. To switch back to the first caller, press  again.


Since Call Waiting is system dependant, the displayed Caller ID may be different from the actual caller.

ADJUSTING VOLUME

Volume can be adjusted by using the volume control keys on the side of the handset, or by using the menu.

1. Press  [MENU]    then select one of the following. To increase the volume, press the Navigation Key to the right. To lower the volume, press it to the left.

- **Ringer:** Controls the ringer volume.
- **Key Tone:** Controls the key pad tone volume.
- **Voice Call:** Controls the earpiece volume.
- **Speaker Phone:** Controls the speaker volume in speaker phone mode.




2. Adjust volume then press  [OK] to save it.


NOTE: To adjust the volume of the microphone during a call, press the volume keys on the side of the phone or the Navigation Key (left or right).

BASIC FUNCTIONS

LOCK

Locks your phone and prevents unauthorized use. Phone can only be used after inputting the password.

1. To lock the phone, press and hold .
2. To unlock the phone, press  or  [UNLOCK] then input the password.

- **Lock feature will deactivate when the phone is powered off. Upon next power up, you will need to press  to lock phone again.**
- **The default password is the last 4 digits of your phone number.**

CALLER ID FUNCTION

Identifies caller by displaying their phone number. If the caller's name and number are already stored in your phone book, they both will appear. This feature is system dependent. Please contact your service provider for details.

NOTE: The caller ID is stored in the call history.

FUNCTIONS DURING A CALL

To display menu options during a call, press [MENU]. These menu items are available while you are on a call.

MESSAGING

Enables you to send a message (SMS) during a call.

1. Press [MENU] .

MUTE (UNMUTE)

Mutes the microphone while you are on a call so the other party cannot hear you when you speak.

1. Press [MENU] .

- **To deactivate, press [MENU] .**
- **The phone will automatically un-mute during an Emergency Call or in Callback mode.**

SCRATCHPAD

Allows you to enter a phone number during a call so it can be dialed later. The other party cannot hear the key presses.

1. Press [MENU] .

- **To deactivate it, press [MENU] .**

FUNCTIONS DURING A CALL

SEND MY PHONE

Automatically transmits your phone number to a pager during a call without manually entering the number.

1. To transmit your phone number during a call, press [MENU] .

MY PHONE

Enables you to see your phone number while on a call. Please see page 48 for more details.

1. Press [MENU] .

VOICE PRIVACY

Enhances voice privacy during a call.

1. Press [MENU] .
2. Select “Enhanced” or “Standard” then press [OK] to save it.


NOTE: *Enhanced voice privacy is a network dependent feature. Standard voice privacy is the default setting.*

FUNCTIONS DURING A CALL

LOCATION

Enables the network to locate your current location through Global Positioning System (GPS).

1. Press  [MENU]  .

2. Select “911 Only” or “Location On” and press  [OK] to save it.

- **911 Only:** *Your location will be hidden from network & applications except 911.*
- **Location On:** *Your location is now available to the network.*

PHONE INFO.

Enables you to view software and hardware version while on a call. Please see page 82 for more details.


1. Press  [MENU]  .

MAKING AN EMERGENCY CALL

This 911 feature automatically places your phone in the Emergency Call Mode when you dial the preprogrammed emergency number, 911. This feature is functional even in the lock mode and in an out of service area.

911 IN LOCK MODE

The “911” call service is available even in the lock mode.

1. Enter “911” then press  .


2. The call connects.

3. The phone exits the Lock Mode for 5 minutes.

4. To exit emergency mode, press  .

- **When the call ends, the phone returns to the Lock Mode.**

911 USING ANY AVAILABLE SYSTEM

1. Enter “911” then press  .

2. The call connects.

3. The phone remains in Emergency Mode for 5 minutes.

4. To exit emergency mode, press  .

- **The phone continuously attempts to receive service from any available system.**

NOTE: 1. *The 911 call is not recorded in the Call History.*
2. *You can not make an E911 call while you are in a BREW application.*

MEMO

Chapter 3

MEMORY FUNCTION

This chapter addresses numerous functions including saving phone numbers to the internal phone book, entering text and accessing call logs.

- Storing Phone Numbers
- Text Input Methods
- Speed Dialing
- Phone Book
- Recent Calls

STORING PHONE NUMBERS

The phone book stores up to 300 entries.

1. Enter phone # then press [SAVE].
2. Choose "New Contact" or "Existing Contact".
To select, press [OK].
3. If "New Contact" is selected, the phone number will appear above a list of icons. The name of the icon is displayed below the list. Press the Navigation Key right or left to choose the type of number you're adding, as indicated by the icon. Press [OK] to select. If "Existing Contact" is selected, your phone book list is displayed. Choose the entry to add the phone number to, then press [OK]. You will then see the phone number listed about a list of icons and the name of the currently selected icon below the list. Press [OK] to select.
4. Enter a name then press [OK].
Follow instructions for entering text on page 37.
To change the input mode, press [Abc].
5. Use the Navigation Key to scroll through more options for the entry (group, other numbers, ringer, etc.).

Mobile/ **Home/** **Office/** **Pager/** **FAX**
E-Mail: Enter E-Mail address.
Wireless Addr.: Enter Wireless address.
Group: Personal, Business, Etc.
Ringer: Select Ringer Type.
Msg. Ringer: Select Msg. Ringer Type.
Graphic: Select take a picture Image.
Memo: Enter memo./ **Set Secret: Lock, Unlock.**

6. To store the entry, press [SAVE]. "New contact added!" or "Contact edited!" will be displayed.

TEXT INPUT METHODS

ENTERING CHARACTERS

Your phone offers several text input methods for convenient entry of memory location names and text messages:

Abc mode: Enters words by repeatedly tapping the corresponding key until the desired character is displayed.

T9Word: Tap each corresponding key only once and the phone predicts the word you are entering.

Numeric mode: Only enters numbers.

Symbol mode: Enters symbols like @, #, %.

ALPHA MODE [ABC]

Use the digit keys to enter letters, numbers and characters. Enter letters using the key pad as follows:


Key Pad	1 Repetition	2 Repetitions	3 Repetitions	4 Repetitions	5 Repetitions
1	1	.	@	-	'
2ABC	A	B	C	2	...
3DEF	D	E	F	3	...
4GHI	G	H	I	4	...
5JKL	J	K	L	5	...
6MNO	M	N	O	6	...
7PQRS	P	Q	R	S	7
8TUV	T	U	V	8	...
9WXYZ	W	X	Y	Z	9







To change the input mode, press [Abc].

- **To enter a space, press . The cursor will automatically move to the next column.**
- **Repeat until letters are entered. (Name or Group is a 16-letter limit, E-mail or Wireless Address is a 48-letter limit).**
- **To delete one digit, press .**
To delete the entire entry, press and hold .
- **To change from lowercase to uppercase, press .**

TEXT INPUT METHODS

T9™ PREDICTIVE TEXT MODE [T9™ABC]

To choose T9™ mode from the Editor screen press  [Abc], then choose [T9Word]. This mode predicts the words you are entering using a built-in dictionary. With T9™ predictive text input, you press each key only once for each letter. The chart below outlines how to use T9™ mode.

KEY	FUNCTION
 Mode	Press to change mode. [Abc][T9Word][NUM][Symbols].
 Next	Press to view the next matching word if the highlighted word is not the word you intended.
 Space	Press to accept a word and add a space.
 Shift	Press to select a letter case of the standard text input or T9 text input mode. [Abc], [ABC], and [abc] indicate the standard text input. [T9word], [T9Word], and [T9WORD] indicate the predictive text input.
 Clear	Press to delete a character to the left of the cursor.
 Save	Store the letters and numbers you enter.


TEXT INPUT METHODS


1. Press each key once for each letter of the word you are writing.


- To write **John** with the English dictionary selected:

1. Press 5 once - (for - K)
2. Press 6 once - (for - Km)
3. Press 4 once - (for - Log)
4. Press 6 once - (for - John)

NOTE: *The display will change each time a key is pressed.*


2. Press  until the correct word is displayed.

3. To select the correct word, press  [OK].
If the T9 mode does not recognize or suggest the word you want to enter, re-enter the name in the Alpha ABC mode.

NOTE: *When entering more than one word in T9Word Mode, enter the first word then press  to insert a space and start the next word.*


TEXT INPUT METHODS

NUMERIC MODE [NUM]

Numeric mode allows you to add a number to your entry/message. To select numeric mode from the Editor screen press  [Abc], then select [NUM].

SYMBOL MODE [SYM]

Symbol mode allows you to add various symbols to your entry. Whether you are adding an e-mail address to your phone book or sending an expressive message, symbols make these entries easier.

To select symbol mode from the Editor screen press  [Abc] then choose [Symbols].

The symbols will appear on the display.






The corresponding key number for that symbol will appear as well. You can press the key to select the symbol .


To move to the next screen of symbols press .

SPEED DIALING

SPEED DIAL

Dials a number simply by pressing and holding its Speed Dial location number. For a 2-digit location number, press the first number then press and hold the second number. To store a number in Speed Dial:

1. Press  [MENU]  .
2. To assign a phone number to a location, select the location then press  [SET].
3. The phone book list will be displayed alphabetically. Select a name then press  [OK].
4. "Speed dial # X Edited!" will be displayed.

● *If a phone number is already assigned to the location, press  [ERASE] then the Navigation Key to delete.*

● *If the entry is set to secret, you will be asked for your password.*

ONE-TOUCH/TWO-TOUCH DIALING

Ideal for frequently dialed numbers, this feature allows phone book entries to be dialed via the key pad with only one or two key presses.

ONE-TOUCH/TWO-TOUCH DIALING:



- 1-9 : Press the corresponding memory number and hold for more than 1 second.
- 01-09/10-20 : Press the first digit and second digits of the memory number short and long respectively.






- *If no phone number is stored in the location entered, "There is no number" will appear on the screen.*
- *If the entry is set to secret, you will be asked for your password.*
- *To One-Touch voicemail (*86 feature), press "1" or "01".*

PHONE BOOK

Stores up to 300 entries, each of which can be assigned to a group. Entries can be retrieved by name, phone number or group.

FIND

Retrieves an entry by name or number, and calls the number by simply pressing . On Standby Screen, you may press  [CONTACTS] as well. You can review all the entries stored in your phone book list or find an entry quickly by entering a name or its character string.

1. Press  [MENU]  .
2. The list of names in your phone book is displayed alphabetically. Use Navigation Key to select the name.
3. Enter a name or its character string or scroll through the list with the Navigation Key. Please refer to page 35 for instructions on entering letters, numbers and symbols.
4. The list beginning with the letter you entered is displayed. Highlight an entry. Press  [OK] to preview list the entry. Press  [MENU] to view options. If the contact has a mobile phone number your options will be 1. Send Text Msg, 2. Send Pix Msg, 3. Send Flix Msg, 4. Erase or 5. Prefix. If no mobile number is saved for the contact, your options will be 1. Erase, 2. Prefix. If only an e-mail or wireless address is saved for the contact, your options will be 1. Send Text Msg, 2. Send Pix Msg, 3. Send Flix Msg, 4. Erase.





● *If the entry is set to secret, you will be asked for your password.*

PHONE BOOK


5. To call the selected number, press .

ADD NEW

Adds a new entry to the phone book. Please refer to page 34 for alternate ways to add an entry to the phone book.

1. To add a new entry to the phone book, press  [MENU]  .
2. The first field highlighted is Name. Enter the name for the entry, then press  [OK].

● **PHONE BOOK FIELD:** Name/Mobile/Home/Office/Pager/Fax/E-Mail/Wireless Addr./Group/Ringer/Msg.Ringer/Graphic/Memo/Set Secret.

3. Press the Navigation Key down to enter all the other information (group, phone number, etc.).
4. To save the entry after all the information is entered, press  [SAVE].

PHONE BOOK

GROUP

Allows you to classify phone entries into groups.
Existing groups include Personal, Business, Etc. and All.

ADD NEW GROUP

1. To add a new group, press [MENU] .
A maximum of seven groups is allowed.
2. Press [MENU] then select "Add Group".
3. Input a new group name.
4. To save it, press [OK].

CHANGE GROUP NAME

1. Press [MENU] .
Select an existing group name.

NOTE: *Default group name(All, Personal, Business, Etc.) cannot be changed.*

2. Press [MENU] then select "Rename".
3. Input a new group name.
4. To save it, press [OK].

PHONE BOOK

ERASE GROUP

1. Press [MENU] .
Select an existing group name.
2. Press [ERASE] to delete it.
"Erase this group?" will be displayed.
3. Press [OK] again to confirm it.

- *When executing erase group, the saved entries are moved to the Etc. group.*
- *The default group names (All, Personal, Business, Etc.) cannot be changed.*

MSG. GROUP






Allows the user to group up to 10 phone numbers.
The user can add, change, and delete Msg.Groups.

ADD NEW MSG. GROUP







1. To add a new group, press [MENU] .
A maximum of five groups is allowed.
2. Press [MENU] then select "Add Group".
3. Input a new group name.
4. To save it, press [OK].

PHONE BOOK

CHANGE MSG. GROUP NAME







1. Press  [MENU]   .
Select an existing group name.
2. Press  [MENU] then select "Rename".
3. Input a new group name.
4. To save it, press  [OK].

SEND TEXT MSG.







1. Press  [MENU]   .
Select an existing group name.
2. Press  [MENU] then select "Send Text Msg.".
3. Complete the "Message", "Default CB#", "Priority", and "Insert Signature" fields.
4. Press  [MENU] then select "Send" or "Save Msg".
Press  [OK].
Please refer to page 113 for more details on "New TXT Msg".

PHONE BOOK

SEND PIX MSG.

1. Press  [MENU]   .
Select an existing group name.
2. Press  [MENU] then select "Send Pix Msg.".
3. Complete the "Message", "Subject", "CC", "BCC", "Priority" and "Insert Signature" fields.
4. Press  [MENU] then select "Send", "Preview" or "Save Msg". Press  [OK].
Please refer to page 115 for more details on "New Pix Msg".

SEND FLIX MSG

1. Press  [MENU]   .
Select an existing group name.
2. Press  [MENU] then select "Send Flix Msg".
3. Complete the "Message", "Subject", "CC", "BCC", "Priority" and "Insert Signature" fields.
4. Press  [MENU] then select "Send", "Preview" or "Save Msg". Press  [OK].
Please refer to page 117 for more details on "New Flix Msg".

PHONE BOOK

ERASE MSG. GROUP

1. Press [MENU], 1, 5. Select the group name to be deleted.
2. To delete it, press [ERASE]. "Erase this message group?" will be displayed.
3. Press [OK]. "This message group erased" will be displayed.

MY PHONE

To display your phone number and service provider:

1. Press [MENU], 1, 6. Your phone number and service provider appears.
2. To return to the previous page, press [OK].

RECENT CALLS

To access Recent Calls from the idle mode, press [MENU], 2.

ALL CALLS

Displays information about the 60 most recently dialed, missed and received numbers. Place a call to a selected number by simply pressing .

1. To see a list of the 60 most recent numbers, press [MENU], 2, 1. If the number is already stored in your phone book, only the name appears. If the number is not stored, only the phone number appears.
2. To view call details, press [OK].

NOTE:

- Call details include date, time, and phone number.
- If the phone number is set to secret, the name is not displayed.


3. To save the number, press [MENU], 1, 3 [SAVE] or press [ERASE] to delete it.





- **Save:** To store the phone number in your phone book.
- **Prefix:** Allows user to add an additional number before the stored number such as an area code or "1" before a long distance call.
- **Send Text Msg:** To send a message to the phone number.
- **Send Pix Msg:** To send a photo message to the phone number.
- **Send Flix Msg:** To send a video mail message to the phone number.
- **Erase All:** To erase all recent calls list.

NOTE: After the 60 received, dialed or missed calls, the oldest call will automatically be erased from the history.




RECENT CALLS

MISSED CALLS

Displays information about the 20 most recently missed calls. Place a call to a missed call number by simply pressing .

- To see a list of the 20 most recently missed calls, press  [MENU],  . If the number is already stored in your phone book, only the name appears. If the number is not stored, only the phone number appears.
- To view missed call details, press  [OK].

NOTE: Call details include date, time and phone number.


- To save the number, press  [MENU],  [SAVE] or press  [ERASE] to delete it.





- **Save:** To store the phone number in your phone book.
- **Prefix:** Allows user to add an additional number before the stored number such as an area code or "1" before a long distance call.
- **Send Text Msg.:** To send a message to the phone number.
- **Send Pix Msg.:** To send a photo message to the phone number.
- **Send Flix Msg.:** To send a video mail message to the phone number.
- **Erase All:** To erase all missed calls list.

NOTE: After the 20 missed calls, the oldest call will automatically be erased from the history.




RECENT CALLS

RECEIVED CALLS

Displays information about the 20 most recently answered calls. Place a call to a received number by simply pressing .

- To see a list of the 20 most recently received calls, press  [MENU],  . If the number is already stored in your phone book, only the name appears. If the number is not stored, only the phone number appears.
- To view received call details, press  [OK].

NOTE: Call details include date, time and phone number.


- To save the number, press  [MENU],  [SAVE] or press  [ERASE] to delete it.





- **Save:** To store the phone number in your phone book.
- **Prefix:** Allows user to add an additional number before the stored number such as an area code or "1" before a long distance call.
- **Send Text Msg.:** To send a message to the phone number.
- **Send Pix Msg.:** To send a photo message to the phone number.
- **Send Flix Msg.:** To send a video mail message to the phone number.
- **Erase All:** To erase all received calls list.

NOTE: After the 20 received calls, the oldest call will automatically be erased from the history.




RECENT CALLS

DIALED CALLS

Displays information about the 20 most recently dialed calls. Place a call to a received number by simply pressing .

1. To see a list of the 20 most recently dialed calls, press  [MENU]  . If the number is already stored in your phone book, only the name appears. If the number is not stored, only the phone number appears.
2. To view dialed call details, press  [OK].

NOTE: Call details include date, time and phone number.

3. To save the number, press  [MENU],  [SAVE] or press  [ERASE] to delete it.

- **Save:** To store the phone number in your phone book.
- **Prefix:** Allows user to add an additional number before the stored number such as an area code or "1" before a long distance call.
- **Send Text Msg.:** To send a message to the phone number.
- **Send Pix Msg.:** To send a photo message to the phone number.
- **Send Flix Msg.:** To send a video mail message to the phone number.
- **Erase All:** To erase all dialed calls list.

NOTE: After the 20 dialed calls, the oldest call will automatically be erased from the history.






RECENT CALLS

CALL TIMERS

Checks the usage time and manages your calls within the limit you set. The five timers include:






LAST CALL

Displays usage time of last call.

1. Press  [MENU]   .
2. To return to the previous page, press  [OK].

ALL CALLS

Displays usage time of all incoming and outgoing calls, excluding web access calls.

1. Press  [MENU]   .
2. The time of the following items is displayed.
 - **Voice Calls, Data Calls**
3. To return to the previous page, press  [OK].







NOTE: You cannot reset this timer.

NOTE: You may also navigate to the next or previous second-level menu (Last Calls, All Calls, Home Calls, Roam Calls, Cumulative Calls) by pressing the Navigation Key right or left.

RECENT CALLS







HOME CALLS

Displays usage time of all calls made within Home area.

1. Press  [MENU]   .
2. The time of the following items is displayed:
 - **Voice Calls, Data Calls**
3. To reset the timer, press  [RESET].
To return to the previous page, press  [OK].

ROAM CALLS

Displays usage time of roaming calls.







1. Press  [MENU]   .
2. The time of the following items is displayed:
 - **Voice Calls, Data Calls**
3. To reset the timer, press  [RESET].
To return to the previous page, press  [OK].

NOTE: You may also navigate to the next or previous second-level menu (Last Calls, All Calls, Home Calls, Roam Calls, Cumulative Calls) by pressing the Navigation Key right or left.

RECENT CALLS

CUMULATIVE CALLS

Displays usage time of all incoming and outgoing calls, excluding web access calls.

1. Press  [MENU]   .
2. The time of the following items is displayed:
 - **Voice Calls, Data Calls**
3. To reset the timer, press  [RESET].
To return to the previous page, press  [OK].

NOTE: You may also navigate to the next or previous second-level menu (Last Calls, All Calls, Home Calls, Roam Calls, Cumulative Calls) by pressing the Navigation Key right or left.

RECENT CALLS

1X PACKET COUNTER

Checks the log of all kilobyte data transmissions.

RECEIVED

To show the received kilobyte usage on a user definable interval:

1. Press [MENU] .
2. To reset the counter, press [RESET].
To return to the previous page, press [OK].

TRANSMITTED

To show the transmitted kilobyte usage on a user definable interval:

1. Press [MENU] .
2. To reset the counter, press [RESET].
To return to the previous page, press [OK].

TOTAL

To show the received or transmitted kilobyte usage on a user definable interval:

1. Press [MENU] .
2. To return to the previous page, press [OK].

Chapter 4 SETTINGS

This chapter addresses customizing your phone by adjusting backlighting, volume, ring tones and other user-friendly features.

- Settings
- Media Gallery

SETTINGS

SOUNDS

Sets Ringer Type, Volume, Alerts, Roam Ringer, Tone Length and Power On/Off.

RINGER TYPE

To select a ringer type for incoming calls:

RINGER

1. Press [MENU] .

2. Select one of the pre-installed 20 music bells and 5 ring tones.

3. To confirm, press [OK].

MESSAGES

To select a ringer type for receiving messages:

1. Press [MENU] .

2. Select a tone (1-5).

3. To confirm, press [OK].

VOICE MAIL

To select a ringer type for receiving voice mail:

1. Press [MENU] .

2. Select a tone (1-5).

3. To confirm, press [OK].

SETTINGS

VOLUME

Controls the Ringer, Key Tone, Voice Call and Speaker Phone volume and alerts you to incoming calls in a variety of modes.

RINGER

Controls the Ringer volume and alerts you to incoming calls in the following modes.

1. Press [MENU] .

2. Select one of the following options:

- *Silent: Mute the ringer, press [Min].*
- *Ringer Off*
- *Vibrate On*
- *Ringer Mode: Volume Levels 1-5.*
- *High & Vib: The ringer sounds with vibration,*
- *Vib to High: The ringer sounds after vibration, press [Max].*

3. To confirm, press [OK].

KEY TONE

To adjust key pad tone:

1. Press [MENU] .

2. Adjust the key pad tone.

- *Off/Level1-5 (Min- , Max-)*

3. To save, press [OK].

SETTINGS

VOICE CALL

To adjust earpiece volume:

1. Press [MENU] .

2. Adjust the earpiece volume.

● *Level1-5 (Min- , Max-)*

3. To save, press [OK].

SPEAKER PHONE

To adjust speaker volume:

1. Press [MENU] .

2. Adjust the speaker phone volume.

● *Level1-5 (Min- , Max-)*

3. To save, press [OK].

ALERTS

Allows you to set an alert that sounds when the following handset changes occur.

MINUTE

Sounds an alert every minute of a phone call.

1. Press [MENU] .

2. Select “Off” or “On” then press [OK] to save it.

SETTINGS

ROAM

Sounds an alert when leaving a service area, change System ID and entering a roaming service area.

1. Press [MENU] .

2. Select “Off” or “On” then press [OK] to save it.

CONNECT

Notifies you that a call has been successfully placed.

1. Press [MENU] .

2. Select “Off” or “On” then press [OK] to save it.

FADE

To notify you when your phone loses a signal during a call.

1. Press [MENU] .

2. Select “Off” or “On” then press [OK] to save it.

FLIP SOUND

Sounds an alert when phone is opened or closed.






1. Press [MENU] .

2. Select “Off” or “On” then press [OK] to save it.

SETTINGS






ROAM RINGER

Sounds a different ringer when you are in a roaming service area.

1. Press  [MENU]   .
2. Select "Distinctive" or "Normal" then press  [OK] to save it.

tone LENGTH







To adjust key tone length:

1. Press  [MENU]   .
2. Select "Normal" or "Long" then press  [OK] to save it.







POWER ON/OFF

To set sound "ON" or "OFF" when powering ON/OFF.

POWER ON

1. Press  [MENU]    .
2. Select "On" or "Off" then press  [OK] to save it.

POWER OFF

1. Press  [MENU]    .
2. Select "On" or "Off" then press  [OK] to save it.

SETTINGS

DISPLAY

This feature allows you to customize and personalize your phone display.

MENU STYLE







To select a display menu style:

1. Press  [MENU]   .
2. Select "Grid" or "List" then press  [OK] to save it.







GRAPHICS

To select an LCD display:

WALLPAPER

1. Press  [MENU]    .
2. Select "Camcoder", "Digital Clock1,2", "Analog Clock 1,2", "Pix #", "Downloads" or "Animations" through Network or received picture by Picture Msg.
3. To save it, press  [OK].

RECEIVED

1. Press  [MENU]    .
2. Select "Default", "Pix #" or "Downloads" with the Navigation Key.
3. To save it, press  [OK].

SETTINGS

DIALED

1. Press [MENU] .
2. Select "Default" with the Navigation Key.
3. To save it, press [OK].

SCREEN SAVER

Set the time of Screen Saver and select the images, the image will then be displayed on the LCD.

1. Press [MENU] .
2. Select "Time Setting" to set the amount of time the screensaver is displayed (Off, 5 Secs, 10 Secs, 20 Secs, 30 Secs).
3. Select a "Screen Saver" from the list. (Pix/Downloads/Animations).
4. To save it, press [OK].

SUB SCREEN

EXTERNAL CLOCK

1. Press [MENU] .
2. Select "Analog1", "Analog2", "Digital1" or "Digital2" with the Navigation Key.
3. To save, press [OK].

SETTINGS

WALLPAPER

1. Press [MENU] .
2. Select "Digital 1", "Analog 1" or "Analog 2" with the Navigation Key.
3. To save, press [OK].

REETING MESSAGE

To input a personal greeting:

1. Press [MENU] .
2. Select "Message", "Font" or "Entry Message" to personalize your greeting. Press [OK].

- **Message: On/Off.**
- **Font: White, Blue, Dark Blue, Magenta, Gray, Black.**
- **Entry Message: Enter message (Default-Pantech).**

3. To save, press [SAVE].


SETTINGS

BACKLIGHT

Backlights the display and key pad for easy viewing in dark places.

1. Press  [MENU]   .
2. Select "LCD" or "Key Pad" then select one of the following options.

- **LCD: 5 Secs/15 Secs/30 Secs/60 Secs/Always On.**
- **Key Pad: 5 Secs/15 Secs/30 Secs/60 Secs/Always On/Always Off.**

3. To save, press  [OK].






SETTINGS

DATA SVC.

Allows you to transfer data when your phone is connected to a PC.

CONNECTION

Select a connection mode based on the handset usage.

1. Press  [MENU]   .
2. Select one of the following connection modes:
 - **Voice Call: To receive a voice call.**
 - **Data Only: To receive data when connected to a PC.**
3. To save, press  [OK].

SETTINGS

SECURITY

Prevents others from using the phone without permission and allows access to security features only after inputting a password.

PHONE LOCK

Prevents others from using your phone without permission. When locked, calls cannot be made and the menu cannot be accessed without entering the password.

1. Press [MENU] then enter "Password".

NOTE: *The default password is the last 4 digits of your phone number.*

2. Press then select "Lock Now", "Lock On Power Up" or "Unlock".

- **Lock Now:** *Lock the phone now.*
- **Lock On Power Up:** *Do not lock the phone now, but automatically lock phone when power is recycled.*
- **Unlock:** *Do not lock the phone.*

3. To save, press [OK].

SETTINGS

RESTRICT

When you attempt to make a restricted call, "This phone is restricted" appears on the screen.

DIALED

Blocks all dialed calls – except emergency or special # calls – but allows incoming calls to be answered.

1. Press [MENU] then enter "Password".
2. Press then select "Allow" or "Restrict".

- **Allow:** *Allows dialed calls.*
- **Restrict:** *Restricts dialed calls.*

3. To save, press [OK].

RECENT CALLS

Blocks access to Recent Call List.

1. Press [MENU] then enter "Password".
2. Press then select "Allow" or "Restrict".

- **Allow:** *Allows access to the recent calls menu.*
- **Restrict:** *Restricts access to the recent calls menu.*

3. To save, press [OK].

SETTINGS

CAMERA

Restricts access to camera mode.

1. Press [MENU] then enter "Password".
2. Press then select "Allow" or "Restrict".

- **Allow:** Allows access to the camera.
- **Restrict:** Restricts access to the camera.

3. To save, press [OK].

900#S

Restricts calling 900 dial service numbers.

1. Press [MENU] then enter "Password".
2. Press then select "Allow" or "Restrict".

- **Allow:** Allows calls to 900-dial services.
- **Restrict:** Restricts calls to 900-dial services.

3. To save, press [OK].

LONG DISTANCE

Restricts calling long distance numbers – the phone is limited to calling numbers within the area.

1. Press [MENU] then enter "Password".
2. Press then select "Allow" or "Restrict".

- **Allow:** Allows a long distance call.
- **Restrict:** Restricts a long distance call.

3. To save, press [OK].

SETTINGS

CHANGE CODE

Changes your 4-digit password.

1. Press [MENU] then enter "Password".

NOTE: The default password is the last 4 digits of your phone number.

2. Press .
3. Enter a new password then press [OK].
4. Re-enter the new password then press [OK].

SPECIAL #'S

Stores 3 phone numbers that can be called even in the lock mode.

1. Press [MENU] then enter "Password".

NOTE: The default password is the last 4 digits of your phone number.

2. Press then select a location.
3. Press ~ , input a phone number then, press [OK] again to save.

NOTE: You can delete a special number by selecting it, pressing [ERASE], then [OK].




SETTINGS

ERASE ALL

Clears all Phonebook entries, Downloads, Pix Gallery and Flix Gallery.

1. Press  [MENU]   then enter "Password".

NOTE: *The default password is the last 4 digits of your phone number.*

2. Press  .
3. Select "Phonebook", "Downloads", "Pix Gallery" or "Flix Gallery" with the  [CHECK] and press  [OK] to erase all the items in those categories.

NOTE: *Since the data cannot be retrieved once it is erased, a warning will appear on the display before erasing everything.*



SETTINGS

RESET PHONE

Resets phone to default settings.

1. Press  [MENU]   then enter "Password".

NOTE: *The default password is the last 4 digits of your phone number.*

2. Press  .
3. A message, asking for your confirmation, will appear as following. "It will erase all data on your phone. Reset Phone?".
4. Press  [OK].

● *When you press "OK" you will see "Phone Reset! Your Phone will reboot now" on the display and your phone will reset all settings to the factory defaults.*

SETTINGS

OTHERS

ANSWER OPTIONS

CALL ANSWER

To select an answer mode:

1. Press [MENU] .

2. Select “Any Key” or “Send Key”.

- **Any Key:** Press any key to answer an incoming call except , , and .
- **Send Key:** Calls can only be answered by pressing .

3. To save, press [OK].

ACTIVE FLIP

To select Active Flip Answer mode:

1. Press [MENU] .

2. Select “On” or “Off”.

3. To save, press [OK].

- **When Active Flip On is selected, an incoming phone call can be answered simply by opening the phone.**
- **When Active Flip Off is selected, you will need to open the phone and follow the Answer mode you have selected.**

SETTINGS

AUTO ANSWER

Automatically answers a call after a preset number of rings. An ideal setting for the hands-free car kit.

When Auto Answer is enabled, call is automatically answered even when ear-mic or car kit is not connected to PN-320.

1. Press [MENU] .

2. Select “Handset”, “Headset”, or “Hands Free Kit”, then select one of the following options:

- **Off/5 Secs/10 Secs/18 Secs.**

NOTE:






1. This function will not be active when you select Vibrate, Silent as a ringer mode.
2. Even if auto answer is set to the handset, auto answer setting for headset and HFK will be activated while they are in use.

3. To save, press [OK].

SETTINGS

AUTO RETRY






Automatically redials your call up to 5 times after a set time interval.

1. Press  [MENU]   .
2. Under Retry Time, select a time interval option (Off, 3 Secs, 5 Secs, 7 Secs, 10 Secs). The Repeat Category will appear when a time frame is chosen.
3. Under Repeat, select a time interval option (1 Time, 3 Times, 5 Times).
4. To save, press  [OK].

SETTINGS






LANGUAGE

Selects the language in which letters are displayed on the screen.

1. Press  [MENU]   .
2. Select either “English” or “Spanish”.
3. To save, press  [OK].

VOICE PRIVACY

Enhances voice privacy and avoids tapping during a call.

1. Press  [MENU]   .
2. Select “Standard” or “Enhanced”.
3. To save, press  [OK].

- **“Enhanced”**: *Makes it more difficult to wire tap.*

SETTINGS


TTY MODE

Your phone is able to operate with a TTY (Teletypewriter) device in both analog and digital modes. This feature is system dependent and may not be available in all areas.

1. Press  [MENU]   .

2. Select one of the following options.

- **TTY Off/TTY+TALK/TTY+HEAR/TTY Full**

3. To save, press  [OK].


LOCATION

To determine whether or not the network system can detect your position:

1. Press  [MENU]   .

2. Select “911 Only” or “Location On”.

- **911 Only: Your location will be hidden from network & application except 911.**
- **Location On: Your location is now available to the network.**


3. To save, press  [OK].

SETTINGS

SHORT CUT KEY

Your phone offers you the option of assigning a short-cut key (UP Navigation Key) to a favorite or often-used function. To assign a shortcut to the key:

1. Press  [MENU]   .

2. Select your desired menu option then press  [OK].

- **Phone Book/Schedule/Display/Sounds/Media Gallery /Alarm**

3. The Shortcut can now be accessed by pressing up on the Navigation Key.

SETTINGS

SYSTEM

SET MODE

Selects the Preferred System.

1. Press [MENU] .

2. Select one of the following options:
Automatic B, Automatic A, Home Only.

- **Automatic B:** Scans the radio channels based on the Automatic B setting.
- **Automatic A:** Scans the radio channels based on the Automatic A setting.
- **Home Only:** Only within your home area or home affiliated area.

3. To save, press [OK].

NAM SETTING

Enables Auto NAM (Number Assignment Modules) or manually selects a NAM.

AUTO NAM

Automatically switches phone to proper NAM when you have multiple NAM registrations.

1. Press [MENU] .

2. Select "Yes" or "No".

3. To save, press [OK].

SETTINGS

CHANGE NAM

Changes the NAM used by the phone when you have multiple registrations.

1. Press [MENU] .

2. Select "NAM1-PANTECH" or "NAM2-PANTECH".

3. To save, press [OK].

PRL ID

Displays the phone's "PRL (Preferred Roaming List) ID", "ERI Version".

1. Press [MENU] .

2. To return to the previous page, press [OK].

ERI BANNER

1. Press [MENU] .

2. Select "Off" or "On".






3. To save, press [OK].

SETTINGS






PHONE INFO

To display the version of your phone:






S/W VERSION

1. Press  [MENU]   .
2. The software version appears.
3. Press  [OK].

H/W VERSION

1. Press  [MENU]   .
2. The hardware version appears.
3. Press  [OK].

GET IT NOW VERSION


1. Press  [MENU]   .
2. The Get It Now version appears.
3. To return to the previous page, press  [OK].




MEDIA GALLERY

PIX

This menu displays the list of Pix taken with the Camera.

1. Press  [MENU]  .



- Press  [MENU] to select 1. Edit Title, 2. Assign, 3. Erase, 4. Information.




2. Scroll through the downloaded images to display the image you want to send then press  [SEND].
3. To send the "MMS" message, press  [MENU], then select "Send", then press  [OK].

FLIX

This menu displays the list of Flix taken with the Camera or Video Clip with the Download.

1. Press  [MENU]  .

- Press  [MENU] to select 1. Edit Title, 2. Erase, 3. Information.
- If "Video Clips" is selected, network will launch "Get It Now" and take you see a new video clip. (Refer to page 137 for more details).
- If "Download Clip" is selected, press  [MENU] to select 1. Erase, 2. Information.



2. Scroll through the captured flix to display the flix you want to send then press  [SEND].
3. To send the "MMS" message, press  [MENU], then select "Send", then press  [OK].


MEDIA GALLERY

MUSIC

This menu needs to be supported by PC data cable. It plays the music stored in the phone. Copy the downloaded music from PC to phone, and play through your mobile phone.

1. Press  [MENU]  .
2. Scroll through the downloaded music to display the music you want.

- **By pressing  [MENU], you can choose from the following:**
 1. Setting: To select play mode (All Repeat/Repeat/Random)
 2. Erase: To erase a MP3 file.
 3. Information: Displays information on the selected MP3 file, such as "File Name", "Size", "Saved Time".
- **By pressing  [CHECK/UNCHECK], you can select the desired file from the file list and listen to it.**

3. Select the music you want to play then press  [PLAY].



- **Use function keys:**
 - Up/Down key/OK : Finding and Playing MP3 songs on the phone (Open clam).
 - Side Volume keys/Play : Finding and Playing MP3 songs on the phone (Closed clam).
 - Right (Short press) : Fast forward to next song.
 - Left (Short press) : Rewind to previous song.
 - Music Play/Pause (Long press) : Turning on the MP3 player with phone closed.
 - Camera (Long press) : Turning off the MP3 player with phone closed.
- **Pantech Wireless shall not be responsible for any action or liability as a result of any breach of copyright or other misuse of music contents.**


MEDIA GALLERY

TONES

This menu displays the list of downloaded ringtones or saved voice memos.

1. Press  [MENU]  .


- **Press  [MENU] to select 1.Edit Title, 2.Erase, 3.Information.**
- **Voice memo : Press  [MENU] to select 1. Information.**

2. Scroll to the saved voice memo you want to send then press  [SEND].

IMAGES

This menu displays the list of downloaded still images.

1. Press  [MENU]  .

- **Press  [MENU] to select 1.Edit Title, 2.Assign, 3.Erase, 4.Information.**

2. Scroll through the downloaded images to display the image.

MEMO

Chapter 5 SUPPLEMENTARY FUNCTIONS


This chapter addresses supplemental functions including the voice tools, camera, schedule, memo pad, calculator, alarm, world clock and stop watch features.

- Voice Tools
- Schedule
- Alarm
- Memo Pad
- Calculator
- World Clock
- Stop Watch
- Camera

VOICE TOOLS

Voice Recognition (VR) enables you to place calls using your voice and to record voice memos.

VOICE DIALING






















1. Press and hold  until your phone turns to Voice Recognition mode.
2. Say the indicator, such as a person's name you saved for the number you are calling.

NOTE: *When there is no registered voice dial, voice recognition mode is disabled.*

VOICE TOOLS

VOICE MEMO

Voice Memo allows you to record a reminder message that can be up to 60 seconds. To record a memo:

1. To start Tools menu, press  [MENU]  .
2. To enter a voice memo, press .
3. 1.1. To record a voice memo, press  .
Instructions will be displayed and you will hear "Please record at the tone".
 - 1.2. To stop recording a memo, press  [STOP] or  [PAUSE/RESUME].
 - 1.3. Press  [MENU] after recording a voice memo to "Rerecord" or "Review".
 - 1.4. Press  [SAVE] and input a "Voice Memo" title, then press  [OK] or press  [SEND] to access the "New Pix Msg". See "New Pix Msg" on page 117.
2. To play voice memo, press  .
Select the message you want to play then press  [PLAY] or press  [MENU] to 1. Edit Title,
2. Send, press  [ERASE].
3. To play in speaker mode, press  .
Select the message you want to play then press  [PLAY] or press  [MENU] to 1. Edit Title,
2. Send, press  [ERASE].
4. To erase all voice memos, press  .
"Erase all voice memos?" will be displayed.
To erase all voice memos, press  [OK].

VOICE TOOLS

VOICE DIAL

Voice Dial allows you to call a person by simply saying their name. To access Voice Dial:

1. To start Tools menu, press [MENU] .
2. To enter a voice dial, press .
3. 1.1. To record a voice dial, press .
The phone book list will be displayed alphabetically. Select a name then press [OK]. Instructions will be displayed and you will hear "Name Please".
- 1.2. Say the name for the voice tag and repeat the name when prompted. You will hear "Added".
2. To play voice dial, press .
Select the message you want to play then press [PLAY] or press [ERASE].
3. To play in speaker mode, press .
Select the message you want to play then press [PLAY] or press [ERASE].
4. To erase all voice dials, press .
"Removing all voice tags Proceed?" will be displayed.
To erase all voice memos, press [OK].

VOICE TOOLS

TRAIN WORDS

Train allows you to use Control words to make a call without using the key pad.

YES

Use to train or untrain the Voice Recognition with the control word, "Yes".

1. Press [MENU] .
2. "Please hold phone to ear and follow instructions" will be displayed and you will hear "Now training control words. Please say the word yes".
3. Say "Yes". You will hear "Again". Say "Yes" again.
You will hear "Training word successful".

NO

Use to train or untrain the Voice Recognition with the control word, "No".

1. Press [MENU] .
2. "Please hold phone to ear and follow instructions" will be displayed and you will hear "Now training control words. Please say the word no".
3. Say "No". You will hear "Again". Say "No" again.
You will hear "Training word successful".

VOICE TOOLS

WAKE-UP

Use to train or untrain the Voice Recognition with the control word, "Wake-Up".

1. Press [MENU] .
2. "Please hold phone to ear and follow instructions" will be displayed and you will hear "Now training control words. Please say the word wake-up".
3. Say "Wake-up". You will hear "Again". Say "Wake-up" again. You will hear "Training word successful".

UNDO TRAIN ALL

Undo Train All erases all "trained" words.

1. Press [MENU] .
2. "Undo voice recognition for all procedures?" will be displayed. To undo all trained words, press [OK].

VOICE TOOLS

VOICE SETTING

After turning on Set Active, open the flip to go on to VR mode. After turning on HFK mode, put Hands-free kit and say "wake up" to go on to VR mode.

SET ACTIVE

Set Active allows the user to activate or deactivate voice dial service.

1. Press [MENU] and select "Set Active".
2. Select "Active Flip" or "Send Key" with the Navigation Key.
3. To save, press [OK].

HFK MODE

HFK Mode activates or deactivates the voice recognition function while using the Hands Free Kit.

1. Press [MENU] and select "HFK Mode".
2. Select "On" or "Off" with the Navigation Key.
3. To save, press [OK].

SCHEDULE

Sets a scheduled plan and reminds you of that plan.

ADD NEW PLAN

1. Press [MENU], .
2. Move the Navigation Key left, right, up or down to choose a date in the calendar then press [OK].
3. To select plan options, press the Navigation Key downwards.

DATE

Use the key pad to change or enter the date, then press [OK].

TIME

Use the key pad to set a time and to select "AM" or "PM", then press [OK].

PLAN

Use the key pad to input a plan message, then press [OK].

SETTING

Select an alert time interval option (On Time, 10 Min Before, 30 Min Before, 1 Hour Before, No Alarm) using the Navigation Key.

RINGER

To set a Ringer, press [MENU], then select "Default" or "Change" using the Navigation Key. To save it press [OK].

- **Default:** To set default ringer type.
- **Change:** To set custom ringer type.

SCHEDULE





4. To save it, press [SAVE] or [CLR] to return to the calendar.
5. The date of the Schedule will be marked on your calendar.

VIEW PLAN LIST

1. Press [MENU], .
2. Move the Navigation Key to choose an event and press [OK] or [ERASE]. Press [MENU], then select "Erase All" using the Navigation Key.

ALARM


You can set up to 3 alarms.

1. To display alarm entries, press  [MENU]  .
2. Select one of the entries using the Navigation Key.
To set a new alarm, choose alarm 1, 2 or 3.
To edit an existing alarm, select that alarm.
Press  [OK].
3. To select alarm options, press the Navigation Key down.

SETTING



Use the Navigation Key to select a setting for the alarm (Once, Daily, Weekly, Monthly, Off).

DATE

Use the key pad to change or enter the date for the alarm then press  [OK].

- **Once:** Enter a date.
- **Daily:** Select a time.
- **Weekly:** Select "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday".
- **Monthly:** Select 1 ~31.
- **Off**

TIME


Use the key pad to set a time for the event and  to select "AM" or "PM" then press  [OK].

SNOOZE

Use the Navigation Key to select a Snooze setting (Off, 1 time after 5 min, 1 time after 10 min, 3 times by 5 min).


ALARM


RINGER

To set a "Ringer" press  [MENU], then select "Default" or "Change" with Navigation Key. To save it press  [OK].

- **Default:** To set default ringer type.
- **Change:** To set custom ringer type.

PLAN

Edit alarm message with key pad, then press  [OK].






4. To save an alarm setting press  [SAVE].

MEMO PAD

Your phone includes an internal memo pad that can be used to compose and store reminders and notes.












ADD MEMO

To compose a memo (there is an 80-letter limit):

1. Press  [MENU]    .
2. Input a new text memo.
(Please refer to page 35 for more details on entering letters, numbers and symbols.)
3. To save, press  [OK].

VIEW MEMO






To view a saved memo:

1. 1.1. Press  [MENU]    .
 - 1.2. To erase a memo, press  [ERASE].
 - 1.3. To add a new memo, press  [MENU]  .
"New Memo".
 - 1.4. To erase all memos, press  [MENU]  .
"Erase All".
2. The list of all memos, in saved order, is displayed.
Select a memo and press  [OK].
3. The selected memo will appear. To edit it, press  [MENU], select "Edit" and input a new text memo.

MEMO PAD

SETTINGS

To select memo pad background image:

1. Press  [MENU]    .
2. Select "Drop", "Sky", "Snow", "Candy", or "Pattern", then press  [OK].

CALCULATOR

To access the calculator:

1. Press [MENU] .
2. Follow the instructions below to calculate $8 \times 6 / 4 - 2.5$

Input 8.
 Move the Navigation Key to the right.
 Input 6 then press the Navigation Key to the left.
 Input 4 then press the Navigation Key down.
 Input 2 then press to input dot (.).
 Press 5.
 Then press and you will see the answer.

3. To reset, press [RESET].

NOTE: : \times , : $-$, : \div , : $+$, : $.$,
 : Reset, : $=$.

WORLD CLOCK

To display the time and date in pre-programmed cities:















1. Press [MENU] .
2. Select a city.
3. The world map appears with the city, its date and time.

● Use the Navigation Key to select another city.

NOTE: As the daylight saving time is not applied, it may be different from the actual time during DST.

STOP WATCH


Simultaneously times up to six different events.
To operate the stop watch:

1. Press  [MENU]   .
2. To measure a time period:
 1. To start the stop watch, press  [START].
 2. To pause it, press  [STOP].
 3. To resume it press  [RESET], to return to the previous page, press  [EXIT].
3. To time up to six events at once:
 1. To start, press  [START].
 2. To stop a time period and continue measuring another one, press  [CONT].
 3. To stop the second and continue measuring a third one, press  [CONT].
 4. To measure up to six time periods, repeat the above steps.
 5. To stop the stop watch, press  [STOP].
 6. To review the results, press  [VIEW].
 7. To return to the stop watch, press  [OK].
 8. To reset it, press  [RESET].

CAMERA (USE CAMERA)

When the phone is open, taking pictures with your phone's built-in camera is as simple as choosing a subject, pointing the lens, and pressing a button. You can activate the Camera Mode and take pictures or take videos.

GETTING READY

1. Camera is located on the back of PN-320 and protected by sliding cover. Please open the cover to expose camera.
2. Camera angle can be adjusted by sliding a button  on the side of PN-320. This unique feature of the PN-320 gives you more flexibility and diverse angles for your convenience.

CAMERA (USE CAMERA)

TAKING A PICTURE FROM THE MENU

1. Press [MENU] or press and hold the right side camera button, then press .
2. Press [OK] or the right side camera button to take the picture.
3. To save the picture, press [SAVE].
To go back to idle mode without saving the picture, press .
To send the picture to someone, press [SEND].
Please refer to page 115 for more details on "New Pix Msg".

● *If you receive an incoming call while taking a picture, the camera mode will turn off. You may not receive a warning before the incoming call.*

● **ZOOM Control:** → zoom in/ ← zoom out

● **Resolution Control:** / .

To select a resolution for a picture.
(960X1280/768X1024/480X640/
240X320/144X176/120X160)

CAMERA (USE CAMERA)

TAKING A PICTURE IN IDLE MODE

1. To activate Camera Mode, press the right side camera button.
2. To take the picture, press [OK] or the right side camera button.
3. To save the picture, press [SAVE].
To go back to idle mode without saving the picture, press .
To send the picture to someone, press [SEND].
Please refer to page 115 for more details on "New Pix Msg".

● *If you receive an incoming call while taking a picture, the camera mode will turn off. You may not receive a warning before the incoming call.*


● **ZOOM Control:** → zoom in/ ← zoom out

● **Resolution Control:** / .


To select a resolution for a picture.
(960X1280/768X1024/480X640/
240X320/144X176/120X160)

CAMERA (USE CAMERA)












CAMERA MODE OPTIONS

To access the camera mode options, press  [MENU].

- **Self Portrait:** Take a picture of yourself by checking the view on the Sub LCD.
- **Flash:** To activate the flash function.
(Off/Auto Flash/Always On/On This Shot)
- **Self Timer:** To activate the camera's timer function.
(Off/5 Secs/10 Secs)
- **Add Frames:** Select your favorite fun picture frame to decorate your picture.
(Flower/Mask/Sweet Heart/Fist-Punch/
Sports/Stars/Candle/Event/Roses/Lips/
Sea/Sky/Snowman/Tropics/Window)
- **Image Controls:**
 1. Brightness : Press  (0~+2) or press  (0~-2) to select brightness control.
 2. White Balance : To select a white tone balance.
(Auto/Sunny/Tungsten/Fluorescent)
- **Pix Effect:** To select picture effects.
(Normal/Gray/Sepia/Negative)
- **Quality:** To select a picture quality. (High/Medium/Low)
- **Shutter Sound:** To select a shutter sound.
(Off/Sound 1/Sound 2)

To enter Review Mode, press  [GALLERY].
From there you can view the captured pictures,
view a running count of stored pictures and more.

CAMERA (TAKE FLIX)


1. Press  [MENU]   or press and hold the right side camera button then press  .
2. Point the camera lens at your subject. You can check the picture framing through the main display screen.
 - 3.1 To take the video, press  [REC].
 - 3.2 To pause/resume the video record, press  [PAUSE/RESUME].
 - 3.3 To stop recording, press  [STOP].
 - 4.1 To save the video, press  [SAVE].
 - 4.2 To replay video, press  [REPLAY].
 - 4.3 To send flix message, press  [SEND].
Please refer to page 117 for more details on "New Flix Msg".
 - 4.4 To return to picture mode, press  .



● **If you receive an incoming call while taking a picture, the camera mode will turn off. You may not receive a warning before the incoming call.**


- **ZOOM Control:**  → zoom in/  zoom out

CAMERA (TAKE FLIX)






CAMERA MODE OPTIONS

To access the camera mode options, press  [MENU].

- **Self Portrait:** Take a video of yourself by checking the view on the Sub LCD.
- **Movie Light:** To activate the movie flash function. (Off/Always On)
- **Self Timer:** To activate the camera's timer function. (Off/5 Secs/10 Secs)
- **Brightness:** Press  (0~+2) or press  (0~-2) to select brightness control.
- **White Balance:** To select a white tone balance. (Auto/Sunny/Tungsten/Fluorescent)
- **Mute(Unmute):** Phone is mute while recording a video.

To enter Review Mode, press  [GALLERY]. From there you can view the captured video, view a running count of stored video and more.

CAMERA (PIX GALLERY)

1. Press  [MENU]  or press and hold the right side camera button then press  .
2. In Review Mode, you can view all the pictures you have taken and stored.
3. Select photo image with the Navigation Key then press  [OK].
4. To send pix message, press  [SEND]. Please refer to page 115 for more details on "New Pix Msg".

PIX GALLERY OPTIONS

To access the in pix options, press  [MENU].

- **Edit Title:** To edit the picture's title.
- **Assign:** To assign the picture image. (Wallpaper/Pix Caller ID/Screen Saver/Incoming Call)
- **Take New Pix:** To return to Camera mode to take another picture.
- **Go to Downloads:** To switch save location from videos to the phone list or Downloads.
- **Erase:** To erase selected pictures.
- **Information:** To display picture information such as resolution, picture quality, file size, etc.

CAMERA (FLIX GALLERY)

1. Press [MENU] or press and hold the right side camera button then press .
2. In "Flix Gallery", list you can view all the videos you have recorded.
3. Select record video with the Navigation Key then press [OK].
4. To send flix message, press [SEND].
Please refer to page 117 for more details on "New Flix Msg".

FLIX GALLERY OPTIONS

To access the in video options, press [MENU].

- **Playback:** To play back the video you just took.
- **Edit Title:** To edit the video's title.
- **Take New Flix:** To return to Video mode to take another video.
- **Go to Downloads:** To switch save location from videos to the phone list or Downloads.
- **Erase:** To erase the video you just took.
- **Information:** To display video information such as resolution, time/date, size, etc.

CAMERA (HELP)

1. Press [MENU] or press and hold the right side camera button then press .



MEMO

Chapter 6

VOICE MAIL AND TXT, PIX, FLIX MESSAGES

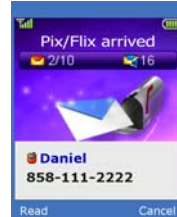
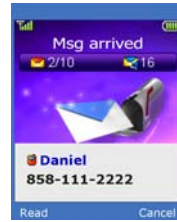
This chapter addresses checking voice mail messages, as well as sending and receiving TXT, Pix or Flix messages.

- When a New Message Arrives
- New MSG
- Inbox
- Sent
- Web Alerts
- Draft
- Quick Text
- Erase All
- Settings

WHEN A NEW MESSAGE ARRIVES

TXT, PIX, FLIX MESSAGE

1. The following display appears when a new message arrives.
2. To display the message, press [READ].



VOICE MAIL

Displays the number of voice mails. You can access them by pressing .

1. To access your voice mail, press [MENU] or press .



NEW MSG

NEW TXT MSG

To send a new message:

1. Press [MENU] or press .
2. Under "Send To", input the phone number and press [OK].

● **By pressing [MENU], the user can choose from the following:**

1. **Find:** Allows the user to search the phone number which is stored in the phone book.
2. **Save to Contact:** Stores the phone number the message was sent to.
3. **Msg Group:** Allows the user select all the phone numbers in a "Msg Group".



3. Under "Message", input a new TXT message and press [OK].
(Please refer to page 35 for more details on entering letters, numbers and symbols.)



● **By pressing [MENU], in the message input screen you can choose from the following:**

1. **Insert Quick Text:** Inserts pre-programmed Text into a Text Msg.
2. **Insert Sound:** Inserts sound in TXT Msg.
3. **Insert Picture:** Inserts picture in TXT Msg.
4. **Insert Animation:** Inserts Animation in TXT Msg.
5. **Save to Quick Text:** Saves the written sentences into Quick Text.

4. Press the Navigation Key down for more fields. Under "Default CB#", Select "No" or "Yes". If select "Yes". The default call back number is automatically inputted into the Default CB# field. You can scroll to the number and edit it or simply press [OK].

NEW MSG









5. Under "Priority", select "Normal" or "Urgent".
6. Under "Insert Signature", select "On" or "Off".
7. To send the text message, press  [MENU] and select the "Send", then press  [OK].


To save the text message, press  [MENU], select "Save Msg", then press  [OK].

NEW MSG


NEW PIX MSG


To send a new picture message:

1. Press  [MENU]    or press   .
2. Under "Send To", input the phone number and press  [OK].

● **By pressing  [MENU], the user can choose from the following:**





1. **Find:** Allows the user to search for a number stored in the phone book.
2. **Save to Contact:** Stores the phone number the message was sent to.
3. **Msg Group:** Allows the user select all the phone numbers in a "Msg Group".
4. **Online Album:** Upload pictures using digital album. (Pix Place/Digital Album)



3. Under "Message", input a message text and press  [OK].



● **By pressing  [MENU], the user can choose from the following:**

1. **New Pix:** To take a new photo.
2. **Saved Pix:** To insert a saved photo.
3. **Delete Pix:** Delete an existing photo.
4. **Voice Record:** To record a voice memo.
5. **Insert Quick Text:** Inserts pre-programmed text into a Pix Msg.
6. **Insert Sound:** Inserts sound in pix Msg.
7. **Insert Slide:** Insert other pix messages (To insert a maximum of 3 picture message).
8. **Slide Duration:** To select a slide duration time.

NEW MSG

4. Under "Subject", input a subject text and press  [OK].
(Please refer to page 35 for more details on entering letters, numbers and symbols.)
5. To send a message to another person, select "CC" or "BCC", input the phone numbers, then press  [OK].
6. Press the Navigation Key down for more fields. Under "Priority", select "Normal" or "High".
7. Under "Insert Signature", select "On" or "Off".
8. To send the pix message, press  [MENU], select "Send" then press  [OK].









To preview the written pix message, press  [MENU], select "Preview" then press  [OK].


To save the pix message, press  [MENU], select "Save Msg" then press  [OK].

NEW MSG


NEW FLIX MSG


To send a new video message:

1. Press  [MENU]    or press   .
2. Under "Send To", input the phone number and press  [OK].

● **By pressing  [MENU], the user can choose from the following:**





1. **Find:** Allows the user to search the phone number which is stored in the phone book.
2. **Save to Contact:** Stores the phone number the message was sent to.
3. **Msg Group:** Allows to select all the phone numbers in a "Msg Group".
4. **Online Album:** Upload video clips using digital album. (Pix Place/Digital Album)



3. Under "Message", input the message text and press  [OK].



● **By pressing  [MENU], the user can choose from the following:**

1. **New Flix:** To take a new video.
2. **Saved Flix:** To insert a saved video.
3. **Delete Flix:** Delete an existing video.
4. **Insert Quick Text:** Inserts pre-programmed text into a Flix Msg.

NEW MSG









4. Under "Subject", input a subject text and press  [OK].
(Please refer to page 35 for more details on entering letters, numbers and symbols.)
5. To send a message to another person, select "CC" or "BCC", input the phone numbers, then press  [OK].
6. Press the Navigation Key down for more fields. Under "Priority", select "Normal" or "High".
7. Under "Insert Signature", select "On" or "Off".
8. To send the flix message, press  [MENU], select "Send" then press  [OK].

To preview the written flix message, press  [MENU], select "Preview" then press  [OK].

To save the flix message, press  [MENU], select "Save Msg" then press  [OK].

INBOX

The Inbox manages received messages. To access:

1. Press  [MENU]   or press   .
2. Select a message then press  [OK]. The message is displayed. To delete a message, press  [ERASE].
3. Press  [MENU].
Menu options include:

PIX/FLIX INFO

1. To show received pix/flix message information.

PLAY FLIX

1. To play received flix message, select "Play Flix".
Please refer to page 109 for more details on "Camera (HELP-Flix Play Mode)".





REPLY

1. Type your reply then press  .





- "Pix/flix Info" menu only appears when you receive a "Pix" or "Flix" message.
- "Play Flix" menu only appears when you receive a flix message.

INBOX

REPLY WITH COPY

1. To reply to a received message and include the received message into the message.
2. To send the text message, press  [MENU], then select "Send" then press  [OK].
3. To save the text message, press  [MENU], then select "Save Msg" then press  [OK].

FORWARD

1. To forward the text message, select "Forward".
2. Input the phone number of the person you are sending the message to then press  [OK].
3. Input any text message to go along with the forwarded message, then press  [OK].
4. To send the text message, press  [MENU], then select "Send" then press  [OK].

SAVE MEDIA

1. Saves an object to the media gallery folder.

- *"Reply with Copy" menu only appears when you receive a text message.*
- *"Save Media" menu only appears when you receive a "Pix" or "Flix" message.*

INBOX

SAVE TO CONTACT

1. To save the number to contacts, select "Save to Contact".

SAVE TO Q.TEXT


1. To save received text msg to "Quick Text", select "Save to Q.Text".

BLOCK SENDER

To block the currently viewed message from the phone number or email address of the sender.

1. Select to block a incoming message from addresses on block list.

LOCK (UNLOCK)

1. Select "Lock" to lock the message or "Unlock" to unlock the message, then press  [OK].


PLAY SLIDE SHOW

1. To play all slides in a slide show from a pix/flix message. Depending on the settings, the phone may also display message (Default-5 seconds). Please refer to page 123 under Note.

SENT

Manages sent text messages or messages waiting to be sent.

1. Press  [MENU]   or press  .

2.1. Select a message, then press  [OK].
The text message is displayed.

2.2. To Erase Message, press  [ERASE].

3. Press  [MENU].


RESEND

1. To resend a text message.


EDIT MESSAGE

1. To send a message to another person:

2. Input a text message then press  [OK].


3. You can edit or add phone numbers to send the message to, then edit the default CB#, Priority, and Insert fields. Press  [MENU] then "Send" to send the message.

SAVE TO CONTACT

1. To save number to contacts, press  [OK].

SENT

LOCK & UNLOCK

1. Select "Lock" to lock the message or "Unlock" to unlock the message, then press  [OK].

STATE

1. To display the status of a sent message.

PIX/FLIX INFO

1. To show pix or flix message information.

PLAY SLIDE SHOW

1. To play all slides in a slide show from a pix/flix message. There is a 5 second interval between slides.

NOTE: *While receiving Pix Msg with 2 pages of slides, Play Slide Show menu substitutes the right softkey and Play Slide Show menu disappears from the menu.*

WEB ALERTS

WEB ALERTS

1. Press [MENU] or press .
2. To select "GoTo", press .
To select "Erase Message", press .
3. The text message will be displayed.

: *Read Message.*
 : *Unread Message.*
 : *Displays the remaining text.*
GoTo : Connecting Selected Site.
Erase : Erase Selected Message.

DRAFT

DRAFT










Draft Folder contains any draft messages or saved messages. If message composition is interrupted by a voice call or other interrupting event, the text of the current composition is automatically saved to the draft folder.

1. Press [MENU] or press .
- 2.1. Select a message, then press [OK].
The text message is displayed.
- 2.2. To Erase Message, press [ERASE].
- 2.3. To Edit Message, press [EDIT].
3. Press [OK].

QUICK TEXT













QUICK TEXT

To view/edit the Quick Text messages:

1. Press  [MENU]   or press  .
- 2.1. Select a Quick Text message from the list.
Press  [MENU].
- 2.2. To add a new Quick Text message, press  [ADD NEW]. To edit the Quick Text message you have selected, press  [EDIT].
3. To erase the saved Quick Text message, press  [ERASE].

ERASE ALL

ERASE MESSAGES

1. Press  [MENU]   or press  .
- 2.1. To erase all folder messages, press .
- 2.2. To erase all inbox messages, press .
 - *Old inbox: To erase messages already read.*
 - *Entire inbox: To erase all messages.*
- 2.3. To erase all the sent messages, press .
- 2.4. To erase the draft messages, press .
- 2.5. To erase the web alerts messages, press .
3. Select "Ok" or "Cancel" with  [OK] or  [CANCEL].








NOTE: *The locked Message(s) will not be deleted.*

SETTINGS

Manages messaging settings through various features.








AUTO SAVE

Select if you want to automatically save a message after sending it.

1. Press  [MENU]   or press   .
Press  "Auto Save".
2. Select "Off", "On", or "Prompt" with the Navigation Key.
3. Press  [OK].

AUTO ERASE

Automatically erases inbox messages when already read messages.








1. Press  [MENU]   or press   .
Press  "Auto Erase".
2. Select "Disable" or "Enable" with the Navigation Key.
3. Press  [OK].

NOTE: *The locked Message(s) will not be deleted.*

SETTINGS

AUTO RECEIVE








Select if you want to automatically retrieve a message as soon as you receive it.


1. Press  [MENU]   or press   .
Press  "Auto Receive".
2. Select "Automatic" or "Prompt" with the Navigation Key.
3. Press  [OK].

NOTE: *"Auto Receive" menu only use when you receive a "Pix", "Flix" or "Push" message.*








DEFAULT CB#

Edits a default call back number so that the recipient can call back or reply.

1. Press  [MENU]   or press   .
Press  "Default CB#".
2. Input a call back number, then press  [OK].

● Press  [FIND] to find a number from the phone book.








VOICE CB#

1. Press  [MENU]   or press   .
Press  "Voice CB#".
2. Input a voice call back number, then press  [OK].

SETTINGS

REMIND








When "Remind" is set, PN-320 periodically alerts the user until all the received messages are checked by the user.

1. Press  [MENU]   or press  .
Press  "Remind".
2. Select "On" or "Off" with the Navigation Key.
3. Press  [OK].

NOTE: When an SMS message is received. If you do not press any key, your phone sends a reminder at 2 minute intervals.

SIGNATURE








Create a signature that can automatically be inserted at the end of a message.

1. Press  [MENU]   or press  .
Press  "Signature".
2. To input, put the cursor on Edit Signature then enter Signature Edit window by using right or left direction keys.
3. To activate Signature function, put the cursor on "Insert" then select "On" by using right or left direction keys. To inactivate Signature function, select "Off".
4. Press  [OK].

SETTINGS








DIRECT VIEW

If the Direct View is set to on, the user will be able to view the message by pressing the read key. If the Direct View is set to off, the user can view the message by entering SMS Menu-> Inbox.

1. Press  [MENU]   or press  .
Press  "Direct View".
2. Select "Off" or "On" with the Navigation Key.
 - **OFF:** Read msg after entering inbox in SMS menu.
 - **ON:** Read msg without entering inbox in SMS menu.
3. Press  [OK].

ENTRY MODE







Sets an Entry Mode as a default. The T9 mode indicator will appear whenever the input mode is activated if the T9 mode is the default.

1. Press  [MENU]   or press  .
Press  "Entry Mode".
2. Select "Alpha Mode" or "T9 Mode" with the Navigation Key.
3. Press  [OK].

SETTINGS

BLOCK OR UNBLOCK

To block all incoming messages from the phone number or email address of the sender.

1. Press  [MENU]  or press  .
Press  "Block or Unblock".
2. Select "Block", "Unblock", or "View List of Blocked Addresses" with the Navigation Key.
3. Press  [OK].

Chapter 7

GET IT NOW & INTERNET








This chapter addresses using your handset to access the Wireless Internet.

- Get It Now
- Starting Internet Browser
- Browser Menu







GET IT NOW





Your phone provides a unique feature -Get It Now- that enables you to download melody ringtones, wallpapers, games and more from your network to your phone. Please contact your service provider for the availability of these services.

STARTING GET IT NOW

1. To launch "Get It Now" from the standby mode, press  [MENU]   or  .
2. When three or more icons appear on the screen, select an application with the Navigation Key.
3. To start the application, press .
4. To end the application, press . The phone will return to the standby mode.

DOWNLOADING APPLICATIONS

1. Press  [MENU]   or  .
2. Select "Start" with the Navigation Key then press .
3. The phone will access your service provider's server. Follow the prompt to download applications.

- To select an option, press  then press .
- When a prompt appears, press  to proceed or  to cancel.

GET IT NOW

DOWNLOADING MELODIES/WALLPAPERS









Before downloading melody ringtones and wallpapers, you need to download the dedicated downloader. Please contact your service provider for details.

APPLYING MELODIES/WALLPAPERS

Downloaded melody ringtones apply to several functions including the incoming call alert, new text message alert, alarm clock and scheduler alarm. Downloaded wallpapers apply to the standby mode.

CHECKING DATA FOLDER MEMORY

Downloaded melody ringtones, wallpapers and applications are saved to the data folder in your phone.

1. Press  [MENU]   or  .
2. Select "Settings" with Navigation Key and press .
3. Select "Manage Apps" with Navigation Key and press .
4. To exit, press .

GET IT NOW

ERASING AN APPLICATION

1. Press [MENU] or .
2. Select "Settings" with Navigation Key and press .
3. Select "Manage Apps" and press .
4. Select the application to be erased with Navigation key then press .
5. Select "Remove" then press .
6. Select "YES" then press .

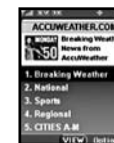
GET IT NOW

VIDEO CLIPS

Video Clips brings the world to your mobile phone with full-motion video and sound. Catch up with what's happening with Video Clips from news, entertainment, sports or weather.

BROWSING, SELECTING AND PLAYING VIDEO CLIPS

1. Press [MENU] or .
2. Select "vzw media player" with Navigation Key and press .
3. Press Navigation Key Left or Right to view Video Clip categories including News, Entertainment, Sports and Weather.
4. Select content provider, press .
5. If applicable, Select sub category, press .



GET IT NOW

TO VIEW A STREAMING VIDEO

1. Press [MENU] or .
2. Select "Video Clips" with Navigation Key and press .
3. Read the description of the video clip, and select one you want to view.
4. Select **Yes** to accept changes.
5. The video clip will begin playback shortly after being selected.

DOWNLOADING A VIDEO CLIP

1. Read the description of the video clip and press **Options**.
2. Select **Save Video** and press .
3. Select **Yes** to accept the charges.
Press and the Video Clip will begin to download.
4. Once video is downloaded, a message will appear on your phone, "Download Complete. Play video now?"
5. Select **Yes** and press to view video.
6. The video clip will automatically be saved in My Clips and the Flix Gallery.

All videos are not downloadable. Only videos that have the option to save can be downloaded. Additional charges for each video clip viewed may apply. Video Clips service is not available in all areas. Check www.pantechwireless.com/getitnow/videoclips website for details.

GET IT NOW

DELETING VIDEO CLIPS

1. Press for "GET PIX & FLIX".
2. Select **Video Clips** and press .
3. Press **Options**.
4. Select **My Clips** and press .
5. Select to **Erase Video**.
6. Press **Options** and select **Erase** and press .
7. Select **Yes** and press to erase video.

CONFIGURE ALERTS FOR NEW VIDEO CLIPS

1. From Video Clips Catalog, select category of content desired.
2. Select Content Provider.
3. Select **Options** by pressing .
4. Select **Alerts**.
5. Click down to **Configure Alerts** and select .
6. Select content for alerts desired and select to save.

NOTE: Fees apply for text messages/alerts both sent and received.

STARTING INTERNET BROWSER

LAUNCHING MOBILE WEB 2.0

Now you can access news, sports, weather, and e-mail from your PN-320. Mobile Web 2.0 keeps you updated by providing access to up-to-date information such as news, sports, weather and stock quotes when you subscribe to Internet service with your service provider. Please contact your service provider for a list of available websites and service details.

1. To start your Internet browser and access websites through your wireless handset press [MENU] or press .

BROWSER MENU

BROWSER MENU

The browser menu lists the actions necessary to operate the browser.

To access the browser menu, press [MENU] , or press then press [MENU].

VZW HOME

When the home item is selected from the browser menu, the phone displays the home page.

- ◆ To display the homepage, press [MENU] then press .

BROWSER MENU

BACK

- ◆ To return to the previous page, press [MENU] then press .

FORWARD

- ◆ To forward to the next page, press [MENU] then press .

REFRESH

Selecting the refresh item from the browser menu refreshes the current page.

- ◆ To select “Refresh”, press [MENU] then press .

HISTORY

When the history item is selected from the browser menu, the browser is displayed with the browser version and copyright information.

The device layer version is also displayed.

- ◆ To select “History”, press [MENU] then press .



ADDRESS

Selecting the “Address” action displays the URL of the current page.

- ◆ To select “Address”, press [MENU] then press .

BROWSER MENU

CLEAR MEMORY

- ◆ To clear browser memory, press  [MENU] then press  .



SETTINGS

- ◆ To select "Settings", press  [MENU] then press  .

- *Downloads*
- *Restart Browser*
- *Scroll Mode*
- *Send Referrer*
- *Key Press Timeout*
- *Connection Timeout*

ADVANCED

Selecting the advanced item in the browser menu displays the advanced menu items.

- ◆ To select "Advanced", press  [MENU] then press  .

- *About...*
- *Encryption: 1. Authentication*
2. Root Certificate
3. Current Certificate

EXIT

- ◆ To exit browser, press  [MENU] then press  .

Chapter 8

SAFETY INFORMATION

- Safety Information for Wireless Handheld Phones
- Safety Information for FCC RF Exposure
- SAR Information
- FDA Consumer Update

SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

Read This Information Before Using Your Handheld
Portable Cellular Telephone

EXPOSURE TO RADIO FREQUENCY SIGNALS

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals.

In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

ANSI C95.1 (1992) *
NCRP Report 88 (1986) *
ICNIRP (1996) *

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C951).

The design of your phone complies with the FCC guidelines (and those standards).

*;
American National Standards Institute;
National Council on Radiation Protection and Measurements;
International Commission on Nonionizing Radiation Protection.

SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

ANTENNA CARE

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

PHONE OPERATION

Normal Position: Hold the phone as you would any other telephone with the antenna pointed up and over your shoulder.

Tips on efficient operation:

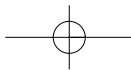
- Extend your antenna fully.
- Do not touch the antenna unnecessarily when the phone is in use. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

DRIVING SAFETY

Talking on the phone while driving is extremely dangerous and is illegal in some states. Remember, safety comes first. Check the laws and regulations on the use of phones in the areas where you drive. Always obey them.

Also, if using your phone while driving please:

- Give full attention to driving. Driving safely is your first responsibility.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions require.



SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

ELECTRONIC DEVICES

Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research.

If you have a pacemaker:

- ALWAYS keep the phone more than six inches from your pacemaker when the phone is turned on.
- Do not carry the phone in a breast pocket.
- Use the ear opposite the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives).

SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

ELECTRONIC DEVICES

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your phone OFF in healthcare facilities when any regulations posted in these areas instruct you to do so. Hospitals or healthcare facilities may be using equipment that could be sensitive to external RF energy.

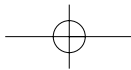
Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

An airbag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the airbag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

Posted Facilities

Turn your phone OFF where posted notices so require.



SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

OTHER SAFETY GUIDELINES

Aircraft

FCC Regulations prohibit using your phone while in the air. Switch OFF your phone before boarding an aircraft.

Blasting Areas

To avoid interfering with blasting operations, turn your phone OFF when in a "blasting area" or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Potentially Explosive Atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle's engine.

SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

PRECAUTIONS AND WARNINGS

Please read and understand all of the Precautions and Warnings contained in this manual before attempting to operate your phone.

1. DO NOT use this equipment in an extreme environment where high temperature or high humidity exists, such as near a heater or in a closed car parked in the sun.
2. DO NOT abuse the equipment. Avoid striking, shaking or shocking. When not using the unit, lay down the unit to avoid possible damage due to instability.
3. DO NOT expose this equipment to liquids such as rain or spilled beverages.
4. DO NOT use unauthorized accessories. Use of unauthorized accessories may result in fire, electric shock or other bodily injury.
5. DO NOT disassemble the phone or its accessories. If service or repair is required, return the unit to an authorized PANTECH service center. If unit is disassembled, the risk of electric shock or fire may result.
6. DO NOT short-circuit the battery terminals with metal items etc.
7. DO NOT use harsh chemicals, cleaning solvents or strong detergents to clean this phone. Always clean it with a soft, damp cloth.
8. DO NOT paint this phone. This can clog moving parts.

SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

OPERATING PROCEDURES

Never violate any of the following Rules and Regulations of the FCC when using your phone. The following offenses are punishable by fine, imprisonment, or both:

- Using obscene, indecent, or profane language.
- Using the unit to give off false distress calls.
- Wiretapping or otherwise intercepting a telephone call, unless that person has first obtained the consent of the parties participating in the call.
- Making anonymous calls to annoy, harass, or molest other people.
- Charging to an account without authorization to avoid payment for service.
- Refusing to yield a party line when informed that it is needed for an emergency call (It is also unlawful to take over a party line by stating falsely that it is needed for an emergency).

SAFETY INFORMATION FOR FCC RF EXPOSURE

WARNING! Read this information before using your phone

CAUTION

In August 1996, the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations.

Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for replacement antenna.

Body-worn Operation

This device was tested for typical body-worn operations with the back of the phone kept 20 mm. from the body. To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 20 mm. separation distance between the user's body and the back of the phone, including the antenna. The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Note: For more information about RF exposure, please visit the FCC website at www.fcc.gov.

SAR INFORMATION

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg.* Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 1.4 W/kg and when worn on the body,

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as described in this user guide, is 0.544 W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID PP4PN-320.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications & Internet Association (CTIA) web-site at <http://phonefacts.net>.

* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.



**U.S. Food and Drug Administration -
Center for Devices and Radiological Health
Consumer Update on Mobile Phones**

1. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the standby mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

2. What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;

- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the subject of the safety questions discussed in this document.

3. What kinds of phones are the subject of this update?

The term "wireless phone" refers here to handheld wireless phones with built-in antennas, often called "cell," "mobile," or "PCS" phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety

guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

4. What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be predisposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

5. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years' follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

6. What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues.

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators.

The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

7. How can I find out how much radiofrequency energy exposure I can get by using my wireless phone?

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects.

Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

8. What has FDA done to measure the radiofrequency energy coming from wireless phones ?

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," sets forth the first consistent test

methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

9. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?

If there is a risk from these products—and at this point we do not know that there is—it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna.

Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

10. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and

increasing the distance between the user and the RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

11. What about wireless phone interference with medical equipment?

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI.

FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a "compatible" phone and a "compatible" hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

12. Where can I find additional information?

For additional information, please refer to the following resources:

- FDA web page on wireless phones:
(<http://www.fda.gov/cdrh/phones/index.html>)
- Federal Communications Commission (FCC) RF Safety Program: (<http://www.fcc.gov/oet/rfsafety>)
- International Commission on Non-Ionizing Radiation Protection:
(<http://www.icnirp.de>)
- World Health Organization (WHO) International EMF Project:
(<http://www.who.int/emf>)
- National Radiological Protection Board (UK):
(<http://www.nrpb.org.uk/>)

MEMO

Chapter 9 WARRANTY

- Protect Your Warranty
- 12 Month Limited Warranty

PROTECT YOUR WARRANTY

Read your Warranty carefully, with the special consideration to paragraph seven of the Limited Warranty for your unit.

“Warranty does not apply to... or to any product or part thereof which has suffered through alteration... mishandling, misuse, neglect or accident”.

Many companies are making look alike accessories and in some cases, promoting that their product is equal to or better than the Pantech product. Be careful. Some of these products may not be compatible to use with your Pantech product and may damage the unit or cause it to malfunction. If service is required on your unit and it is determined that a non-Pantech accessory has created the problem with your unit, the Warranty will not apply. In addition, if the unit has already suffered irreversible damage by reason of a non-compatible accessory, the Warranty will be voided. To protect your Warranty, use only compatible accessories which cannot damage or interfere with the functioning of your Pantech product.

PANTECH

Pantech Wireless, Inc.

11240 Warland Drive, Cypress, CA 90630 (800) 962-8622

12 MONTH LIMITED WARRANTY

Pantech Wireless, Inc. (the Company) warrants to the original retail purchaser of this Pantech handheld portable cellular telephone, that should this product or any part thereof during normal consumer usage and conditions, be proven defective in material or workmanship that results in product failure within the first twelve (12) months period from the date of purchase, such defect(s) will be repaired or replaced (with new or rebuilt parts) at the Company's option, without charge for parts or labor directly related to the defect(s).

The antenna, key pad, display, rechargeable battery and battery charger, if included, are similarly warranted for twelve (12) months from date of purchase.

This Warranty extends only to consumers who purchase the product in the United States or Canada and it is not transferable or assignable.

This Warranty does not apply to:

- (a) Product subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;
- (b) Product whose mechanical serial number or electronic serial number has been removed, altered or defaced.
- (c) Damage from exposure to moisture, humidity, excessive temperatures or extreme environmental conditions;
- (d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;
- (e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts;

12 MONTH LIMITED WARRANTY

- (f) Product damaged from external causes such as fire, flooding, dirt, sand, weather conditions, battery leakage, blown fuse, theft or improper usage of any electrical source.

The Company disclaims liability for removal or reinstallation of the product, for geographic coverage, for inadequate signal reception by the antenna or for communications range or operation of the cellular system as a whole.

To obtain repairs or replacement within the terms of this Warranty, the product should be delivered with proof of Warranty coverage (e.g. dated bill of sale), the consumer's return address, daytime phone number and/or fax number and complete description of the problem, transportation prepaid, to the Company by calling the number listed below or to the place of purchase for repair or replacement processing.

In addition, you may telephone us at (800) 962-8622, or email us at HandsetHelp@Pantech.com

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR AN SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED,

12 MONTH LIMITED WARRANTY

WHATSOEVER. THE COMPANY SHALL NOT BE LIABLE FOR THE DELAY IN RENDERING SERVICE UNDER THIS WARRANTY OR LOSS OF USE DURING THE TIME THE PRODUCT IS BEING REPAIRED OR REPLACED.

No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states or provinces do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitation or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.