

User Requirement Document for C8000

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Revision Record (Part II)

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01	Nancy	2005/03/29	<p>5.8.2 Calendar & Schedule</p> <p>Add "Exit" menu as the last option of weekly view & monthly view</p> <p>Annex A: C8000 Menu Tree</p> <p>[4] Mobile office</p> <p>Calendar</p> <p>Add "Exit" menu as the last option of weekly view & monthly view</p>	
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01	Nancy	2005/03/31	<p>5.6.3 Image editor</p> <p>Add “Send MMS” menu in Tag-It option, add it behind “Open” menu.</p> <p>Change the title to “5.6.3 Tag-It”.</p> <p>Annex A: C8000 Menu Tree</p> <p>[3]Multimedia</p> <p>Tag-It</p> <p>Add “Send MMS” beind “Open” menu</p>	

NOTICE

For body worn operation this phone has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

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1.PURPOSE AND OBJECTIVES OF THE DOCUMENT

1.1 Purpose

This document describes the C8000 Handset from the end user point of view. Besides major characteristics of the C8000 Handset, it also defines the user interface.

1.2 Major objectives

The goal of C8000 Handset is to become high-end products in the mobile phone market, principally aiming at the following consumer groups:

- Senior business personnel
- High-end market

2 REFERENCE DOCUMENTS

<<C8000 User Interface Specification>>

3. INTERFACE DESCRIPTION

3.2 Keypad

The keypad to this Handset has 28 keys in all, which are divided into tow functional blocks as described below:

- Alphanumeric keypad, 12 keys in total
- Control keypad, 16 keys in total.

3.2.1 Alpha/numeric keypad

Alpha/numerical keypad is composed of 12 keys arranged according to a certain standard. Among them, there are 10 digit keys referred as [0]~[9] keys, and two symbol keys referred as [*]

key and [#] key.

Keys in the Alpha/numeric keypad allow user to input numbers or characters. As shown in table 1, press the same key may result in different values depending on different screen environment.

Under T9Eng input method, press 1 key can input space.

Key label	Content Input in Editors										
	Capital	Lower case	T9 spell	T9 stroke	Number		PW	Currency		Time	Calculator
					S P	L P					
1	Space1@#= ◇>()&_£\$¥	Space1@#= ◇>()&_£\$¥			1	1	1	1	1	1	1
2ABC	ABC2AÄÅÆÇ	abc2ääåæç		—	2	2	2	2	2	2	2
3DEF	DEF3ÉÊΛΦ	def3éeèΔΦ			3	3	3	3	3	3	3
4GHI	GHI4ΓΙ	Ghi4Γι		∩	4	4	4	4	4	4	4
5JKL	JKL5Λ	Jkl5Λ			5	5	5	5	5	5	5
6MNO	MNO6ÑÖØ	mno6ñöø		、	6	6	6	6	6	6	6
7PQRS	PQRS7ΠΘΣ	pqrs7ΠΘΣ			7	7	7	7	7	7	7
8TUV	TUV8ÛÜ	Tuv8üù		→	8	8	8	8	8	8	8
9WXYZ	WXYZ9ΩΞΨ	wxyz9ΩΞΨ		?	9	9	9	9	9	9	9
0.	ABC&abc exchange	ABC&abc exchange	ABC&abc exchange	0(LP)	0	.	0	0	.	0	0
*	Input mode switch (Longpress can switch handwriting/keypad wirting)	Same as Capital	Same as Capital	Same as Capital	Input mode switch	+					positive /minus
#	Input Symbol	Input Symbol	Input symbol	Input symbol	#	wp					decimal

Table 1. Input Contents of Alpha/numeric Keys in Different Editors

3.2.2 Control keypad

The Control Keypad of the Handset includes:

- 11 keys on the top of numeric keys (PickUp, On/Off, Clear/Cancel/Back, Up, Down, Left, Right, Middle, Left softkey, Right softkey, Home)

- Five keys on the side of the Handset (Mode key, Menu key, Shooting key, Focus (in) key, Focus (out) key).

Detailed description of control key:

[On/Off] key:

- If the handset is power off, press this key to power on (need to long press when the handset is charging).
- If the handset is power on, long press this key to power off no matter what state the handset is now.
- If the user is browsing menu or editing text or enter other applications etc, short press this key to close the current application.
- Press this key to end the current call if during a call.
- Press this key to reject a call if there's an incoming call.

[PickUp] key:

- If in idle state, short press this key to enter dailed call list.
- If there's an incoming call, then press this key to accept call.
- Press this key to dial a number.
- If the call is in background, then long press this key to switch back to call. If there's no call, then long press this key to enter dial input screen.

[Up] key & [Down] key:

- In editor, if the input method is pinyin or stroke now, press this key to scroll page to display candidate character.
- Scroll the screen up/down.
- Browse sms text or other long text.
- Browse previous/next file when preview image.
- Focus in/out when in camera
- Select previous/next file when in audio player and video player.

[Left] key & [Right] key:

- In editor, press this key to move cursor left/right.
- If under pinyin or stroke input method, press this key to move to select word or pinyin combination.
- Browse main menu collection.
- Scroll page when browse list.
- Browse previous/next file when preview image.
- play previous/next frame when view mms.

[C] (Cancel/Clear/Back) key:

Also named "Back" key.

During editing text, if the string is not null, then short press [C] key to delete the character on the left side of the cursor, if there is no character on the left side of the cursor, then delete the character on the right side of the cursor. If the string is not null, then long press [C] key will clear all string no matter where the cursor is.

If browse menu, short press [C] key to back to previous menu, if already back to main matrix menu , then short press [C] to back to table, and last short press [C] to back to idle.

[Home] key:

Press this key will back to idle screen no matter in any circumstance, but the current running applications don't close and just switch to background.

There are two side keys on the left side of the phone, they are "Mode" key and "Menu" key; there are three side keys on the right side of the phone, from the top to down they are "Multimedia" key (also named "Shooting" key), "Focus (in)" key (also named right side "up" key) and "Focus (out)" key (also named right side "down" key).

Left side [Mode] key:

- When the phone's cover is open, as long as already entered in DC or DV, press this key can switch in DC/DV/DC Player/DV Player.
- As long as there's an incoming call, then short press this key to silence and long press to reject the incoming call.

Left side [Menu] key:

- When the phone's cover is open, as long as already entered in DC/DV/DC photo player, press this key can open the "Option" menu.
- As long as there's an incoming call, then short press this key to silence and long press to reject the incoming call.

Right side [Multimedia] key:

- If the phone's cover is open, in idle state, long press this key to open DC/DV.
- When the phone's cover is open, as long as already entered in DC or DV, in preview screen, short press this key to shoot photo or begin/stop shoot video.
- If the "Option" menu of DC/DV is open, then short press this key to close the "option" menu.
- During a call, short press this key to start/stop record.
- When there's an incoming call, short press this key to silence, and long press to reject.

Right side [Up]/[Down] key:

- Enter DC, when in preview screen, short pressing realizes zooming in steps and long pressing realizes continuous zooming.
- When there's an incoming call, short press this key to silence, and long press to reject.
- When the phone's cover is open, if already in DC photo Player or DV Player or video player or audio player, short press to select previous or next file.

3.2.3 Key function in idle screen

When the screen is display idle state, the user can:

- Press [PickUp] key to enter dialed call list.

- Press [UP] key to enter call list (Mixed).
- Press [Down] key to enter phonebook name list.
- Press [Left] key to enter audio player.
- Press [Right] key to enter SMS.
- Press [OK] key to enter main menu.
- Press [SKL] key to enter main menu.
- Press [SKR] key to enter running program list. The running program list doesn't include Touch panel adjust/Flight mode/Factory setting/sync/Call.
- Press number key input phone number, and then dial or enter "Option" menu.
- Use hot key. (Please refer to hot key setting)
- If the phone's cover is open, long press right side "Multimedia" key to enter DC/DV.

Key function with no SIM card

- Press [OK] key to enter main menu.
- Press [Left] key to enter audio player.
- Press [SKL] key to enter menu.
- Press [SKR] key to enter running program list.
- Press [PickUp] key to enter 'SOS'.
- If the phone's cover is open, long press right side "Multimedia" key to enter DC/DV.

3.3 Screen

3.3.1 Screen elements

3.3.1.1 Overview


The Handset employs a liquid crystal display (LCD) screen which is 240 (width)×320(height) pixels without hard icon. C8000 can display 262K colors, TFT technology.















Each character displayed in screen is a complete graph block, the size of which depends on the font of the character.

3.3.1.2 Icons

All icons in the Handset are dynamic soft icons. For the detailed icons, please refer to the ID design.

The priority order of icons displayed in the Handset is as shown in the table below with priority decreasing from up to down.

Icon	Icon Name	Description
Dynamic Icons		
	Network (closed network)	The Network icon is composed of two parts. The left part indicates the Handset is registered on the network, and the right part shows signal strength, which is divided into five levels (from no signal to the strongest signal strength). Moreover, before the Network is found, another icon shall be used instead. In PDA mode, Another icon should be used.

	Battery (thick battery)	Indicates the electricity quantity of the battery with five levels in total. This icon scrolls during the process of charging. When the thick battery is used, different icons are displayed.
	Lock/Unlock	When lock is activated: If phone function is activated, the user is asked to input password when he wants to power on. Display the first icon. If phone function is deactivated, then display the second icon. Note: The user can select Lock or Unlock.
	Missed call prompt	Indicates there is at least a piece of missed call in the missed call list.
	SD card	If the user plug in SD card in the phone, then this icon will display. The user can touch this icon to uninstall the SD card.
	Message (including SMS, MMS, QQ info)	Indicates there is at least a piece of unread message. When message memory is full, an icon indicating the memory is full will be displayed. If the memory is full and there is unread message, then only an icon showing the memory full is displayed.
	No sim card	Indicates there's no sim card in the phone
	Active flight mode	Indicates currently the flight mode is active
	International roaming	Displayed only when the Handset is registered out of the home area and have registered with a different network (when traveling in other countries, for example). Otherwise, it is removed.
	Local network	Displayed when the Handset is registered on a local network. Otherwise, it is removed. (the function requires network support)
	GPRS	GPRS comprises two situations (exclusive): GPRS network exists but the user has not attached to the network. Or GPRS network exists and at the same time the user has attached to the network. Only displays this icon when the user has attached to the network. If the user does not attach to the network, do not display this icon.
	Audio player	When mp3 plays, there is a play prompt.
	Alarm clock	Indicates the Alarm Clock is activated.
	Vibration	Indicates the Handset will vibrate on occurrence of incoming call, new events or alarm clock event.
	Call Forwarding	Indicates call forwarding function has been activated.



	Silence	Indicates silence function has already been activated.
	WAP Alert	Indicates WAP alert info comes.

Table 2 Icons Description

For the display position of the icons, please refer to OSG.

The Vibration icon is only effect for incoming call, and don't effect for sms/mms/alarm clock/etc. If the user press “#” key to on/off vibration is still only effect for incoming call.

For lock/unlock/SD Card/message/miss call icons, the user can use touch pen to click this icon to active related function. If the user use touch pen to click SD card icon, then user can uninstall the SD card, if the user user touch pen to click lock/unlock icon, then enter guard setting menu, if the user use touch pen to click message icon, then enter inbox open message list, if the user click miss call icon, then open missed call list.

3.4 C8000 indicator light

Under different circumstance, C8000 indicator light flashing principle is as follows:

- Power on/off moment: the light color is red.
- Working: the light color is blue and flash every 3 seconds.
- charging: no matter the phone is power on or power off, the light is purple and always shine till the charging is end. After charging, the light resumes original state. If during charging, there is an incoming call, then the light is same with incoming call.
- Incoming call: the light color display three color: blue-red- purple, and according to this order to flash every 500 ms.
- Low battery alert: the light color is red, and flash slowly.

3.5 C8000 Earphone operation

The user can accept/reject call by button on the earphone. There are four circs:

1. The user input number on the idle

After the user input numbers, if the user short press the button on the earphone, then call out the number, if the user long press the button, then back to idle.

2. During the outgoing

When the user dialing out a call, during outgoing, short press the button has no response, while long press the button to end outgoing.

3. During a call

Short press the button has no response, while long press the button to end the call.

4. During incoming(include second call waiting)

If there's an incoming call, then short press the button to accept the call, while long press the button to reject the call.

4 BASIC DESIGN

4.1 Basic principle

If Scratch pad editor is used during the call, then contents of Scratch-pad editor will be displayed at first after end the call.

Contents of a feedback screen will stay in the screen until a preset time (20 seconds) set by the timer or until another event occurs. Timing can begin again depending on keystrokes.

When sending a message or making a call, if a number or a name has been selected from the Phonebook, then press [Pick Up] will begin to launch the call. However, press the key has no effect in Phonebook editor or message editor.

When displaying a title, if the length of the title exceeds the width of the screen, then the exceeding part will not be displayed. If the title is a number, then “...” will be displayed in the beginning of the number.

Once the users close the phone's cover, all the running applications will be killed, besides audio player.

If the vibrator is active, then vibrator should deactivated while plug charger.

The files under video player or audio player or image browser or notepad are all sorted by created time.

When the user input password (include PIN code, call barring password, guard setting password, etc), if the user input number of character is less than password character number, then there's no response when the user press “OK”. If the user want to input number of character is more then the password charater number, then the phone will forbid it.

4.2 New event

4.2.1 Brief description

When new events occur, they will be put into new events stack, all new event priority is higher than old event.

The user can press [C] key or right softkey to exit from the broadcasting message or new event screen environment.

4.2.2 New message

In case of new messages (SMS, MMS), press “Read” in idle state to enter the inbox list. The user also can use the menu to enter Messages/Inbox. Each unread message is marked with an icon.

4.2.4 Calendar event prompt

If there's a new calendar even arrived, it will display title on the prompt dialog. If the title is too long, then display “...” at the end. Without SIM card, these events (Organizer prompts) are also visible.

4.2.5 Missed call

If there's a missed call, then the screen will display “missed call” prompt dialog, the user can press “OK” key or left softkey to read list . After the user press “ignore” or right softkey, the Handset displays the missed call icon on idle till the user enter call list.

4.2.6 Alarm clock

When the Handset is off, alarm clock can awake the Handset, display alarm animation and give out alarm clock ringer. When alarm clock ringer time expires or any key is pressed during the alarm ringer, the alarm clock will stop and the Handset will automatically turn off.

In idle state, alarm clock is displayed and alarm clock ringer is given out. When alarm clock ringer time expires or any key is pressed during the alarm ringer, the alarm clock will stop and the Handset will automatically return to idle state.

In the menu: the alarm clock animation is displayed, and alarm clock ringer is sent out. When alarm clock ringer time expires or any key is pressed, the Handset will stop the alarm clock and return to the original state.

4.2.7 Count-down timer

Similarly to alarm clock, however, it is set to prompt the user after the set time passed, and there is no repeated option. Other operations are the same as alarm clock.

4.3 Menu

In idle state, press “OK” key or left softkey enter main menu. On main menu, the user can use touch pen to click header of the main menu to switch to other menu collections, or press “left”/ “right” key to switch in six menu collections.

Enter main menu, there are two display styles for each menu collection, one is nine grids, the other is list. The user can press left softkey to switch in this two styles.

When the user select a menu table, press “OK” key or “down” key can select the first menu under the current collection. If the users select the top layer menu of any collection, press “Up” key, the focus back to menu collection.

Use direction key to select a menu and press “OK” key to enter this menu. If the focus on a menu now, then use touch pen click this menu can enter this menu too. But if the focus doesn't on this menu, then use touch pen first click this menu to select it, and second click this menu to enter. This rule is effective for menu list or other list too, but the rule is not effective for option menu and the list with checkbox or the menu with a popup sub menu.

After enter any menu, if exit from this menu, then the focus still stay on that menu icon.

If the time exceed 1 second when enter a menu, it will display an animation.

4.4 SD Card

The phone support SD card. If the user insert SD card in the phone, then the SD card icon will display on the top line of screen. If the user want to uninstall SD card, he should first click this icon. If the user click this icon, then popup a dialog to ask the user “OK to uninstall SD card? ”, if the user select “OK” then uninstall SD card, and prompt the user “Now you can take SD card out from the slot safely”. If the user take SD card out without uninstall it first, then after the user take it out, popup a dialog to prompt the user “Unsafe to plug out may cause data loss.”

If the phone can't support the inserted card, or can't identify the inserted card, then prompt the user “Unknow SD card plug in.”

5 SERVICE INTRODUCTION

5.1 Power on/off

5.1.1 Power on

To switch on the Handset, press [On/Off] key. Before initialization, the Handset displays power on screen and gives out the power on tone.

If the phone is protected from password(On), will ask the user to input. Only correct input can go through.

In case of no SIM card or other errors, the Handset will enter “Usage Restricted” state. Under this state, the user only can switch off the Handset, dial SOS numbers, or press “OK” to browse some menus, and can’t see all menu options that require SIM card information, such as Message list.

When the SIM card is not available (for example, IMEI error), the Handset will also enter the “Usage Restricted” state.

If PIN code is activated or the SIM card is locked, the Handset will enter safe mode. And the user will be required to input PIN code.

5.1.2 Switching on Handset by Alarm clock function

If the Handset is off when alarm clock time arrives, the Handset will automatically switch on, activate alarm clock function and display alarm clock screen. After alarm clock prompt is over, or press any key during the process of alarm clock prompt, alarm clock function will be closed, and then the Handset will automatically switch off. During this process, no registry or network connection is required.

In C8000, count-down timer also can switch on the Handset.

5.1.3 Power off

When the Handset is on, long press [On/Off] key can turn off the Handset. The Handset displays switching off screen and gives out a switching off prompt sound. After that: If auto switching on has been activated, then “Auto power on has been activated, please pay attention to avoid automatically switching on the Handset in improper occasions ” will be displayed after the user long press red key. Then the Handset is turned off.

If the Charger is plugged in, then battery charges will be displayed when Handset off screen.

During the process of switching off the Handset, long press [On/Off] key is of no effect.

In case of insufficient battery electricity, the Handset will give off prompt sound to remind the user. If electricity quantity of the battery is too low, the Handset will automatically turn off.

5.2 Call management

5.2.1 General principle

During a call, short press right side “Multimedia” key can start/end record and there’s a

recording icon display on the screen. No matter handfree or unhandfree, the user can record the current call. The max recording time is 99 minutes. If the call is end, the recorder auto stop, and the recording file saved automatically, the saved file name is "Call_DateTime", for example "Call_200501101520".

If the incoming call is a "data call", then the screen will prompt "data call", and there's only a "Reject" softkey, the user can't accept this type call.

When there's an incoming call or dial a number or during a call, if the number or name is too long to display on the screen, then add "..." after name or number.

During the phone is connecting with wap by CSD mode, if the user call out a number, then popup a dialog to prompt the user "Can't call out, here a CSD data connection now". If there's an incoming call and the user accept this call, then disconnect the CSD data connection, and back to idle screen after end the call. If the user reject this call, then continue CSD data connection.

If the user dialed number is an emergency call, then the name field display "SOS".

If the user accept a call when open the flip, if he plug the earphone and close the flip, the call should not be end.

Input numbers under idle state, if the user press "OK" key then open the call option menu include "IP Dial", "Send SMS", "save", "Dial".

If the user dial a number or there's an incoming call, then the phone should matching all number filed of each namecard, and should not only matching default number type of each namecard.

5.2.2 Call information

During a call, the name or number of the call party and call duration time should display on the screen. If the user end the call, and the total time should display too.

5.2.3 Scratchpad

During a call, once press any of [0]~[9] key, [#] key and [*] key, the scratchpad will be active. Then the Handset will open the Scratchpad editor, where input numbers and symbols can be added.

Press "Back", or press [C] key if the input string is empty, the Handset will return to in call screen. If the user doesn't press any key, the Handset will also return to in call screen after 20 seconds and save the Scratchpad content at the same time.

Scratchpad can accommodate up to 160 characters.

In the Scratchpad screen, press [On/Off] key can end all call; press [PickUp] key can automatically hold the original call and dial the number displayed in Scratchpad.

On occurrence of the following, Scratchpad will be cleared:

- a) A new call arrives during a call;
- b) A new call is established with a third party during a call;
- c) The call ends.

Press "Option" in Scratchpad to enter options list, and then the user can select "IP dial", "Send SMS", "Save" or "Dial" to the number.

5.2.4 Making calls

Input numbers under idle state, then press [PickUp], or press "OK"/left soft key to enter

dialing preparation option list to select “dialing”, “IP dialing”, and then the Handset enters dialing state. Another way, input numbers under idle state, if the name is display in the matching list, press up/down key to select and press [PickUp] key to dial. In case of IP dialing, the system will add an IP special service number before the number input by the user, and then send the number to the network.

The user also can select a record from the Phonebook or Call list, and press [PickUp] key or use dialing option to make a call.

If the called party answers, then the screen will display detailed call information, including the name (or number) of the called party and the call duration; press the volume key on the side of the Handset can adjust the receiver volume.

Press [On/Off] key screen can end the call, and the Handset will return to Idle state.

5.2.4.1 Dialing an international long distance call

To make an international long distance call, input an international head code (00 or “+”), plus the country code and the local telephone number of the called party.

To enter “+”, long press [*] key.

5.2.4.2 Emergency call

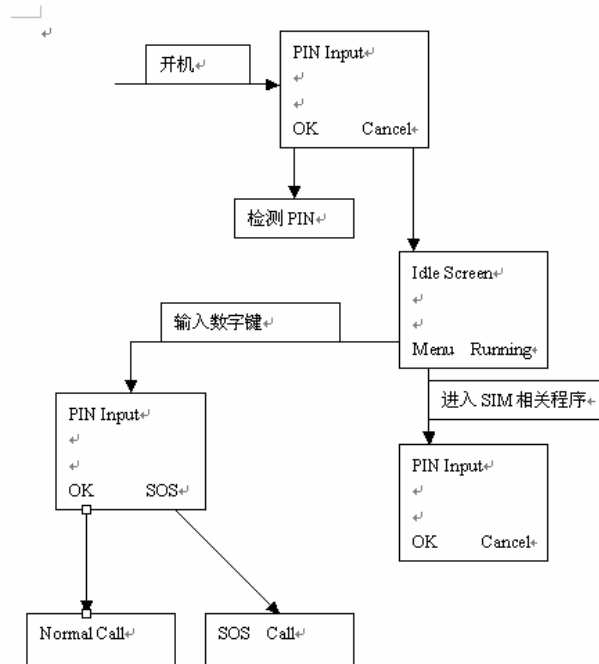
Whether the Handset is registered on a network or not, the user can dial emergency calls (“112” or specific emergency calls of the country the user is in).

When insert SIM card, and the phone register network successfully, In idle screen, input an emergency number and press [PickUp], the Handset will establish a process for the emergency call.

If the network is not register, then the emergency calls are not saved in Call list.

When there’s no SIM card insert in phone, or register network unsuccessfully, once the user press a number key, then auto enter “SOS” screen, the user can input number up to 40 bytes. Press left softkey to call, and press right softkey to back.

When the user insert SIM card, but the SIM card is locked, then the user should input password. The user press number key to input password, and press left softkey “OK” to confirm. If the user wants to send emergency all, he should press right softkey “Cancel” to exit PIN input box and back to idle. On idle state, press number key, then popup PIN input box, press right softkey “SOS” to enter the “SOS call” screen, the user can input number up to 40 bytes. And then press [PickUp] key or softkey can directly make a call, and display the dialing animation.



5.2.4.3 IP call

The user can choose to make IP dialing. After the user selects the “IP call” option, the Handset will automatically add the preset IP special service number before the telephone number (if the former several digits are the IP special number, the Handset can recognize it, avoiding to add repeated numbers), and make IP dialing.

The premise of IP dialing is to input an IP special service number into the IP special service number screen in Phonebook menu. The input principle is: the IP special service number must be consistent with the IP special service number provided by the telecom operator who has provided the SIM card (for example, if the Handset uses a SIM card number provided by China Telecom, then the IP special service number may be 17951 (currently); for a SIM card number provided by China Unicom, the IP special service number may be 17911 (currently). The user also can input an IP number provided by a telecom operator who has business relation with the registered operator). Thus, once an IP number is input, then the user will be able to select “IP call” to use this function. If the user has not input an IP special service number before, when he selects “IP call”, the system will open a number editor and require the user to input an IP number

An exception: If an input or selected telephone number equals to or is less than four digits, then even after selecting “IP call”, the IP special number will never be automatically added before the telephone number, and the original number will be used to launch the call.

Once a call is established, its process is the same with “Outgoing calls”. But IP dialing animation is different from common dialing animation.

5.2.5 Auto redial

For some network calling management failures, the Handset provides auto-redial function (it is necessary for the user to activate the Auto redial function in Phone settings.)

Before redialing, it will ask user whether redial. Press “OK” or left softkey, then the Handset will begin automatic redialing. If the user press right softkey/[C] key/ [Home]key/ [On/Off] key, then don’t auto redial and return to idle state. If there’s an incoming call or the user closer the flip, the auto redial is end too.

If a new call arrives during the process of redialing, then redialing will automatically ends. In the interval of two redialing, the Handset will display redialing waiting screen.

If the user close the flip during auto redial, then end auto redial(If the earphone not plug).

The number of auto redialing will not be added into the Call list.

5.2.6 First incoming call

In case of an incoming call, the Handset will

- Give incoming call prompts depending on the current setting (ringer, volume, vibration).
- Switch the screen to the incoming call animation interface. Incoming calls have the highest priority, thus can interrupt the current screen of any type.

At that time, the user can:

- Press [PickUp] key or “Accept” softkey to answer the incoming call when the Handset cover is not closed and enter “In call screen”. After the call ends, the Handset will return to idle state. If “Any key answer” function is activated, then press any key (except [On/Off]/ [SKR]/ [C]/ [Home] / [UP]/ [Down]/ [Left]/ [Right] key) can answer the call. If “Auto answer” is activated, then the Handset will automatically answer the call 10 seconds after it arrives. In this case, the incoming call will be added into call list. When the Handset cover is closed, plug in the headset (if it has not been plugged in) or open the cover (if uncover function is activated) to answer the incoming call.
- Press the [On/Off] key or the “Reject” softkey to reject the call. The Handset will return to the previous screen. In this case, the incoming call will be added into call list.
- Reject by touch “busy tone” button on screen.
- Accept by touch “hand free” button on screen.

5.2.7 Single call

During a single call, the user can perform the following operations

In the call option menu,

- Hold
- Namelist
- Send SMS
- Scratch pad
- Dial new number
- Hand free / Cancel hand free

- Mute/Unmute
- Record/Stop record
- End all calls

The user also can adjust volume by left side up/down key

To end the current call, also can press [On/Off].

During the call, the user can record the conversation. The coding format is only AMR.

5.2.8 Call waiting (second incoming call)

If a new incoming call arrives when the Handset is in call, the Handset will display call waiting screen and give out four short waiting prompt sounds. The user can

- Press [On/Off] key or touch [Reject] button on screen to reject the second incoming call, and the screen will return to single call screen.
- Press [PickUp] key or touch [Accept] button on screen, then the system will automatically hold the first incoming call and establish talking with the second calling party.
- Touch [Waiting] button on screen, then the second incoming call continue waiting.
- The user doesn't make any operation and continue to talk with the first calling party, then the Handset will return to normal in call screen after incoming call prompt ends after a while. The new incoming call will be saved in call list with "missed call" icon.
- Press numeric keys or [*] and [#], then the Handset will open the scratchpad editor under call waiting state.

5.2.9 Processing multi-party call

Under this state, the Handset can manage three types of calls at the same time:

- The current active call (including the counterpart of the call)
- A call in holding
- A call in waiting.

When there are calls of the three types at the same time, the user can

- Press [Up]/[Down] key on the side of the Handset to adjust receiver volume.
- Reject the third calling party and continue with the current active call and the call in holding.
- Press [PickUp] key can activate the waiting call and hold the multi-party call.

When there are a holding call and an active call at the same time, the user can:

- Switch calling state between the holding call and the active call (press [PickUp] can make quick switching)
- Press right softkey "Reject" to end the current call
- Press red key to end call.
- Record the active call
- Mute/unmute
- Hand free

5.2.10 Multi-party call (telephone conference)

When the Handset is in call, and there is a call in waiting, the user can answer the waiting call and hold the current active call, then select “Join”, thus combining the two incoming calls with the Handset into a telephone conference. The Handset is the manager of the conference. During the conference, the user can select “Split” in the multi-party call menu, so as to separate a member and separately talk with him, or select “End call” to end talking with a member.

During the conference, the user can dial the telephone number of a person who is not in the conference, or accept a new waiting incoming call. The system will automatically hold the multi-party call. After the call to the new member is activated, select “Join” to add the new member into the conference.

Doing so, the Handset can add new members in succession into a telephone conference. Up to 5 members can enter a telephone conference, and in addition, there may be a call in waiting. During a telephone conference, the screen displays “multi-party call”.

When in multi-party call, if one of phones held itself, then the other phones’ screen will display “Call has been put on hold”, if that call retrieved itself, then the other phones’ screen will display “Call has been retrieved”.

5.2.11 End a call

When ending a call in a normal way (the counterpart or the user hangs up the call), the Handset will turn on the backlight, and display “Call end”, the name (or the number) of the counterpart and call duration depending on different settings. And then return to idle (or event) screen.

If a call is terminated due to abnormal causes, then the Handset will display error information before to display normal ending screen, and give out invalid sound in low volume and turn on the backlight at the same time.

If the Handset is processing a two-party call (including telephone conference), then the system will return to the idle screen after the call ends. Here, if there is a second call in holding, then the holding call screen will be displayed. Press [On/Off] key or select “End call” in the call holding menu, then the system will end the holding call and return to Idle state.

5.2.12 Mute/Unmute

During a call, the user can select silence or cancel silence, thus the microphone will have no effect. When a call is switched from a party to the other party, silence will be cancelled.

5.2.13 Adjust receiver/headset volume

During an active call, call holding or waiting, if the Handset has not entered the call menu list, then press the volume key on the left-side of the Handset can increase or reduce the volume of a call, and a volume screen is displayed.

After volume setting is finished, the volume is refreshed, and it will remain as the volume of the next call.

5.2.14 Record during the call

The user can press a dedicated key to start recording during the call (single call, or multiparty call). AMR coding will be used. And can also stop it.

5.2.15 Hand free mode during the call

The user can press a dedicated key to enter hand free mode during the call (single call, or multiparty call). And can also stop it.

5.3 Public Land Mobile Network (PLMN) management

5.3.1 Public Land Mobile Network

In idle state, the Handset displays the network name. If the Handset can't identify the network name, then it displays country code and network code.

5.3.2 PLMN list

The Handset manages three public land mobile network lists, separately available PLMN list, prohibited PLMN list and Preferential PLMN list. If the Handset is rejected by a PLMN when attempting to register on, it will automatically add the PLMN into prohibited PLMN list.

5.3.3 Selection of PLMN

5.3.3.1 Automatic

In automatic mode, if the Handset has just been switched on or has lost the current network, it can automatically select PLMN again. The Handset will attempt to register on the home PLMN, if such attempt fails, then it will try to register on other networks listed in the preferential PLMN list. If it fails again, the Handset will randomly register a network listed in the available PLMN list. If it still fails, then the Handset will try to register on other provided networks (receiving signal strength shall be larger than -85dBm). If it fails, the Handset will randomly try registry in the order of descending signal strength. During registry, if the user presses any key, "Register" prompt will disappear. Any operation before registry succeeds will make the Handset give out "Fail" prompt. After registry succeeds, the Handset will display the antenna icon and give out registry success prompt sound.

5.3.3.2 Manual

If the user selects to manually register network, then the Handset will search for all available networks. During this period, the screen will display network searching animation and then display all searched networks, which are arranged in the following order:

- Home PLMN
- Preferential PLMN
- Other PLMN networks with signal strength bigger than -85dBm , arranged at random
- Other available PLMN arranged in the order of descending signal strength

If the user selects one of the above and press "OK", the Handset will try to register on the selected network. If it succeeds, the Handset will be solely registered on this network. This status will be kept until the Handset is switched off. Once switched off, the Handset will switch to the automatic selection mode. If registry fails, the Handset will also switch to automatic selection mode.

5.4 Handset functions

5.4.1 Phonebook

The max storage capacity of handset phonebook is 2000 items.

When there's an incoming call, the matching principle between incoming call number and phone book is as follows:

China Mainland version

- both ≤ 11 digits, only the two numbers are the same length and same number, we think they are the same number
- one < 11 digits and one > 11 digits, they are different
- both > 11 digits or one > 11 one $= 11$, compare the last 11, at the same time, it support floating 5 digits (like birder match algorithm description)
- if the number which saved in phonebook include ext., and the user dial out a number which include ext. too, then first compare the part before "w" of two numbers, if the result is consistent, then compare the part behind "w" of two numbers, if the result is consistent too, then this two number is same, otherwise this two number doesn't matching.
- If the number which saved in phonebook include ext., and the user dial out a number which doesn't include ext., then this two number doesn't matching.

test cases:

rule1:

1. dial number **123456789** record number in phonebook is **123456789**, solution is **match**.

2. dial number **123456789** record number in phonebook is **223456789**, solution is **no match**.

rule2:

1. dial number **13912345678** record number in phonebook is **3912345678**, solution is **no match**.

rule3:

1. dial number **13912345678** record number in phonebook is **13912345678**, solution is **match**.

2 dial number **008613912345678** record number in phonebook is **13912345678**, solution is **match**.

3. dial number **12345613912345678** record number in phonebook is **13912345678**, solution is **no match**.

If the user want to dial out a number, when he input number on screen, the matching principle between phonebook and input number is as follows:

Only the user input numbers exceed three, begin to match. As long as the phonebook records include the numbers that the user input, then it will display. For example, if the user input "623", then the all phonebook records which include "623" (for example 623, 8623775, 6238123, 82847623 etc) will display on the screen.

PB includes two types:

SIM Card PB (its capacity depends on SIM) and Handset PB. There's some difference in content and operation between them, but they are sorted together in the mixed list.

- SIM Card PB

Each record in the SIM Card includes a name and a number. The saved record must have a name and a number.

- Handset PB (Smart PB)

Each record in the Smart Phonebook is called a “name card” which may include the following information:

- Name (up to 40 bytes for handset phonebook name, up to 14 bytes for SIM card phonebook name)

- Number (each name card can have up to 5 numbers, and the type of each number is fixed, in other word, each type just only has one number. Each number cannot exceed 40 bytes and only can be “0--9”, “*”, “#”, “w” and “p”)

- ◆ Default Number Type (If the records in the SIM Card are copied or moved to the Handset, the number will be put in this field)

- ◆ Phone Number

- ◆ Office Number

- ◆ Family Number

- ◆ Fax Number

- E-mail (Up to 100 bytes)

- Post Address (up to 128 bytes)

- Post Code (up to 10 bytes)

- Company (up to 128 bytes)

- Note (up to 1024 byte)

Each name card (when created by the user) should include a name (can not be empty) and at least a piece of other information.

In the Handset PB, the user can group the name cards into “Default”, “Family”, “Friend”, “Colleague”, “Society” or “Private” (the name and corresponding group icon can be changed). Different group can have different ringer.

If copy a record from other phone, and this record just only has name not has number, then our phone can display/search/modify it. But if the user modify this record, he must input other info besides name.

Add new

When the user add a new number, on the “add new” screen, the user can press [up]/[down] key to move to others input box and edit area. If the user want to add a big head icon for the new number, he can click the pictuer box, then it will open the picture list, the use can use direction key to select a picture and press “OK” key to adopt it, if the user select a more bigger picture, the phone should auto zoom. After finished all input, the user can press “Finish” left soft key to save it or press “Back” key to cancel.

The record without name can’t be save.

For each record in SIM card or handset, the name field can input any character、 number、 Chinese/English word. The number field only can input numbers and “*”“#”“+”“w”“p”, can't input Chinese word or other English characters. “w” only can input one time, and the “p” must display behind “w”. “p” can be input many time. The post code field only can input numbers. The other fields can input any character、 number、 Chinese/English word.

When in a call, if the opposite party number is in PB and associated with a big head icon, then the big head icon will be displayed with the name and number as indication instead of call icon.

Capacity

Enter this menu, the user will see the total number on the SIM card and handset, and he will see how many has been used on the SIM card and handset.

Sort the Mixed List

Upon entering the PB, select “Enter” to enter the Mixed List of the SIM Card PB and Handset PB. The list only display the name of each record.

Mixed List supports Keystroke Quick Positioning

The user can press the initial letter of the name (initial Pinyin letter for Chinese records) to quick locate the record with this initial letter, and then press [Up]/[Down] key to browse.

Take key [2] for example, valid “Pinyin” defined to key [2] include only “A”, “B” and “C”.

Press key [2] in the PB list, and then:

1. Select “A” to see all Pinyin with the initial letter as “A”: “a”, “ai”, “an”, “ang” and “ao”.
2. Search for Chinese records with initial Pinyin “a” in PB. Move to the first matching Chinese record with initial Pinyin “a” if there is any.
3. If there is no Chinese name with initial Pinyin “a” in PB, then repeat step 2 to search for Chinese record with initial Pinyin “ai”, “an”, “ang” and “ao”. Move to the first matching record if there is any.
4. If there are no matching records, step 1---3 will be repeated to search for letter “B” and “C”. If found, then move to the first matching record; otherwise it indicates no matching Chinese records can be found by pressing key [2].
5. Start searching for English records. Search for the name with an initial letter “A” and move to the first matching record if there is any matching record. Otherwise, search names with initial letter “B”, “C” and “2”. The rest follows the same procedure.
6. If no matching records are found by all GSM letters defined to [2] key, the cursor will stay unchanged.

Search

C8000 supports following Search methods:

- By surname

Classify the initials of all PB records (initial letter for English name and initial Pinyin for Chinese name, “L” for “Li”(李) for example). The records with same initials are put in one group. If a letter is none of the initial in Phonebook, it will not be listed. All letters are listed in alphabetical order. All surnames with the same initial will be listed to the right of the letter (there will be another line if one line is not enough). All surnames in one group are listed in Pinyin order. When the user selects a surname, all records with this surname will be listed.

- By keyword

The user inputs the keyword (including figures and characters) to search for all matching records in Phonebook.

- By initials

The user inputs initials of the key word to find the name. For example, input “LB” for “Li Bai”(李白) and “TB” for “Tom Bruce”. The number of name initial letter is up to 20 bytes.

Note: For English character, it is insensitive to capitalization. For example, “ABC” is equal to “abc”.

PB list

PB list displays name list with the icon of the record at the right. It's SIM card icons for records from the SIM card and the default number type for the records from the Handset. The user can select “Enter” menu under the phonebook to enter the pb list.

The user can add new records.

The user can also perform the following operations through the Option Menu:

- Add new: the user can add a new phone number.
- Modify: modify the selected record
- Delete: delete the selected record
- IP dial: the user is asked to input IP number first if it is not input before IP dial.

First.

- Send sms: sends short message to the selected record.
- Dial: dial a number. First, dial the default type number, if there's no default type number, then dial default field number, if there's no default field number, then dial phone number, office, family, fax number by orderly.
- Copy to phone (if the record is in the SIM Card)

Copy the selected SIM Card record to the name card in the Handset PB. The phone number in the SIM Card record will be put to default phone number field of the name cards (automatically set as the default field).

- Copy to SIM card ((if the record is in the phone)

The selected name card in the Handset PB can have up to 5 phone numbers. This operation will only copy all the phone numbers to the SIM Card with each phone number occupying one record in SIM Card. Name in the record all comes from the name field of the name card.

- Move to phone (if the record is in the SIM Card)
- Move to SIM card (if the record is in the phone)

It is similar to “Copy”. Only that the source record will be deleted after copy.

- Send name card: The user can send name card of the selected record by SMS in text formatting (*Note: If the record is too long, part of it may fail to be sent out*).

- Speed dial: set hotkeys to the default number of the selected record.

- Copy and edit: copy one record as a new record and the user can edit it. The new record will add in the memory which the user select. The user can add similar records at his convenience.

It is similar to “Copy”. Only that the source record will be deleted after copy.

For a selected record in the Handset PB, if it includes non-phone number fields (such as e-mail, remarks, post address and post code field, etc.), then should popup a dilaog to prompt user “Some non-number fileds will be lost.”

Detailed Info

When the user selects one record from the PB List and press [OK] key, he will see the detailed info of the record and modify the items in the record. Similarly, operations can be done through the Option Menu.

- Operation of SIM Card Record

Modify, Delete contact, IP dial, Send SMS, Dial, Copy to phone, Move to phone ,Send name card, Speed dial,Cancel big head icon(if there is an icon related with the record),.

- Operation of Handset Record

Modify, Delete contact, IP dial, Send SMS, Dial, Copy to SIM Card, Move to SIM Card, Speed dial,Send name card, Cancel big head icon(if there is an icon related with the record),.

On detailed info screen, the user can move focus on each field of the namecard, if the user move focus on number-fields, then the user can press green key or select “Ip dial/dial” in option to dial the number he selected, if the user move focus on non-number field, then the user can press green key or select “Ip dial/dial” in option to dial the default type number, if there’s no default type number, then dial default field number, if there’s no default field number, then dial phone number, office, family, fax number by orderly.

Delete All

- SIM card

Delete all records that saved on the SIM card. Before delete, it should prompt user.

- Phone

Delete all records that saved on the phone. Before delete, it should prompt user.

Copy All

- SIM to Phone

The records can be copied to the phone one by one to the last until the phone is full.

The name and number of a SIM Card record are copied to the Handset PB with the SIM Card number defined as the default phone number (default field).

- Phone to SIM

The records can be copied to the SIM Card one by one to the last until the SIM Card is full, or the SIM Card is full.

A name card in the Handset PB can have up to 5 phone numbers. This operation will copy all the phone numbers to the SIM Card, and each phone number occupies one record in SIM Card. Name in the record all comes from the name field of the name card.

In addition, if the Handset PB record not has phone number field, then skip it and copy the next one.

Move All

It is similar to the above “Copy All”, only that the source records will be deleted after copy.

Before this operation, should popup a dialog to prompt user “Some non-number fields will be lost”.

Group Settings

For six groups, the user can change the name, set the picture or ringer type of each group.

New Entry Storage

New numbers will be added into the corresponding PB as the user selects (SIM Card or Handset).

Own Info

The user can add, display, modify, send and clear the phone owner’s info.

- Modify Own Info

The user can input different fields here (the details of the field is the same with

a Handset PB recor, but the own info don't include group).

- **Delete Own Info**

The user can clear own info, that is, to empty all the fields of own info.

- **Send Own Info**

The user can send own info by SMS in text formatting (Note: If the own info is too long, part of it may fail to be sent out).

Select "Send own info", then transfer SMS editor. The own info will display on the SMS editor, the user can send it as SMS.

- **Display Own Info**

Display all fields of the own info and the user can press [Up]/[Down] key to view them.

The own info should save in phone, not save in sim card. If the user don't insert sim card, the phone's own info don't lose. If the user change sim card, the phone's own info don't lose and still can display/modify/delete/add/send.

IP service number

The user can save IP service numbers here. If the user change SIM card, then this number don't reserve

5.4.2 Call list

5.4.2.1 All Call list

Overview

There are three types of call: missed calls, received calls and dialed numbers, these three types calls are all sorted together in the mixed call list.

In the call list, N call records can be stored. For each record, up to M latest time and date can be stored. The order in the number list is based on the latest time of each record.

C8000 sets no limitation to the value of M and N, that is, unlimited. However, considering flash capacity, a value should be provided to control the total call history number in call list. The total call history record in call list should be 100 and each record can store 8 latest time. The earliest record will be deleted automatically if records overflow.

After the user dials a number, information of the call will be automatically added into the call list with "dialed numbers" icon despite the called party answers or rejects the call.

If the Handset receives a call and the user answers it, than information related to the call will be added into the call list with "Received calls" icon.

If the Handset receives a call but the user doesn't answer the call or rejects the call, then information related to the call will be added into the call list with "Missed calls" icon, and the screen display "missed call" prompt.

Call list does not include auto redial numbers.

View and deal with records in Call list

The user enters the Call list. The user can press “Option” softkey to delete records in the call list. In “Option” softkey, there are five menu items: “Delete selected”, “Delete dailed”, “Delete answered”, “Delete missed”, “Delete all”.

The user can select any record in the list , press green key to call the record, and press “OK” key to view detailed information (the time list of the number). On detailed info screen, the user can view detailed information of other records by pressing Left/Right key and view more time record about this number by pressing Up/Down key.

When detailed information of a record is displayed, press “Option” then the user can select the following functions:

- IP dial
- Send sms
- Delete
- Save (if the number is not in Phonebook)
- Dial

5.4.2.2 Call meters

Overview

This function group allows the user to set or display the latest call duration, the latest GPRS service, accumulative calls duration . The timer can deal with all calls. Call duration is displayed in the format of “hh:mm:ss”.

When the Handset is switched off, it still keeps all information of the previous call.

- Last call: displays the duration of the latest communication call .
- Last GPRS call: displays the bytes that the latest GPRS service transmits.
- Call timer: display ccumulative call duration, it has 3 sub menus:
 - Dialed call: displays the total duration of all outgoing calls.
 - Incoming call: displays the total duration of all incoming calls.
 - Reset: clear the accumulative call time to zero. Before clear, should prompt user “ Are you sure to reset?”

5.4.3 Call Forward

This function just forward call , and don’t forward data and fax. Only unconditional forward

can set forward icon on idle, and only inquire unconditional forward status when power on.

Totally, there are four types of call forward:

- Unconditional
After unconditional divert is activated, all incoming calls will be diverted to a pre-designated number. The Handset will give out no prompt information.
- When busy
After Divert when busy is activated, an incoming call will be diverted to a preset number if the user is busy or rejects the call.
- When no reply
After Divert when no reply, an incoming call will be diverted to a preset number if the user doesn't answer the call.
- Unreachable
After Divert when unable to reach is activated, an incoming call will be diverted to a preset number if the network can't contact the user.

The user can do the following after he selects any type of call divert:

- Enable
Select this menu, then press the right key, the user can select a number to define the destination number of call divert service. This number can be a new input number or from PB, or a voice mail number. Voice mail number is automatically saved in the Handset. If there is no voice mail number, the Handset will prompt "Number is empty" when the user activates call divert and selects "Voice mail". The user can input voice mail number here.
- Disable
Cancel selected call divert.
- Status
Inquire the status of selected call divert. "Network connecting" displays during inquiring. The status will be displayed after inquiring.

In addition, the user can Cancel all or Inquire all:

- Disable all
Cancel all call divert at one time.
- Status
Inquire status of all call divert in one operation.

5.4.4 Call settings

The user can set the following items in Call settings menu. The user can press OK key to activate or deactivate for the first five items and results will be displayed on the right of the menu

bar.

Minute reminder

The user can select to set minute prompt sound during a call, then the Handset will give out prompts at the 50th second of each minute after a call begins.

Any key answer

Any key can answer the incoming call except [On/Off]/ [SKR]/ [C]/ [Home] / [Up] / [Down] / [Left] / [Right] / [OK]key when this function is activated.

Auto redial

The user can choose to activate or deactivate the auto redial function.

When the auto redial function is activated, if the call can not be connected, the Handset will auto redial in a certain time interval. There will be a prompt for every redialing. The auto redialing can be canceled by pressing the key [C].

During the process of redialing, if the user uses the Handset, then redialing will exit automatically.

Auto answer

The user can choose whether to activate the “auto answer” function, that is, the Handset will answer the call after a short time(10 seconds) ringer when there is an incoming call.

If the phone's cover is close and the earphone not plug in the phone, then don't auto answer even though the “auto answer” function is active. If earphone was plug in the phone, then can auto answer.

Active flip

The user can answer the call after open the cover when this function is activated.

Call waiting (needs network support)

- GSM call:

If a new call arrives during a call, the Handset will display call waiting screen and let the user choose whether to answer the second call when this function is activated. If the function is deactivated, there will be no prompt when a new call arrives and the calling party will hear the busy tone. The user can select this menu and then press the right key to activate, deactivate or inquire the state.

If the user active or deactive GSM call waiting, it should affect three kinds of call at same time, include voice call, data call and fax call. If the user inquire the state of GSM call waiting, then it should return three kinds of state, for example:

Voice call active/deactive

Data call active/deactive

Fax call active/deactive

- **GPRS call:**

If another voice incoming call arrives when processing a GPRS session, whether or not to prompt the user is determined by this option. The user can select this menu and then press the right key to activate or deactivate this option.

Send ID (need network support)

The user can choose whether to send ID(phone number) to the one who is called by this option. There are four sub menus in this menu:on, off, default and status.

If the user select “On” or “Off”, but the network can’t accept this setting, then need to prompt the users “The network doesn’t support!”.

5.4.5 Security settings

- **PIN code**

Some settings of the Handset and SIM card are protected by passwords.

- PIN code protects all services related with network except emergency calls

If the SIM card has not activate PIN function, then the user will not be required to enter PIN when switching on the Handset. The user can activate the function by using the menu.

- **Call barring**

The additional service of call barring is set in the Security settings menu. This additional service allows the user to control the type of calls. For each type, the user can activate, deactivate or inquire the state.

Activating and deactivating call barring service requires the call barring code, which will be sent to the network for verification.

Five type calls will be bar:

Roaming calls

All incoming calls are barred from being answered when the user is in roaming.

All incoming calls

All incoming calls are barred from being answered.

All outgoing calls

When the user attempts to dial a call, the Handset will display “dialing barred”.

Local calls only

Only those calls to the home country are allowed.

International calls

When the user attempts to make an international long-distance call, the Handset will display “dialing barred”.

- **Change PIN/Call barring code**

The user can use three edit screens (“Enter the old PIN”, “Enter the new PIN”, and “Repeat

the new password”) to change PIN/Call barring code.

5.4.6 Guard settings

5.4.6.2 Power on protection

If the user active “power on protection”, then the user will be required password when the phone power on.

To set a password for power on, select it and press “OK” key to open sub menu, the user can select “on” to active this function. Before active, the user will be required to input the password, if the password is wrong, then can’t active safeguard and back to previous screen.

If the protection is active, then the user will be required password when the phone power on. If the password input by the user is incorrect, the Handset will directly inform the user the password is wrong and return to the previous screen. It’s not necessary to set the maximum times for the user to input password. Otherwise, it may be very troublesome for the user go to the after service to unlock the password.

Passwords of protection function are four-digit, “0000” as default, and the user can change them. To change a password, first input the old password, then input a new password and repeat it to confirm the new password.

5.4.7 Network settings

In idle state, the Handset displays the network name. If the Handset can’t identify the network name, then it displays country code and network code.

Preferred networks

The preferred networks list is saved in the SIM card and it determines the order when the Handset automatically registers the network.

- **Show preferred networks**

Enter this menu, the preferred networks list is displayed and the one on the top is of the highest priority.

Press “up” / “down” key to select a network, and then press the softkey “Move”, this network will be moved to the top of the preferred networks list which shows its highest priority.

- **Delete preferred networks**

The preferred network list will be displayed after confirmation and the user can choose a certain network and delete it by pressing “Delete” softkey.

- **Add available networks**

The Handset begins to search the available network after confirmation and then display the

list on the screen. The user can select anyone and add it to the end of the preferred network list by pressing the “Add” key.

- **Add existing networks**

It will be displayed in the existing networks list saved in the Handset after confirmation. The user can select anyone and add it to the end of the preferred network list by pressing the “Add” key.

- **Add network code**

The Handset will open the editor after confirmation. The user can input mobile country code and mobile network code in turn. The code will be added to the preferred network list after confirmation again.

Attach GPRS

The Handset supports GPRS and this option designates the time on attaching GPRS. It's always attached or only attached during PDP session.

Register again

The Handset will search the available network immediately after confirmation and then the list will be displayed on the screen. The user can select one of the networks and press the “Register” key, then the Handset tries to register the network.

5.4.8 In-Flight Mode

If the flight mode is close now, then the user select this menu, it will popup a dialog to ask “OK to activate in-flight mode?”, press “OK” key of left softkey to active, press “C” key or right softkey to cancel. If the user press “OK” to activate flight mode, then popup an info box to prompt “In-flight mode activated” and the signal icon was changed.

If the flight mode is active now, then the user select this menu, it will popup a dialog to ask “Ok to deactivate in-flight mode?”, press “OK” or left softkey to close, press “C” key or right softkey to cancel. If the user press “OK” to close flight mode, then popup an info box to prompt “In-flight mode closed” and the signal icon was changed.

The user also can active/close flight mode by click signal icon.

If the user active flight mode, then all operation related to the network can not go on.

If the user active flight mode, then the user can't register network.

5.5 Settings

5.5.1 Sound settings

Sound settings is composed of two parts:

- Call Ringer type settings
- The other of the sound settings are in accord with the items of the “Personalized settings ” of the current selected profile in the “Quick settings ”(no repetition here). Please refer to 5.5.4 Quick settings

Ring type

The PB in this Handset is composed of six groups. Each group has a different ringer for the user to know which group’s call it is.

All ringers are in one list, but the user can view ringer of one type by selecting from the combo box. The selected ringer will be marked with a sign on the right. When the user views the ringer list, the selected ringer will be played with defined volume (if it is mute, then play with low volume).

The ringer can be classified as follows: (Can have more if new type is added.)

- All: all the following types (as default.)
- MIDI
- MP3
- AMR
- WAV

5.5.2 Interface settings

Interface settings is as follows:

Idle screen type

The Handset provides four types of idle screen, they are:

- Digital
- Analog
- Monthly view
- World time

The user can preview every type by the left softkey.

Wallpaper

The user can set the wallpaper in idle state.

Enter this menu, there is a picture list. All pictures are display on the screen. The user can view pictures of one type by selecting from the combo box.

The group type can be: all(default), picture(Jpg), icon(bmp), animation (GIF), and PNG).

The user can press “Up”/”Down” key move focus between combo box and wallpaper list. If the focus on combo box, press “OK” key to open combo box, then use “Up”/”Down” key to select a picture type, press “OK” key then the all wallpapers of this type will display on the list.

If the focus on the top layer picture, press “Up” key, the focus back to combo box. If the focus on combo box, press “Down” key, then the focus move to the first picture.

When the focus on a picture, the user can press direction key to select any picture, and then the left softkey “Option” includes: “Preview”、 “Icon view”、 “List view”、 “set as wallpaper” . Select a picture and then press “OK” key can set as wallpaper too.

If the picture size is smaller than the screen, then the picture will be display at center; if the picture size is larger than the screen, then the picture will zoom by geometric proportion.

If the selected picture is .gif file, and if the file is smaller than the scree, then display it at center and at same time, the animation file must be play; if the file is larger than the screen, then the file will zoom same as screen and be static.

Idle screen content

The user can set the content displayed on the idle screen:

- Time
- Week
- Chinese calendar (this option only effective for chinese language circs.)
- Wallpaper
- Year and month

Each option mentioned above can be set as “On” or “Off”. The user can use “Up” / ”Down” key to select an item, and press “OK” key to on/off it. On this screen, the left softkey is “Finish”, and the right softkey is “Back”. Press left softkey to save and back, press right softkey back but not save.

If the user does not select any wallpaper, then the screen will display white background.

Under English language, can’t display lunar calendar.

Screen theme

The screen theme includes the headline, status bar, soft key, scroll bar, button, etc. (For more detailed items, please refer to OSG.) Changing theme means changing the screen display style.

Entering “Screen theme”, the system should list all themes. The user can preview and select one of them.

C8000 can support three types of themes, (please refer to OSG for details)

5.5.3 Phone settings

Language

Multi-language support means the product can display multi-langrage. Display includes menu, button, prompt, etc. The content of data file will not change with language. For example, a Simplified Chinese name card will not change to Traditional Chinese automatically when the system switches to Traditional Chinese. But menu, button and

program will switch to Traditional Chinese.

The user can set the language of menu and prompt.

The interface shall support multiple languages, like:

- Simplified Chinese/Traditional Chinese
- English

Under English language, can't display lunar calendar.

Input method

C8000 can support input methods, such as T9 Simple Chin. Pinyin, T9 Traditional Chin. Zhuyin, T9 Simple Chin.strokes, T9 Traditional Chin. strokes, T9 Eng, abc, 123.

For each input method, the user can select On/Off. If Off, when the user switch input method in editor, closed input method will not occur.

Power on greetings

Power on greetings set by the user will be displayed after the Handset plays Power on animation. The user can set the content of Power on greetings. The max long of wellcome word is less than 16 words.

Auto power on/off

The Handset has auto power on/off function

Auto power on/off can be set separately. Input power on/off time in time edit window.

Enter "auto power on/off" menu, the focus first on "power on" checkbox, the user can press "OK" key to on/off "auto power on", if the "auto power on" is on, then the focus move down to the "auto power on time" editbox, the user can input time, and press "OK" or "down" key to move down to the "auto power off" checkbox, the user also can press "OK" key to on/off it. If the user active "auto power off", then the focus move down to the "auto power off time" editbox, after input time, if the user press "OK" key then save and back. If the user press "down" key then the focus back to "auto power on" checkbox

On this screen, the user can use "Up"/"down" key to move focus between "auto power on/off" checkbox and "auto power on/off" editbox, the left softkey is "Finish" and the right softkey is "Back". If the user press left softkey then save the current setting and back. If the user press right softkey then back and not save.

Brightness

The user can press "right"/"left" key to adjust lightness for the main screen (10 levels). Short press can adjust one level, long press can adjust continuously. When the user adjust lightness, he can see the effect real-time.

LCD sleep interval

On occurrence of the following, the LCD backlight and keyboard light will be lighted:

- Press a key
- During a period after the keyboard is released
- During a period after an accessory is connected to the Handset
- During a period after a new event occurs
- During a period after a call arrives
- During a period when the screen displays call information after a call ends.
- During a period after receipt of a message from the network
- During a period after the Handset cover is opened.

The user can set interval for 10 seconds, 30 seconds, 1 minute, 3 minutes, 5 minutes or 10 minutes.

5.5.4 Quick settings

The user can use the preset parameters by simple operation with Quick settings. The selected mode will be marked with a sign on the right.

Quick settings are a group of preset character definitions. After one profile is activated, it will automatically overwrite the original setting. The Handset provides a group of default profiles, including Normal, Silent, Meeting, Outdoor and car.

For each profile, there is a set of default parameter values (see the following table), which can be changed by the user according to his preferences and saved in the profile. If the profile has been activated, the modified settings will become effective immediately, and will be saved automatically.

In addition, the use can change the name of any profile at will (the length of the name is up to 16 bytes).

	General	Silent	Meeting	Outdoor	Car
Call ringer alert	Ringer+LED	Vibrate+LED	Vibrate+LED	Ringer+Vibrate	Ringer
Ringer volume	volume 5	volume 1	volume 1	volume 5	volume 5
Message volume					
Alarm volume					
Key tone	Off	Off	Off	On	On
Touch panel tone					
Alarm clock	Ringer	Vibrate	Vibrate	Ringer + Vibrate	Ringer

Message Alert					
Calendar alert					
Power on/off tone	On	Off	Off	On	On
Battery alert	On	On	On	On	On

Enter “Quick settings” menu, there are five profiles display on the screen, the user can use “Up”/”Down” key to select a profile, press left softkey “Option”, the user will see:

- Enable: Select this menu to active the selected profile and back. The user also can press “OK” key to active and back. Don’t save if the touch pen clicks it.
- Personalize: The user can change parameters according to his preferences and saved in the profile
- Rename: Change the name of the selected profile.

Personalize

Based on default value, the user can set value in each mode at will.

Note, if the vibrator is active, then vibrator should deactivated while plug charger.

ringer volume & alert

The user also can adjust ringer volume. There are totally five levels of volume set, along with gradually increasing volume (a sign occurs on top of volume level) . Once the user selects one, it will become effective to the selected group ringer.

The user can select alert type: Activated or deactivate ringer, vibrate or Light.

Message alert

The user can adjust volume of SMS /MMS tone. There are totally five levels of volume.

The user can select alert type: Activated or deactivate ringer, vibrate .

Alarm clock

The user can adjust alarm volume. There are totally five levels of volume set with gradually increasing volume (a sign occurs on top of volume level).

The user can select alert type: Activated or deactivate ringer, vibrate .

This menu is effective for count-down timer too.

Calender alert

The user can activate or deactivate tone, vibration.

Events can be from “Calender and schedule”

Key tone

After Key tone is activated, key tone will be heard when a key is pressed. Depending on the current situation, the prompt sound may be common or double tone multi-frequency (DTMF) sound. For the latter, if the user presses an illegal key, the Handset will give out a invalid sound, not DTMF sound.

Touch panel tone

The user can activate or deactivate tone when clicking the touch panel.

Power on/off tone

The user can activate or deactivate power off tone.

Battery alert

The user can activate or deactivate battery alert in case of low battery.

Automatically switch off the Handset when battery is used out: When the battery electricity quantity is too low to work normally, the Handset will automatically turn off.

5.5.5 Clock settings

It is used to set the clock of the phone.

Date and time are set in one screen. The week day and Chinese calendar are to be update when the user input date. On this screen, the left softkey is “Finish”, the right softkey is ‘back’.

The user can select to edit date or time by pressing Up/Down key and move to different number by pressing Left/Right key. When the focus is in “Date” edit box, press “OK” key or “down” key the focus jump to “Time” edit box. When the focus is in “Time” edit box, press “Up” key the focus jump to “Date” edit box, press “OK” key to save and back.

When input date or time, press “C” key to delete a number, long press “C” key clear all numbers, and display “YYYY/MM/DD” and “HH:MM”.

Only correct numbers are allowed to input and wrong numbers will be filtered. The cursor will move to next location automatically after input.

The validate date is from 1971/1/1 to 2037/12/31。

Date input format: In the format of “YYYY/MM/DD” (Chinese) and “DD/MM/YYYY”(English).

Time input format: “HH:MM”

Display the week day: In the format of “星期 X” (X is one of “一 二 三 四 五 六 日”)(Chinese), and one of “Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday”.(English)

In Chinese mode displays the Chinese calendar date in the format of “年月日”. The year of Chinese calendar date should include “天干地支 “。

5.5.6 Hotkey settings

A user can set a new hotkey to establish a relation between a certain function and a numeric key. He also can change or delete an existing hotkey.

There are two means to set a hotkey: one is long press an undefined numeric key in idle state, the other is to set the hotkey function for a numeric key in the menu.

After entering “Hotkey settings” menu, the user can browse the Hotkey list. Items in the list is displayed in a way as follows: in the left is a key code, and in the right is the corresponding hotkey function; if the key is not used, then “No hotkey” is displayed.

Select a hotkey and presses “OK” or left softkey, then available function list is displayed, and the user can select a function corresponding to a key from the list. Here, the user can press “OK” or left softkey to confirm the current setting and back to the previous screen.

When the phone is leave factory, the [1] and [#] hotkey is fixed. Long press [1] key to enter “Voice mailbox”. Long press [#] key to on/off vibrate.

When the user set “Speed dial” hot key function, it will open an editor, the user can input number.

Some hotkeys will be invalid when the Handset is in Restricted Idle.

The phone provide a total of 8 hotkeys ([2]-[9] keys) for the user to set a shortcut method. The default shortcut of 8 keys are as follows, the user can change them.

HOTKEYS	LONG PRESS
0	NOT APPLICABLE
1	NOT APPLICABLE
2	Phonebook
3	SMS
4	MMS
5	WAP
6	Video Player
7	Image Browser
8	Audio Player
9	PC Sync

5.5.7 Resource Management

5.5.7.1 Program installation

By Sync.

5.5.7.2 Resource Management

5.5.7.2.1 File Management

File management is to manage files opened to the user. From top to bottom are: “Local/SD” ; folder name or file list; Shortcut tool buttons. The left softkey is “Option”, the right softkey is “Back”.

Local /SD: Press left./right key to switch to local flash or SD card.

Folder name: Display the name of current folder and its path.

File list: Display all files in current folder, including folders and files with icons before them to differentiate. For folder, use touch pen first click folder is select it, and second click this folder to enter it.

The options include:

Capacity: Display the total capacity, used capacity, left capacity etc (only when the focus on the page header of local and SD).

Format: Select this menu to format the SD card, before this operation, should prompt the user (only when the focus on the page header of SD).

The following options only when the focus on the file list:

Open: Enter selected directory. It is invalid for a selected file.

Cut: Cut the selected file into the buffer

Copy: Copy the selected file into the buffer

Paste: Paste the selected file into the current directory from the buffer

Delete: Delete selected file

Upwards: Back to previous directory.

Select all: Select all the files under the current folder.

5.5.7.2.2 Program management (depend on market demand)

Enter this menu, only the program that can be uninstalled display on the screen. The user can use “up”/”down” key to select a program, and press left softkey “unload” to uninstall this program. Press right softkey to back. The program which be uninstalled don’t display on the screen next time.

5.5.8 Touch panel adjust

In this screen a cross occurs at the top left corner to prompt the user to click. After the user clicks, a cross occurs at the bottom left corner. After the user clicks, a cross occurs at the bottom right corner. After the user clicks, a cross occurs at the top right corner. After the user clicks, a cross occurs in the middle of the screen. After the user clicks, if error is within limit, then the regulation is successful. It will return automatically in two seconds. Otherwise, it will repeat the steps above.

If the user does nothing for 10 seconds since it prompts user at any step, it will return automatically. If there is any event of higher priority (such as the incoming call, alarm, SMS, or Org. alert), it will also return automatically.

5.5.9 Factory Settings

if the user select “Factory settings”, prompt “OK to restore factory settings?”, if the user select “OK”, then restore factory setting, and prompt “Restart the Phone to active.”

The user can set the following settings to factory settings value.

Parameter	Default value
Quick settings	Normal
Quick setting 1 name	Normal
Quick setting 2 name	Silent
Quick setting 3 name	Meeting
Quick setting 4 name	Outdoor

Quick setting 5 name

Use in car

For other factory settings for quick settings, please refer to quick settings section.

Group ringer type

Default	First Midi
Family	First Midi
Friend	First Midi
Colleague	First Midi
Society	First Midi
Private	First Midi

Sound settings

	Ringer
Message alert	Light
Alarm clock	volume 5
Event alert	First Midi
Key tone	Off
Touch panel tone	Off
Power on/off tone	On
Battery alert	On

Phone settings

Main screen idle type	Digital
Wallpaper	First wallpaper
Idle state content	All content is on
Interface theme	First theme
Languages	Simplified Chinese
Contrast	8
Backlight	Off after 10 seconds
Input Method	All input method is on
Auto power on/off	Off

Hot key settings

Refer to 5.5.6 Hotkey settings

Call settings

Minute reminder	On
Anykey answer	Off
Auto redial	Off
Auto answer	Off
GPRS call waiting	Off
Active flip	Off
Call volume	5
Send ID	Off

Call guard settings

	Off
Attch to GPRS	Always attached
Alarm settings	Off
Group icon ID	1~6

Group name	Default/Family/Friend/Colleague/Society/Private
------------	---

IP service number	Empty
PB memory type	SIM Card

SMS settings

Validity period	Maximum
Status report	On
Reply path	Off
Select memory	SIM card

MMS settings

Read report	off
Delivery report	off
Validity period	Maximum

Hide sender	off
Delivery time	Immediate
DV/DC	
Meter mode (Only in DC)	Single
White balance	Auto
Image size	320*240
quality	Fine
Photo effect	Off
Exp.compen	0
Storage location	Phone
Display info	On

5.6 Multimedia

5.6.1 DV/DC

If the phone's cover overturns to 90 degree and time more than 1.5 s, then enter DC/DV. Leave factory, system enter DC default, but next time enter DC/DV according to the user enter what function last time.

If the phone's cover overturns to 180 degree and time less than 1.5 s, then the screen content doesn't change, but the screen should overturns 180 degree too. If the time more than 1.5 s, then enter DC/DV.

After enter DC/DV, press the left side "Menu" key to open "Option" menu, right side "Up"/"Down" key is as same function as "Left"/"Right" key on keypad, this four keys can select an menu item from the "Option". Enter any menu item, left side "Menu"/"Mode" key is as same function as "Up"/"Down" key on keypad, this four keys can select any value of the selected menu. Press right side "Multimedia" key to start/stop shooting, or close "Option" menu is the "Option" menu is open.

For DC, the user can use "Up"/"Down" key and right side keys to adjust zooming (support 8 times zooming) . Short pressing realizes zooming in steps and long pressing realizes continuous zooming.

In the preview screen, if there is no key pressing operation for 2 minutes, the system will return to the idle screen.

During recording a video, the phone need to judge the memory by real-time, if the free memory is insufficient (already use 98% of memory), then auto stop the recording and save the current recorded video, and last wirte a red line word on the screen to prompt the user "Memory is

insufficient”.

Picture and video will be automatically saved to the selected storage equipment by the default name(like img001.jpg, where 001 is increased automatically.) when shooting is over. The taken picture is kept on the screen for 2 seconds and then the system returns to the preview status.

After shooting, the screen back to preview, press left side “Mode” key can switch to DC player/DV Player to view the photos or videos. In DV player, press right side “Up”/”down” key can select previous/next file, press “Multimedia” key to play/pause, press “2”/”8” key to adjust volume. In DC player, press right side “Up”/”down” key can select previous/next file. Press left side “Menu” key and left softkey to popup/hide sub menu(If the sub-menu was popped, press “mode” or “Multimedia” key to close sub menu), the sub menu includes: Delete、Edit、send, select any option, and press “OK” or use touch pen to click it to execute.

Note: the option menu for both DC and DV are very similar. They will be listed as below. The difference will be specified.

- Meter mode (Only in DC) (this option’s value won’t be apply for next time if the value is changed)

There are three modes in DC: Single (default), Continuous, Self-timer 10sec.

“Single” is used to shoot one photo.

“Continuous”, is used to continuously shoot a series of photos. The interval of two pictures depends on HW maximum speed. And fixed number (5)of photos will be taken.

Self-timer 10 sec, is used to shoot one photo with 10 seconds delay after the user presses key to start.

- White balance(this option’s value won’t be apply for next time if the value is changed)

The user can select from one of the following items

- ◆ Auto(default),
- ◆ Sunny
- ◆ Cloudy
- ◆ Incandescent
- ◆ Fluorescent

- Night mode (only in dc, this option’s value won’t be apply for next time if the value is changed)

Two choices: ON、Off

- Image size/quality

For the quality, the user can adjust the image compression ratio. The higher the compression ratio, the lower the picture quality. Three quality can be selected:

quality only for DC

- ◆ Normal

- ◆ Fine(default)
- ◆ Super fine

The image size can be:

For DC

- ◆ 1280*1024
- ◆ 640*480
- ◆ 320*240(default)
- ◆ 160*120

For DV

- ◆ 320*240(default)
- ◆ 176*144

If the user want to shoot MMS picture, the image size will be restricted as follows.
(Only allowed sizes are shown to the user.)

MMS Image size only can be: 160*120

- MMS mode(For DV): Limit the size of video in 50k.
- Photo effect(this option's value won't be apply for next time if the value is changed)

The photo effect can be as follows:

- ◆ Off(default)
- ◆ Neutral
- ◆ Vivid
- ◆ Sepia
- ◆ Cold
- ◆ Reversal
- ◆ B&W

- Exp.compen (this option's value won't be apply for next time if the value is changed)

The user can change it range from -2EV to +2EV, 1EV per step. 0 as default.

- Storage location

It can be saved in "SD card" or "Phone". The system will save the photo/video by the default name(img001.jpg/vid001.avi). If the storage is not enough, the system will indicate, "Storage is full!"

- Display

This setting specifies whether to display DC settings parameters on the screen.

If the selection is "On" (default), the shooting screen will display some

info (Please refer to UIS). If the selection is “Off”, the above mentioned info will not be displayed.

In DC/DV preview screen, there’s a “Exit” icon, the user can use touch pen to click this icon to exit from DC/DV.

5.6.2 Record

The system enters record screen. The content is :

- Title: Recorder
- Button “START” to record and then the key becomes “STOP”.
- Recorded time
- Max record time
- Left and Right softkey prompt.

The record format is AMR only.

If record time is already set, presses “START” to recording and now the right softkey is “Stop”. During recording, the system will judge the free memory by real-time and automatically stop recording and save the recorded file when the free memory is insufficient or the record time is over. If the user presses “STOP”, the system will stop recording in despite of the record time and now the right softkey is “Back”. Press “C” key or “Back” softkey can exit recorder. When recording is over, the system will save the recorded file by a default name.

The user can edit the max record time, use touch pen to click “Max record time” area, and then press numeric key or “Up”/“Down” key to adjust time, press “Left”/“Right” key to move to other number. The max record time is 99 minutes. The default time is 3 minutes.

Press “Option” softkey, you will see:

- **Audio player:** The system enters audio player menu and the user can play the newly recorded sound file. The key is not available during recording.
- **Record again:** To record a new one.
- **Storage location:** . Option includes “Phone” and “SD” card. The user can select one of them.
- **Send by MMS:** The system enters MMS editor and takes the recorded clip as the first object of new MMS.

5.6.3 Tag-It

Image editor is used to edit or draw images. If the user does not open any image, the system will display a blank image.

Image editor displays the following:

Image name

Edited image

Color palette, foreground color, background color

Floating tool bar:

Select: Outlines a portion of the screen with a user designated rectangular marquee.

Pencil: Draws a freehand line on the image.

Eraser:

Fill: Fill in the area with the foreground color. The area is an adjacent area with the same color with the selected point.

Rectangle: Draw rectangle with selected foreground color.

Circle: Draw circle with selected foreground color.

Line: Draw lines with selected foreground color. The user can select size (four thickness types, from 1 dot line to 4 dot line.).

Rotate& Flip:

Rotate: Turns the image around its center point. The system displays floating bar when the user selects Rotate. The user can select “90 degree clockwise”, “90 degree anti-clockwise” and “180 degree”.

Flip: Mirrors the image on the horizontal or vertical plane. The system displays floating bar when the user selects Flip. The user can select horizontal or vertical mirror image.

Eyedropper: The eye dropper tool samples the color at the tip of the dropper and displays it in the color picker.

Text: Adds text to your image. Select this tool to touch screen, the text will insert in the place where the touch pen clicked, and open a text editor.

For the above shortcut tools, the user can use touch pen to select, also can press “1-9”, “0”, “Up”/“Down” key to select, and then press “OK” key.

If some of tool buttons have annex options, then if the focus on this button, press “OK” key or “Right” key can open the annex option. Use “Left”/“Right” key to select an option, press “OK” or “Left”(only the focus on the leftmost option) key to close annex option.

The right softkey is “Back”. The left softkey “option” menu is:

Undo: Undo is active from the moment you make a change to image. Only can undo one time.

Redo: Redo is active after you click the undo button. You can redo any change you have undo.

Copy:

Cut:

Paste:

New: Create a new image file and edit. The system will inform if the current image is not saved.

Open: The system will enter the image list. The user can select one picture to open it in the editor and close the current picture. The system will inform if the current image is not saved.

Send mms: The user can send the current editing picture by mms. The more info please refer to same option of image browser.

Save: The system will save the modified file.

Save as: Save to another file with new name.

Cancel edit: The system will cancel all edit.

If the user select to save the picture, then enter “picture save” screen. The user can input file name in edit box, and press “Up”/“down” key to select picture format (jpg/bmp/png), at last press

“OK” key to enter file management to select storage path.

5.6.5 Image browser

The following types of image can be supported:

picture(Jpg),
icon(bmp),
animation (GIF),
PNG

Enter “Image browser” menu, the focus first on the combo box, press “OK” key can open combo box, and press “Up”/“down” key to select location, press “OK” to save. Press “down” key, the focus move down to the image list. If the focus on the top layer image, press “Up” key, then the focus move to combo box.

The system displays all miniatures and names in both phone and SD card in the image browser. If the file can't be support, then display a fixed picture. The user can press “Up”, “Down”, “Left” and “Right” direction keys to select Picture displayed on the screen. A scroll bar will occur in the right side if one screen is not enough.

When the user select a picture, the option menu is as follows:

- **Browse:** select this option can open image browser to browse the select picture.
- **Delete:** The unlocked and non-built-in picture can be deleted.
- **Edit:** The system enters Image editor.
- **Send MMS:** The system enters MMS editor and takes the current picture as the first object of new MMS. Can't send picture which saved in Sd card. If the user select a SD card picture, then prompt “can't send SD card file, please copy this file from SD card to local”. If the picture is more than 50K, then can't send it and prompt the user.
- **Detailed info:** The system enters detailed info screen. The screen includes: the file name, format, resolution, size, storage location, etc.
- **Rename:** The unlocked and non-built-in file has this option.
- **Add frame effect:** (The option enabled only when the current picture is less than 640*320size). Enter “Add frame” screen add all kinds of frame on the selected picture, and all breviary picture display on the screen. The left softkey is “Preview” and the right softkey is “Back”. Press direction key to select a breviary picture, press “OK” key or left softkey to enter next screen to preview. And now press “Left”/“down” key or use touch pen to click “left”/“right” button on the screen to preview other breviary. The left softkey is “Save as”, the right softkey is “Back”, select “save as” can save the picture.

When the user select a picture, and press OK key or select “Browse” from “Option” or use touch pen double-press the picture to enter Picture browser screen which displays the following:

- **Filename**
- **“slide show” button,** use touch pen click this button to open slide show, all pictures will display one by one every 1 s. click this button again to close slide show.
- **Picture is displayed in the middle.** The system will zoom out the picture automatically if the picture is too big when entering this screen.
- **Shortcut tool buttons:** from left to right, the buttons are “Previous”, “Fit in”, “ZOOM In”, “ZOOM Out”, “Original size”, and “Next”.

- The function of the left and right softkey: “Option” and “Back”

Pressing Up/Left direction key can view the previous picture, while pressing Down/Right direction key can view the next picture.

The option menu is as follows: (Most of them have the same functionality as above option for a single picture.)

Zoom: will have four sub-menu items.

Zoom in: can zoom in the picture. It can be pressed 3 times, then becomes gray (not available).

Zoom out: can zoom out the picture. It can be pressed 3 times, then becomes gray (not available).

Fit in: will be fit in the picture display area.

Original size: Display the picture in original size.

Set as wallpaper:

Delete:

Edit:

Send via MMS:

Detailed info:

Add frame effect:

5.6.6 Audio player

The following types of audio format can be supported:

- MIDI(SP-MIDI)
- MP3
- AMR
- WAV.

The system enters audio menu.

- Title
- Combo box: to select the storage location
- Display the filename (with suffix) list in both phone and SD card. All the system build-in ringer files don't be include in the list and can't be delete, send, upload..., for example the embed incoming call ringer, message ringer and etc.
- A scroll bar is added in the right side if one screen is not enough.
- The bottom displays the functions of the left and right softkey

The user can use “Up”/”Down” key to move to an audio file, and press “OK” key to select/unselect(use touch pen also can select/unselect). The user can select many files one time.

The left softkey “Option” includes:

- **Play :** Enter audio player screen to play the selected files. If the user select file can't be support, then popup a dialog to prompt “Can't support this file”

In the audio play screen, The following button is used:

Play/Pause

Stop

Fast forward(Midi file can't be support this)

Fast Revind(Midi file can't be support this)

previous

Next

Volume up/down : On left area of the screen. Use touch pen click it can adjust volume.

Play list: On the right area of the screen. If the user selects many files at one time, then this area can show the user which file is playing now. the user also can use touch pen click it to play other audio in play list.

Play mode: under "volume adjust" area, the user can use touch pen click this icon to select play audio by order or random.

Cycle mode: under "play list" area, the user can use touch pen click this icon to select whether play audio circularly.

the slider at the bottom of the screen can display the current audio 's playing progress. (Midi file can't be support this)

Keypad function is as follows:

Left side "Up"/"down" key: adjust volume

Right side "Up"/"down" key: select previous/next file

Right side "Multimedia" key: short press to play/pause, long press is stop(when the phone's cover is open) or "back" (when the phone's cover is close)

"Up"/"down" key: select previous/next file

"Left"/"Right" key: Rewind/Forward

"ok" key: play/pause

right softkey: stop/back

"C" key: Back

- **Delete:** Delete the selected files. Before delete, it should prompt "Really want to delete?"
- **Select all:** Select all the files.
- **Send via MMS:** If the user selects many files one time, this option is not available. Can't send audio which saved in Sd card..
- **Detailed info:** The system enters detailed info list to display the detailed info of current file
- **Rename:** The system enters the edit screen and the user can change the select file name. If the user selects many files one time, this option is not available
- **Flip exit:** the user can decide whether the audio player is close if the phone's cover is close. There are two choices: on, off.

5.6.7 Video player

When the user enters video player, all videos in phone and SD card are listed with breviary

picture, if the video file can't be support, then display a fixed picture. The user only can select one file at one time. When the user select a file, the left softkey "option" menu as follows:

- **Play:** Enter video player screen to play the selected file, the use also can press "OK" key to play. If the user select file can't be support, then popup a dialog to prompt "Can't support this file".
- **Delete:** The unlocked video can be deleted.
- **Send via MMS:** If the selected file is less than 95K, then prompt the user.
- **Detailed info:** The system enters detailed info screen. The screen includes: the file name, format, resolution, size, locked or not, storage location, etc.
- **Rename:**

In the video play screen, left softkey is "Hide"/"Open"(used to open/hide bottom toolbar), the right softkey is "Back". The bottom toolbar includes:

Play/Pause

Stop

Delete

Volume up/down (The video can also be muted.)

Keypad function is as follows:

"2"/"8" key: adjust volume

Right side "Up"/"down" key: select previous/next file

Right side "Multimedia" key: short press to play/pause, long press is stop

"Up"/"down" key: select previous/next file

"Left"/"Right" key: Rewind/Forward

"ok" key: play/pause

Right softkey: stop/back

"C" key: Back

The video can output to TV to play. If the user plug link to TV, please prompt the user "Please re-plug the link" if there's any other reason that the device can't work with mobile or prompt the user "please wait..." if the device is not ready. If the user link the mobile to TV successfully, then there will be an icon automatically display on the video play screen and if the user play this video, then this video will directly play on TV, not on mobile.

When the video was playing on TV, the mobile LCD doesn't play this video and just display video player screen, at same time, the mobile LCD doesn't respond any pen-touch event, but only can accept key-press events.

When the video was playing on TV, the user can control the TV display only by keypad of the mobile. The key function is as follows:

"2"/"8" key: adjust volume

Right side "Up"/"down" key: select previous/next file

Right side "Multimedia" key: short press to play/pause, long press is stop

"Up"/"down" key: select previous/next file

"Left"/"Right" key: Rewind/Forward

"ok" key: play/pause

right softkey: stop/back

“C” key: Back

If the user want to switch back to the mobile LCD, he must first stop the video, and then the control power automatically revert to mobile, the user can play video on LCD by pen-touch or key-press event.

When the video was playing on TV, if the link between mobile and TV was interrupted, the TV will display blue screen, but the video will not stopped till the user press stop it himself or the video is end. The user can continue to watch television by reinsert link as long as the video not end.

5.7 Messages

5.7.1 WAP settings

The user can set parameters of wap in this menu. The user can modify the profile settings, create new profiles. Only 10 profiles can be add in.

Enter wap settings, select a profile, press left softkey “Option”, the menus include:

Add: Create a new profile.

Delete: Delete the selected profile, before delete, should prompt the user.

Edit: Modify the parameters of the profile. Please refer to 5.7.1.5.1.

Connect:

5.7.1.5.1 Edit profiles

The detail of each profile is as follows:

Profile name

The user can set the name of profile.

Bearer

The user can select CSD or GPRS. Please note, maybe some embed profile only can be set CSD or GPRS.

User name: user’s name when log on WAP server.

Password: password when log on WAP server.

Gateway: IP address/port of the gateway server

5.7.2 Web browser

The user inputs website in address bar, presses OK or clicks Website to open web page. The operation should be performed when connected.

Starting up browser will open Homepage automatically.

Title bar: Display the name of the web page, display downloading progress.

Website: An edit box to Input website. Common input is called here and “Website” is a clickable control. Before the edit box, there are three shortcut tool buttons are “Backward”, “Refresh” and “stop”, and behind the edit box,

there is a shortcut tool button is “Go”.

Content area: Display content of web page, including image and text.

Left softkey: “Option”, please refer to 5.7.2.1 Options.

Right softkey: “Back”, if the user press right softkey, then there should be a dialog for the user to confirm the exit action, after the confirmation of the exit action, browser terminates and control will return to the previous page where user starts the browser.

The user can press up/down and left/right key to scroll the web pages.

If the web page is not found, then it will popup an info box to prompt.

5.7.2.1 Options

The options include:

Forward: Go to next page.

Backward : Go to the previous page and the system will save 8 records (first in, first out), that is, go backward 8 times at most.

Homepage: Go to homepage. It is a website. Open Homepage when he selects Homepage or start up Browser.

Refresh: Refresh content of the current page.

Bookmarks: Display/edit Favorites. Bookmarks stores websites in common use.

History: View 、 delete and select a History record.

Settings: Configure web browser.

Enter select mode: select this menu, the user can use “Up” / ”Down” / ”Right” / ”Left” key to select a picture to save. On the screen, the right softkey is “Back”, and the left softkey is “Option”, the “option” include :

“save as”: save the selected picture into user local picture folder under file management.

“Set as wallpaper”:

Exit select mode: exit and back to previous screen.

Set as homepage: Set the current page as homepage.

Offline pages: Save the current page as a file of html, or save all.

Quit: Quit the web browser directly.

5.7.2.1.1 Bookmarks

Bookmarks manage websites in common use. Website bar displays current website.

If the user selects bookmarks, then it will enter next screen to display bookmark list, and now the left softkey is “Option” and the right softkey is “Back”. Press “Option” softkey enter next screen, the user can add bookmark, edit, Delete, enter the bookmark”.

5.7.2.1.2 History

History stores web pages browsed by the user. It is stored by a rule of “First in, first out” and there is a maximum. On history list screen, there is a “more” menu at last line. The web pages browsed by the user is displayed in the middle. The left softkey “Option” includes Clear all, Delete and go. If there isn’t any history, then it should popup an info box to prompt “No history available”.

Open: Select “Open” to connect to the page.

Delete: Delete the selected web page. Before delete the web page, it should popup an info box to confirm.

Clear all: Delete all the web pages browsed by the user. Before this operation, it should popup an info box to confirm.

5.7.2.1.4 Settings

The user can configure the web browser here. There are eight items under “settings”.

1. **Edit homepage**
2. **Select Profile**
3. **Rename Profile**
4. **Connection**
5. **Browser options**
6. **Cache**
7. **Cookies**
8. **Push settings**
9. **Clear history list**

5.7.4 SMS

Besides in SIM card, SMS can be stored in the Handset, which provides additional storage positions (the max storage capacity is 1000 items). The user can select a preferential location for saving SMS. If the preferential location is full, then SMS will be saved in the non-preferential medium.

After the user insert SIM Card and the SMS initialization is done, if the SIM location has been full, and the FLASH location has not yet, then one SIM SMS will be moved to FLASH location automatically.

There are four SMS boxes. SMS list in each box displays name or number. The content of the selected SMS will be displayed. If it is too long, it can be scrolled to display the completed information.

- **Inbox**

Save received SMS ((other than broadcasting SMS and level 0 messages).

- **Sent Box**

The sent successfully SMS will be saved in the Sent Box. The sent ones in Group SMS will

be saved in sent box one by one(one for each person).

- Unsent Box

The unsent SMS or failed sent SMS will be automatically saved in the unsent box. The unsent ones in Group SMS will be saved in unsent box one by one(one for each person).

- Favorite

The user can remove SMS from Inbox to favorite. The sms in favorite box just only can be stored in the Handset and can't be stored in SIM card.

When the user enter in any box, the left softkey is "Delete", to delete the selected sms

When the user selects and view a SMS in any box, the option menu has the following operation:

- Reply (an option only in Inbox) : the replied SMS automatically includes the destination number and reply address (it is necessary for the sender to set this option as "Activated").
- Send (an option only in sent box and unsent box)
- Forward
- Delete: the Handset will display "Ok to delete?" Press "Exit" to return to the previous screen, or press "OK" to confirm and the Handset will display deletion screen. After deletion is finished, the screen will display " SMS deleted" and return to the menu of the upper level.
- Move to favorites (an option only in inbox): the user can save the SMS to the favorites for long-term reservation. The items saved in the favorites will not be deleted in "Delete all" operation.
- Store number(an option only in inbox and favorite box): if the original address (the sender's number which is not saved in the SIM card) of a SMS occurs or the number is in the text, then this menu will be automatically displayed. The user is required to input a name and select a storage location (SIM PB or Handset PB).
- Dial(an option only in inbox and favorite box)

Write SMS

Use touch pen click "To..." button to open phonebook list, in phonebook list, the user can select name. Enter SMS editor, the focus first on "recipients" edit box. After input recipients(only can input number) and then press "Down" key, the focus move down to the content edit box.

In SMS content edit box, press "Up" key to move up one line, press "Down" key to move down one line, press "Left" key to move left a character, press "Right" key to move right a character.

When the focus in the content edit box, press "OK" key to open left softkey "Option" menu, the "Option" menu includes: Send now、Save、Namelist、Send & Save、Save as User-defined、Insert User-defined.

Receive SMS

When new SMS arrive (other than broadcasting SMS and level 0 SMS), the screen will

display prompt information, such as “2 new SMS”. Then the user can press “OK” to enter inbox sms list. Once the prompt information is removed from the idle screen, the user need to enter “Inbox” to read SMS.

Whether a SMS will be saved or not depends on the type of the SMS:

- Broadcasting SMS and level 0 SMS will never be saved. (except broadcasting SMS on region type);
- A Level 2 SMS will be automatically saved in the first empty position in SIM card, and the Handset will give out prompt of new SMS arrival. If the storage space is already full when a SMS arrives, the Handset will not accept the SMS.
- If the SMS storage space in SIM card and phone is full, “SMS” icon will blink;
- If a SMS can’t be saved due to reasons other than “space full”, then the SMS will be managed as a level 0 SMS.

Send SMS

The user can send SMS to other Handsets. The maximum length of one SMS is 160 Western characters or 70 Chinese characters. In default, a SMS will be sent out as a level 2 SMS.

When editing a SMS, the content will be automatically saved if the user exits without saving. When the user composes a new one, the SMS will be restored. If the SMS is sent successfully, the editor will be empty.

This phone support SMS group sending function, and the user can send a message to a maximum of 10 recipients at one time.

User defined SMS

The user can add/modify/send/delete self-define sms. The user can insert the SMS to where the cursor is located.

Enter “Preset SMS”, the left softkey is “Option”, includes:

- ◆ Add: the user can add a new user define sms. S
- ◆ Send: Enter sms editor screen, the user can edit selected user define sms and send it.
- ◆ Modify: The user can modify the selected user define sms.
- ◆ Delete: The user can delete the selected user define sms, before delete, it should prompt the user .

Delete SMS

The user can delete all SMS in different box or delete all in all box, include:

- Delete all: delete all in all box except favorite box.

- Inbox
- Sentbox
- Unsentbox
- Favorite
- SMS in SIM card
- SMS in phone
- SMS before a certain date

Enter this menu, there are six options: “Delete 1 day ago”, “Delete 3 days ago”, “Delete 10 days ago”, “Delete 1 month ago”, “Delete 3 months ago”, “Delete 6 months ago”.

Capacity

The user can check the number of the used SMS in SIM card and in phone, total number of SIM card.

The SMS number in each box can also be listed.

SMS settings

- Service center number

The Service center number is stored in Service center and used every time when a new SMS is sent. If the user wants to change the number, he must modify it before sending a SMS. The number can't be modified during the process of preparation for sending a SMS.

The SMS center number, which can be edited, is saved in the SIM card.

- Validity period

The user can set a validity period for sending SMS, for example, validity period for sending SMS, validity period for being saved in the SMS center, etc. A series of different values (12 hours, 1 day, 1 week or maximum period) are provided under the SMS setting submenu.

- Delivery Status report

The user can select “On” or “Off” to set status: Whether to indicate the SMS has been sent succeeded or failed.

- Reply path

The user can select “On” or “Off”. If “on”, when the recipient select “Reply”, the SMS he sends will automatically selects the service center the sender has used.

- New entry storage

The user can select preferential storage location: SIM card or phone.

Note: If preferential storage location full, SMS will be saved in non- preferential medium,

Broadcasting SMS

The broadcasting SMS has the following options:

- **Reception**
 - If “activated”, the Handset can receive broadcasting SMS, which will be displayed
 - If “closed”, then the Handset will not listen in any broadcasting message channel.
- **Channel list:** is used to add, modify listen-in channels

5.7.6 MMS

In the “MMS” menu, there are nine sub menus: “Write MMS”, “Inbox”, “Outbox”, “Sent Message Box”, “Draft Box”, “Template box” and, “MMS Setting”, “Capacity”, “Exit”.

The total number of mms that saved in “Inbox”, “Outbox”, “Sent Message Box”, “Draft Box” in all should not exceed 150.

5.7.6.1. Write MMS

When users want to create a new MMS, he can enter mms and select “Write mms”. In mms editor, users can input text. Can insert pictures, sounds and new pages in their own orders.

Enter mms editor screen, the focus first on the “Subject” edit box, the user can input subject, and then press “down” key to save subject and the focus move down on the “Recipients” edit box.

When the focus on the “Recipients” edit box, the left softkey is “Phonebook”, the right softkey is “Back”. The user can directly input number, email or name in editing box or press left softkey to select name from phonebook list.

After input recipients, press “Down” key to save and the focus move down to the next edit box.

If the user wants to CC(make a Carbon Copy) to somebody or BCC(make a blind Carbon Copy) to somebody, he can use touch pen to click the “CC” icon which behind the “Recipients”. Once users click the “CC” icon, the “CC” and the “BCC” edit box will appear under the “Recipients” and the “Hide CC” icon will appear behind “BCC” too. The users can click “close CC” icon to close “CC” and “BCC”. When the user presses the “Up” and “Down” direction keys to select “CC” or “BCC”, the key function and operation is the same as “Recipients”.

If the user wants to add mms text, he can use touch pen click mms text editor area or select “Add text” from “Option”, and then the text editor is active, after input text, press “OK” key of left softkey to save and back to mms editor.

When the user is editing the mms content and cursor is in the text editing box, the left softkey is “Option”, and the right softkey is “Back”. The option is:

- Add text: Only the user still not input text on the current page, this option will appear.
- Edit text: Only the user had already inputted text in the current page, this option will appear.
- Insert picture: Open picture folder. The user only can send picture which saved in user local folder under file management.
- Insert audio: Open audio folder. The user only can send audio which saved in user local folder under file management.
- Insert video: Open video folder. The user only can send video which saved in user local folder under file management.
- Insert new page
- Previous page (only the mms include more than two pages): can view the previous

page.

- Next page (only the mms include more than two pages): can view the next page.
- Delete page(only the mms include more than two pages): can delete the current page
- Preview: The system enters the page preview screen to play the page. The detail please refer to 5.7.6.3. Preview and playing.
- Page timing: The system enters the “Time Setting” screen where the user can set the lasting time of a page.
- Text color: The user can set the text color of the current page.
- Text color, all slides: the user can set text color of all pages in this new mms.
- Background color: The user can set the color of the background
- Remove object: The user can delete the object which already inserted in the new mms.

In the MMS editor, the user can select different pages by pressing the “Left” and “Right” keys. Press “Left” key is invalid if the current page is the first page; press “Right” key is invalid if the cursor is on the last page.

After one or several objects have been inserted into the MMS, the interface of the editor and the contents displayed on this screen are:

- Display title: “Page n/m”, “MMS size” and subject of the mms, “m” denotes the total pages of the MMS and “n” denotes the page number of the page that is being edited.
- The main area shows the MMS being edited.
- A bugle is shown in the editor to present a inserted sound
- An video icon is shown in the editor to present a inserted video.
- The bottom line: the left softkey is “Option” and the right softkey is “Back” .

After finish the new MMS, the user can press “OK” key to send MMS, the detail please refer to 5.7.6.2. MMS Sending.

Note: The new mms limited size and the object limited size which inserted in mms is as follows:

New mms	should not exceed 100k
Each picture	should not exceed 50k
Video	should not exceed 95k
Sound	should not exceed 95k
Text	should not exceed 100k

5.7.6.2. MMS Sending

After edit mms, the user can press “OK” key to send mms. When the users send a mms, enter MMS sending screen. On this screen, the left softkey function is “OK”, the right softkey function is “Back” and the middle key funtion is “Ok”. there are three sub menus:

Send

Send mms immediately. If the user set “auto save” option on, and if sent successfully, save this mms into “sent message box”. If sent unsuccessfully, then save this mms into “outbox”. If the user set “auto save” option off, then don’t save.

Save

The system will save the MMS body as well as the recipient, the subject, the BCC and the related setting into the “draft box”. If the memory is not enough, the system will prompt: “Memory is insufficient, please clear up first!”. The system displays “Saving fails!”. Saving the MMS, the system prompts “Saving...”. Finishing saving, the system prompts “Messages saved in draftbox.”

Save as template

The system saves the MMS into the “Template box” as a template. Saving the MMS, the system prompts “Saving...”. Finishing saving, the system prompts “Messages saved.”. If memories are not enough for the MMS, the system will prompt: “Memory is insufficient, please clear up first!”

When users send a mms, the system displays “Sending...” animation and after sending the system displays “Message sent successfully”. If the sending is unsuccessful, the system prompts “Message sending fails” and save the MMS into the “outbox”. If the memories in not enough, the unsent message will not be saved and the prompt “Memory insufficient, Message saving failed!”. After sending, if the sent MMS is a new edited MMS, the system returns to the “MMS Sending” screen and if the sent MMS is a outbox MMS, the system returns to the “Outbox list”.

5.7.6.3. Preview and playing

The preview screen is used to preview or play an editing MMS, a new received MMS and all mms in all box. MMS can be previewed when the “OK” key is pressed in the inbox, outbox, Sent Message Box, template box or draft box list, when the left softkey (“Read” key) is pressed in a new MMS notification screen or when the “Preview” is chosen in the “MMS Option” menu when edit a new MMS.

The softkey function in a MMS preview screen is:

- For the new edited MMS, the right softkey is “Stop”.
- For template box, draft box, inbox, Sent Message Box, outbox and new received MMS, first it will display the mms essential info (From,to, cc, subject etc.) and the left softkey is “Next”, the right softkey is “Back”. Press left softkey to play the mms content, and now the right softkey is “Stop”.

If the user select “Stop”, then the mms is stop and the left softkey is “Option”, include “Play”, “Back to first page”, “Previous page”, “Next page”, “Close”.

If the page time is over and mms stopped itself, then enter option menu automatically.

5.7.6.4. Detailed info

The Detailed Info screen is used to show the detailed information of a MMS. There are two kinds of the screen.

The first kind is used to show the information of a new edited MMS or a MMS in the draft box, template box, outbox and Sent Message Box. The contents displayed on this screen are:

- The title displays “Detailed Info”;
- Display “Subject:” and then display the content of the subject. If the width of a text is larger than the allowable width the text will be displayed in the next line.
- Display “Recipients” and then display the sending number or e-mail address. If the number is already saved in Phonebook then the name is displayed. If the width of the content is larger than the allowable width the content will be displayed in the next line. If the recipients are more than one, the recipients are displayed one by one and each is divided by a “;”. (The recipients are no more than 8)
- Display “CC:” (Carbon copy) and then display the names/numbers or the e-mail addresses of the CC recipients. The rule of display is the same as the recipient line, and the CC recipients are also no more than 8. If there is not CC recipient, there is not content behind “CC:”.
- Display “BCC:” (Blind Carbon copy) and then display the names/numbers or the e-mail addresses of the BCC recipients. The rule of display is the same as the recipient line, and the BCC recipients are also no more than 8. If there is not BCC recipient, there is not content behind “BCC:”.
- Display “Memory Size:” and after it is the memory size of the MMS. The format is “xKB”.
- “Pages:” is displayed and then is the number of the pages including in the MMS.
- “Objects:” is displayed and then is the number of the objects including in this MMS.
- Display “Priority:” and then is the priority of the MMS.
- If the content is more than the display area, in the right a scroll bar is displayed, which shows the current position and proportion.
- The bottom line displays the left softkey: “OK”, right softkey is “Back”.

The second kind is used to show the information of an inbox MMS or a new received MMS. The contents displayed on this screen are:

- The title displays “Detailed Info”;
- Display “Sender:” and then display the names/numbers or the e-mail addresses of the sender. If the width of a text is larger than the allowable width the text will be displayed in the next line.
- Display “Subject:” and then display the content of the subject. If the width of a text is larger than the allowable width the text will be displayed in the next line.
- Display “Memory Size:” and then display the memory size of the MMS in the format “xKB”.
- “Pages:” is displayed and then is the number of the pages including in the MMS.
- “Objects:” is displayed and then is the number of the objects including in this MMS.
- Display “Receiving time:”. Secondly if the selected MMS has been read (downloaded)

the screen displays the downloading time of the MMS in the format “dd/mm/yyyy”.

If the selected MMS has not been read the screen displays nothing.

- Display “Priority:” and then is the priority of the MMS.
- The bottom line displays the left softkey: “OK”, right softkey is “Back”.

5.7.6.5. Inbox

Enter inbox, the mms that the user received before display on the screen. The contents displayed are:

- Title: displays “Inbox”.
- Middle of the screen: Display the mms list. To the left displays the subject of the mms. Before subject, displays icons to show whether the message has been read and the mms priority. If the MMS has no subject, then the system displays “No subject”. The latest mms display on the first position of the list.
- The bottom line displays the left and right softkey functions: the left soft key is “Option” and the right softkey is “Back”.

5.7.6.6. Sent message box

Enter Sent message box, the mms that the user sent successfully before display on the screen. The contents displayed are:

- Title: displays “Sent Message Box”.
- Middle of the screen: To the left display the subject of mms, one MMS a line. Before subject, displays icons to show the mms priority.
- The bottom line displays the left and right softkey functions: the left soft key is “Option” and the right softkey is “Back”.

5.7.6.7. Outbox

Enter outbox, the mms that the user sent unsuccessfully before display on the screen. The contents displayed are:

- Title: displays “Outbox”.
- Middle of the screen: To the left display the subject, one MMS a line. Before subject, displays icons to show the mms priority.
- The bottom line displays the left and right softkey functions: the left soft key is “Option” and the right softkey is “Back”.

If the user selects a mms and press “OK” or press “View” in the “Option”, then enter mms playing screen and plays the message. The following operation please refers to 5.7.6.3. Preview and playing.

5.7.6.8. Draft box and Template box

Enter draft box, the mms that the user saved display on the screen. The contents displayed are:

- Title: displays “Draft box”.
- Middle of the screen: One MMS a line, to the left displays the subject of the listed MMS. Before subject, displays icons to show the mms priority.

- The bottom line displays the left and right softkey functions: the left soft key is “Option” and the right softkey is “Back”.

Enter template box, the mms that the user saved as template display on the screen. The contents displayed are:

- Title: displays “Template box”.
- Middle of the screen: One MMS a line, to the left displays the subject of the listed MMS. Before subject, displays icons to show the mms priority.
- The bottom line displays the left and right softkey functions: the left soft key is “Option” and the right softkey is “Back”.

If the user selects a mms in draft box or template box and press “OK” or press “View” in the “Option”, then enter mms playing screen and plays the message. The following operation is same as 5.7.6.3. Preview and playing

5.7.6.9. MMS settings

The system provides setting functions that allow users to set the MMS center and realize some personality settings.

Enter “mms setting” menu, many options display on the screen. The left softkey is “Ok”, and the right softkey is “Back”. The user can press “Up”/”Down” key to select an item. The sub menus in the “Settings” menu are as follows:

MMS center

Select this menu, and press “OK” key, the user can enter the “MMS Center” editing screen and input the center address, and the left softkey is “OK”, and the right softkey is “Back”.

Sending

Here the user can set the settings about sending, include:

Validity period

Select this menu, and press “OK” key, the user can select the time that the MMS is kept in the MMS center. There are four choices: “1 hours”, “12 hours”, “1 day”, “1 week” and “max”. The default time is the max, and the left softkey is “OK”, and the right softkey is “Back”.

Read report

Select this menu, the users can choose “on” or “off” menu. The default setting is “off”.

Delivery report

Select this menu, the users can choose “on” or “off” menu. The default setting is “off”.

Priority

The user can set the priority of the new edit MMS. The default priority is “Normal” and the other two are high and low.

Reply charging

Select this item, and press “OK” key, system enter the “Reply charging” screen. On this screen, there are 3 sub menus: “Reply charging”, “Reply charging deadline”, “Reply charging size”, and the left softkey is “OK”, and the right softkey is “Back”.

➤ Reply charging: select this item, it will give 3 options: “Off”, “On”,

“Text only” , and the left softkey is “OK”, and the right softkey is “Back”.

- Reply charging deadline: select this item, it will give 3 options: “1 day”, “1 week”, “Max” , and the left softkey is “OK”, and the right softkey is “Back”.
- Reply charging size: select this item, it will give 3 options: “1 kb”, “10 kb”, “Max” , and the left softkey is “OK”, and the right softkey is “Back”.

Show number

Select this menu, the users can choose “Yes” or “No” menu. The default setting is “Yes”.

Auto save

Select this menu, the users can choose “on” or “off”. The default setting is “off”.

Page timing

Select this menu, the users can input time in editor.

Delivery time

Select this menu, and press “OK” key, the user can select the delivery time. There are four choices: “Immediate”, “In one hour”, “In 12 hours”, “In 24 hours”. The default setting is the “Immediate”.

Retrieval

Select this item, and press “OK” key, system enters the “Retrieval” screen. On this screen, there are 4 sub menus: “Home network”, “Roaming network”, “Send read report”, “Delivery report allowed”, and the left softkey is “OK”, and the right softkey is “Back”.

- Home network: select this item, it will give 2 options: “Automatic”, “Always ask” , and the left softkey is “OK”, and the right softkey is “Back”.
- Roaming network: select this item, it will give 3 options: “Automatic”, “Always ask”, “Restricted” , and the left softkey is “OK”, and the right softkey is “Back”.
- Send read report: select this item, it will give 3 options: “On request”, “Always”, “Never” , and the left softkey is “OK”, and the right softkey is “Back”.
- Delivery report allowed: select this item, it will give 2 options: “Yes”, “No” , and the left softkey is “OK”, and the right softkey is “Back”.

Filters

Select this item, and press “OK” key, system enter the “Filters” screen. On this screen, there are 10 sub menus: “Immediate server”, “Immediate limit”, “Treat as delayed”, “Max retrieval size”, “Anonymous senders”, “Personal message”, “Advertisement message”, “Informational message”, “Auto message”, “String message”. The left softkey is “OK”, and the right softkey is “Back”.

- “Anonymous senders”, “Personal message”, “Advertisement message”, “Informational message”, “Auto message”: select these items, it will give 2 options: “Reject”, “Allow” , and the left softkey is “OK”, and the right softkey is “Back”.
- “Immediate server”, “Immediate limit”, “Max retrieval size”, “String

message”: select these items, it will enter a text edit box, the user can input string in it, and the left softkey is “OK”, and the right softkey is “Back”.

- “Treat as delayed”: The users can choose “on” or “off” menu. The default setting is “off”.

Network

Select this item, system enter the “Network” screen. On this screen, there are 8 sub menus: “Connection type”, “Network account”, “WAP gateway”, “Login”, “Password”, “Realm”, “Secure port”, “HTTP port”, and the left softkey is “OK”, and the right softkey is “Back”.

- Connection type: select this items it will give 3 options: “HTTP”, “WSP CL”, “WSP CO”, and the left softkey is “OK”, and the right softkey is “Back”.
- “WAP gateway”, “Login”, “Password”, “Realm”, “Secure port”, “HTTP port”: select these items, it will enter a text edit box, the user can input string in it. The left softkey is “OK”, and the right softkey is “Back”.
- Network account: Two choices “BMCC GPRS”, “BMCC CSD”.

5.7.6.10. Capacity

Enter this menu to display the number of mms respectively saved in inbox, outbox, draft box, sent message box, template box. And also display the used capacity and the free capacity.

5.7.6.12. MMS Recieving

When new MMS arrive, the system enters the new event screen which displays a new MMS icon and a new MMS arrival prompt, for example: “2 new MMS”. In this screen

- If the user presses the middle key or the left softkey, the system enters the MMS inbox. In the inbox selecting the new MMS and pressing the middle key gets the system to download..
- If a new MMS can not be downloaded because of the network, the system will prompt users, and set the icon in the inbox to be unread and displays an unread MMS icon in the idle screen.
- If the “C” key, the red key or the right softkey is pressed, the system returns to the idle screen and displays a unread MMS icon on the screen. Once the prompt information is removed from the idle screen, the user need to enter “Inbox” to read messages. In the inbox list the function of the middle key is downloading.
- If the system is set as “Silent”, the system doesn’t play sounds including in a MMS.

5.7.9 QQ (Java based, Provided by 3rd party.)

5.7.10 STK Service

STK (SIM TOOL KIT) allows the SIM card based on intelligent card to run its own application software.

STK card can receive and send GSM message data, acting as an interface between SIM and messages, and meanwhile, it allows the SIM card to run its own application software. These functions are often displayed in the Handset screen, which can be activated by software. Friendly text menus take the place of the mechanical way of “dialing-listening-answering”, thus enabling

the user to carry out complicated information searching and transaction by pressing keys.

STK provides SIM card value-added services with a developable environment, that is, a simple and operable development platform. A Handset that supports SIK card can provide additional STK menus, contents of which are read by the Handset from the STK card and can't be modified by the user. Depending on the type of STK, contents of the menu may vary and may be changed via air interfaces.

This Handset supports different STK value-added services depending on the telecom operator. For example, Beijing Telecom currently provides the following services:

- Personal communication
 - Greetings
- Public information services
 - Weather forecast
 - Flight
 - News
- Stock
 - Stock inquiry
 - Index inquiry
 - Price inquiry
- Customer service
 - Charge inquiry
 - Service consultation
 - ICBC

5.8 PIM

5.8.1 Phonebook (Please refer to the Handset part)

5.8.2 Calendar & Schedule

The number of events is not exceed 1000. The content of the event is up to 1K words, and the subject is up to 40 words.

With Calendar & Schedule, the user can create new event, view event list, delete event or modify event contents.

When creating a new event, the user is required to input information related with the event, and then to select whether or not to set prompt mode, and whether or not need periodical repeated prompts. It stores the prompt date and time of each event. When the current time is the same as the prompt time, then the Handset will prompt the user by event prompt sound, vibration and LED and display new event arrival picture in the idle screen and display the event content.

The validate date is from 1971/1/1 to 2035/12/31

Calendar includes three types of view:

Daily view

Set one hour as a period of time (such as 0:00, 1:00, ... 23:00) and list all events of the

selected date (several events may occur in one period of time, if the user create many events in same period of time, then divide several line to display each event title and the period time only display one line and not change.). For each piece of the list, if there is an event, then the title (the selected line can scroll) will be displayed behind the period of time.

At the same time, Daily view displays the date and week (on days of solar terms, the name of solar term is displayed instead) of Chinese calendar. The user can view the event list of previous/next day by pressing Left/Right keys and move to different period of time by pressing Up/Down keys (no loop).

For each event in a period of time, press OK key. If the event is already existed, view it; If not, create new. And the date and time of new event is the user select day and time.

Through the option menu, the user can:

- New:

the user will be required to set title, the start date, start time, terminating time (no earlier than the start time), contents, prompt mode and repeat mode of the event.

Before save the new event, should judge whether the terminative time is earlier than the commencing time, if it is, then popup a info dialog to prompt “End time earlier than the start time”.

The title of the event can't be null.

If storage is full, the Handset will display “Space full” after the user selects “New”.

When editing date and time, the Handset will display default values of the current date and time(the start time is the current time, and the end time should later 30 minutes than the start time). So the user can edit or directly confirm, and then input detailed contents of the new event.

The Handset provides the following prompt modes: On time, 5 minutes ahead, 10 minutes ahead, 1 hour ahead, 1 day ahead, 1 week ahead, No prompt.

The Handset provides the following repeat mode: No repeat, Everyday, Every week, Every month or Every year.

- Monthly view: enter Monthly view.
- Weekly view: enter Weekly view.
- Delete: delete selected/due/all events.
- Enter date: the user can check by any date.
- Capacity: In Capacity the user is allowed to see the number of saved events and the number of out-of-date events.
- Settings:

Default view in calendar: Monthly view/Weekly view/Daily view.

Weekly type: the user can set a commencing date of a week (Monday or Sunday).

In daily view, the right softkey is “Back”.

Weekly view

Weekly view is grid view. It is seven days of a week breadthways, 24 hours (four hours for each row. such as 0:00-4:00, 4:00-8:00 ... 20:00-24:00) lengthways. If an event occurs in a certain

period of time in a certain day, then a sign will be marked on the corresponding period of time (one event may span several periods of time, even date).

In addition, Weekly view displays which week it is and the selected date.

The user can press Left/Right key to translate to previous/next day (If it is the first day, pressing Left key will skip to last week. If it is the last day, pressing Right key will skip to next week). Pressing Up/Down key can translate to previous/next week.

For each day, the user can press “OK” key to enter Daily view of the corresponding date.

Through the option menu, the user can:

- Daily view: enter the daily view of the corresponding date.
- New: (same as that of the day view)
- Monthly view: enter monthly view.
- Delete: delete due/all.
- Enter date: the user can check by any date.
- Capacity: In Capacity the user is allowed to see the number of saved events and the number of out-of-date events.
- Settings: (same as that of the day view)
- Exit: Exit from calendar.

In weekly view, the right softkey is “Monthly view”.

Monthly view

Monthly view is similar to that of Monthly Calendar. If there is a event in a day, a sign will be marked on the corresponding day (an event may span several days).

In addition, Monthly view displays which week it is at the beginning of each line, as well as lunar calendar and solar calendar of the selected date on top of the calendar.(both need year,month,day show)

The user can press Left/Right key to translate to previous/next day (If it is the first day, pressing Left key will skip to the last day of the last month. If it is the last day, pressing Right key will skip to the first day of next month). Pressing Up/Down key can move to the same day of different week and different month.

For each grid, the user can press “OK” key to enter Daily view of the corresponding date.

Through the option menu, the user can:

- **Daily view**: enter the day view of the corresponding date.

- New: (same as that of the day view)
- Weekly view: enter weekly view.
- Delete: delete due/all.
- Enter date: the user can check by any date.
- Capacity: In Capacity the user is allowed to see the number of saved events and the number of out-of-date events.
- Settings: (same as that of the day view)
- Exit: Exit from calendar.

In monthly view, the right softkey is “weekly view”.

When the user select an event and see the detailed info, on detailed info screen, the user can press “Back” right soft key to back, and can press “Option” softkey to “add”, “modify” or “delete” the event.

5.8.3 Notepad

The file numbers are only limited by flash.

The existing file list is displayed after entering Notepad (the list is sorted by the finishing time of the file). If there is no file, then directly enter “Notepad Edit” screen. Each piece of the list includes the name of the file (filename). On this screen ,the right softkey is “Back”, and the left softkey is “Option”.

The user can perform the following operations through option softkeys:

- New: an empty file will be opened and the user can edit it.
- Open: the selected file will be opened and checked, as well as edited and modified. If the file is exceed 64k, then the phone only can open 64k content by read-only mode.
- Delete: delete selected files.
- Rename: rename the selected files
- Detailed info

When create or open a file to view and edit, and enter “Notepad edit” screen. The following operation can be done through option menu as well:

- New: the current file will be saved automatically and a new file will be created.
- Save: the user is asked to input the file name if the file is new create. If the file is exist, then save the modification. If the user don’t input name, then use the current system time as the file name.
- Save as: the user can save to another file. If the user don’t input name, then use the current system time as the file name.
- Delete: delete selected text. If the user not select any text, then this option won’t display.
- Search: Prompt the user to input a text to search and search direction. It begins

to search after user's confirmation. If found, the found string will be highlighted.

- Search next: Search from the cursor position.

5.8.4 World time

World time function helps the user find out the time of major cities in each time zone. There must be at least one major city in each time zone.

World time function displays the names and time of two cities simultaneously. One is local city, the other is out-of-town.

The user can select the out-of-town city by [Up]/[Down]/[Left]/[Right] key. [Left]/[Right] key will move according to longitude and [Up]/[Down] key can select different city in a same time zone.

When the user select an city, the left softkey "Option" include:

Set as local: The user can take the selected city as local.

daylight saving: (This option is effective for the city with daylight saving time) The user can set/unset daylight saving time. If the select city is open daylight saving time, then this option is "unset", if the select city is close daylight saving time, then this option is "set".

5.8.5 Calculator

C8000 only supports Standard calculator.

Standard calculators support the following function:

Integer, floating point numbers, positive numbers and negative numbers operation.

Calculator can execute operation of addition /subtraction /multiplication /division.

Support Clear, MC,MR,MS,M+, wherein:

- Clear: Clear the digit input editor.
- MC: Memory Clear.
- MR: Memory Read.
- MS: Memory Store.
- M+: Memory Plus.

Each operand in the edition window can have up to 9 digits.

The operational precision of floating point numbers is up to 7 digits after the radix point, and the abundant part will be rounded up (for example, 0.123456789 is rounded to 0.1234568).

On this screen, the left softkey is "Option" include:

- Clear: Clear the digit input editor.
- MC: Memory Clear.
- MR: Memory Read.
- MS: Memory Store.

- M+: Memory Plus.

No matter the user select “Clear” from option, or delete all operands, the editor should display “0”, not null.

5.8.6 Alarm clock

This Handset has 24-hour alarm clock function. The clock function can also be activated in power off state.

There are three groups of alarm clocks in total, and the user can activate or deactivate alarm clocks.

In the alarm clock edit window, press OK key to move focus down, press up/down key to choose time editbox, repeat setting of the three alarm clocks and alarm ring. When the focus on the repeat setting combobox, press “Left”/”right” key to select repeat mode. When the focus on the time editbox, the user can input alarm clock time in text box. As long as the repeat setting is not set to close, then this clock is activate. There are five modes for the user to make choice (use left/right key)

- Once: Activate the alarm clock at a set time in a certain day
- Everyday: Activate the alarm clock at a set time each day
- On weekdays: Activate the alarm clock at a set time each working day (From Monday to Friday)
- Except Sunday: Activate the alarm clock at a set time each working day (From Monday to Saturday)
- Close

When the alarm clock time is on, then the ringer is ringing. It will persist 1 minutes till the user press any key to stop it.

5.9 Mobile Office

5.9.1 PC sync and backup (PC)

This section please refer to <C8000 PC Download Tools URD>

5.9.2 PC sync and backup (Phone)

When MS is successfully connected with PC, data or file can be received/sent by USB interface.

Since Phone just receives downloaded/uploaded signal passively and provides service, no operation should be performed on MS. MS affects nothing except “Quit”.

MS screen will display “Connected with PC” animation as soon as PC is connected with MS.

【Quit】 Right softkey: During connection or after connection of PC and MS, the user can disconnect PC and MS by this key.

5.9.4 Chinese-English 2-way Dictionary

When Chinese-English 2-way Dictionary is activated, the user can search for and browse Chinese and English words, view phonetic symbol and grammar of the search result.

Enter Chinese-English 2-way Dictionary:

- Title bar: Display Dictionary.

- Input Bar: Input the word to search in Input area.
- Browse area: Display all words with the initial letters the user input. If the user does not input any character in Input area, it will display the word list from the very beginning in Browse area.
- [Option](Left softkey): Including Spelling Check (if the user fine Chinese word, this option won't be display) , Page up , Page down.
- [Back] (Right softkey):
Spelling Check is available only that the user inputs three or more letters. Otherwise it will appear gray.

5.9.4.1 Smart identification

This dictionary provides Smart Identification function. When the user inputs English words, the corresponding Chinese translation will be displayed on the screen, and vice versa.

5.9.4.2 Word Matching List

In the process of inputting words, all words similar to the part already input will be displayed on the screen before the user presses [OK] key. For example, if the user wants to search for the word “phone”. When he has input the first three letters “p”, “h” and “o”, all the words and phrases starting with “pho” will be displayed on the screen.

If the word that the user wants to find is displayed, the user can press Up/Down key to select the right word, then press [OK] key or double click the word in the list with a touch pen to view it. When there is no such a word in the list, the user can input the complete word in the Input area and press [OK] key.

If the user is not sure about the word he inputs, he can press Left softkey [Option] and select “Spelling Check” in the pop-up menu. Please refer to 5.9.4.4 Spelling Check for details.

5.9.4.3 DJ phonetic symbols

To search for English words, this dictionary provides DJ phonetic transcriptions.

5.9.4.4 Spelling Check

The Handset provides spelling check to the word input by the users and lists all similar words, including one extra letter, one missing letter, and one modified letter or with the prefix or suffix deleted.

For example, when the user inputs the word “skale” and there is no such a word in the dictionary, the user can press [Option] (Left softkey) and select Spelling Check in the pop-up menu. Then all correct words similar to the word input by the user will be displayed in “spelling check” screen. On this screen, you will see:

Title: Spelling check

Main area: list all the correct words similar to the word input by the user

Left softkey: ”Stop”/”OK”

Right softkey:”Back”

During searching, the left softkey is empty, the right softkey is “Stop”. After the search is end, the left softkey is “OK”, the right softkey is “Back”.

If the correct word already display, the user can press “C” or right softkey “Stop” to stop searching, and then the right softkey change to “Back”. The user can press Up/Down key to select a word in the list and press “OK” key or left softkey, or double click the word with the touch pen to enter “Browser” screen to see the detailed grammar of this word.

5.9.4.5 Grammar

To look up a word, the user must be provide not only the basic information of the word, but also the information on the grammar, past tense and past participle of the word. If the user input a metabolic word, the dictionary should also can find it and give the prototype.

5.9.4.6 Browse

When the user is browsing the explanation of a word:

- Title bar: Display dictionary
- Toolbar: Provide shortcut operation, such as the Previous Word, the Next Word.
- Browse area: Display all grammars of the word being browsed. A scroll bar will display if one screen is not enough. Press Up/Down key to view it.
- Left Key: Go to the previous word.
- Right Key: Go to the next word.
- [Option](Left softkey): Including Last word, Next word
- [Back](Right softkey)

Under the title bar, there is an “input” button and a text box. In the text box, it will display the word that the user find and view now, the Browse area displays all the grammar of this word. If the user wants to find another word, he can use touch pen to click “input” button and then back to previous screen, or press “C” key, right softkey to back to previous screen to find a new word.

5.9.5 Stopwatch

The Handset provides stopwatch function. Press [Start] (the left softkey) to start timing and [Back] (the right softkey) to return to the previous page.

The commencing time is 00:00.0. Press [start] (the left softkey) or “OK” key to start timing when the left softkey changes to “Pause” and the right softkey changes to “Clear”. Press “Pause” (the left softkey) to pause, then the left softkey changes to “Continue”. Press “Continue” (the left softkey) again to continue, then the left softkey changes to “Pause”. Under any circumstance, pressing “Clear” (the right softkey) backs to initial screen. See the above Figure.

The user also can use touch pen to click “Start” button on the screen, and then the “start” button change to “Stop”, and the “Next” button on the screen is active. During timing, press direction key or use touch pen click “Next” can save the current time, and the stopwatch is going on. Press direction key or Click “Next” again save the current time again. After the stopwatch is end, the user can press direction key to view reserved records.

Up to 9 group data can be saved, the user also can press number key to view the reserved records.

5.9.6 Count-down timer

The Handset provides count-down timer function. The user can set alarm time.

when User enter count-down timer, there are two cases: 1. if currently the timer is already on, then the left softkey is "Reset", user can click it to stop the timer. 2. if currently the timer is off, then the left softkey is "Start", and the focus is on the first number of the input area. User can click it to start the timer after he set the left time.

Enter "Count-down timer", the focus first on input area. After input time, press "OK" key to start/reset timer. The left softkey is "STAR/Reset", right softkey is "Back". If the count-down timer is on, the timer won't stop till the user close it or the time is over even though the user exits from timer.

If the user active the count-down timer, the time which display on the screen should update by real time, if the time passed 1 minute, then the count-down timer time reduce 1 minute.

When the time is on, then the ringer is ringing. It will persist 30 seconds till the user press any key to stop it. The ringer of count-down timer is same with the ringer of alarm clock.

5.10 Games

5.10.1 Java Application

Java games can be downloaded from the Internet and run on the Java Virtual Machine. At least 1~2 Java games are already preset in the Flash and more games can be downloaded from the Internet.

Enter Java Application you will see the screen:

- Title bar: "Java"
- Browse area: Display game packages list and game folders list. The downloaded game or game package was arranged by download time. A scroll bar will display if one screen is not enough. Press Up/Down or Left/Right key to view it.
- Left softkey is "Option": If users select a game package, then the "option" includes "Enter", "Update", "Info", "Setting", "Delete", "About", "Move". If the user select a game folder, then the "Option" includes "Enter", "Add new folder", "Delete", "Rename", "Exit".
- Right softkey is "Install": Install a new game package.

The user can press "OK" key to enter the game package or the game folder he selected. For each operation of left softkey "Option" please see 5.10.1.1 and the right softkey "Install" operation please see 5.10.1.2.

5.10.1.1 Operation for a game

Enter

Select this sub menu to enter the game package or game folder that the user selected. On this screen you will see:

- Title bar: Display the path and the name of the game package or game folder that the user entered. For example, if the user entered a folder or package named “game” under JAVA, then the title will display “Java\game”, if the user entered a folder or a package named “gamepackage1” under folder “game”, then the title will display “Java\game\ gamepackage1”.
- Browse area: Display games list or sub game package/folder in this game package. A scroll bar will display if one screen is not enough. Press Up/Down or Left/Right key to view it.
- If the user selects a game, then the left softkey is “Launch”, if the user selects a game package or game folder, then the left softkey is “Option”, and the items in this “Option” please refer to above paragraphs.
- Right softkey is “Back”: Press this right soft key or press “C” key to back to the previous screen.

Info

Select this sub menu it will display the information of the game package that the user selected. For example, it will display the size, version, vender and content of this game package. On this “Info” screen, you will see:

- Title bar: “Info”
- Browse area: Display the information of this game package.
- Right softkey is “Back”: Press this right soft key or press “C” key to back to the previous screen.

Remove

Select this sub menu to delete the game package or game folder that the user selected. Before delete, it should popup a dialog to prompt “Are you sure you want to remove... ”. Select “Remove” or press “OK” key to delete, select “Cancel” or press “C” key to cancel and back to the previous screen.

Update

Select this sub menu to update the game package that the user selected. Before update, it should popup a dialog to prompt “Are you sure you want to update... ”. Select “OK” or press “OK” key to delete, select “Back” or press “C” key to cancel and back to the previous screen.

Setting

About

Select this sub menu it will display the information of JAVA Copyright. On this “About” screen, you will see:

- Title bar: “About”
- Browse area: Display the information of Copyright.
- Right softkey is “Back”: Press this right soft key or press “C” key to back to the previous screen.

Rename

Select this sub menu it will open the edit screen, the user can input new name for this folder.

Add new folder

Select this sub menu it will add a new folder under the current folder, the default name is newfolder1, 2,3. The user can edit new folder name in the edit box in the bottom of the screen.

To be attention, the user just only can create one level folder and can't create another folder under the folder he created.

Move

The user can user this sub menus to move a game or a game package into another folder..

5.10.1.2 Install a new game

The user can install a new game from explorer or download from the Internet. Press "Install" button to install new game.

Enter new

If the user selects "Install, then it will enter the next screen, on this screen you will see:

- Title bar: Enter new.
- Edit area: a text editor, the user can input the URL. Under edit box, the url that the user saved before listed on the screen.
- Left softkey is "Option": Including "Go", "Save", "Add from explorer", "Clear all".
- Right softkey is back.

If the user selects "Go" and the URL search successfully, then install the game, press "Cancel" or "C" key to return.

If the user selects "Save", then save the new url and display on the screen. New saved url will display in the top of the list. There are most 5 urls in the list, so if more than five, then delete the first saved url in the list and add new saved url at the bottom of the list.

Add from explorer

If the user selects "Add from explorer", then it will open the java game folder that is already preset in the mobile, this folder is especially use to save the java game downloaded from PC. The user can select an available game package press "OK" key to install. Before install the game, it will go back to JAVA application and the user should select a folder first and then press left softkey "Install" to install, press "Cancel" or "C" key to return.

5.10.2 Local Games

At least five embedded local games, including classical (Tetris), shooting (Planes), intellect (Boxman), Poker (Black jack), recreational (Marbles). New games can be installed from PC.

Options of each game include:

Start: Start the game.

Set level: Select game speed and enemy number (set in need).

Stage: Select game map and gate (set in need).

Heroes: When the player breaks a record, he is asked to enter his name.

Help: Help information.

5.11 System Configuration

5.12 GUI/MMI

5.12.1 panel

5.12.1.1 Six Sections

There are 6 blocks on the panel (6 types): Handset, Messages, Multimedia, Mobile Office, Settings and User define. Preset application program is put into the first five blocks and the downloaded programs and delete-able programs are put into User define.

5.12.2 Handwriting

This function includes simple Chinese, Traditional Chinese, English, characters and numbers. When it is activated, Handwriting Box will appear for the user to write in Chinese characters. The chinese will be recognized and accepted as an input word after a while. A copybook broken line will be displayed in the center of the Handwriting Box.

This function depends on Handwriting Vendor.

Once turn on hand writing, some common used candidate character will display on the candidate line. For different input method, the candidate character is different. The original candidate character is as follows:

Chinese : 的、一、不、是、了、我、人、在、有、这

numeric: 0、1、2、3、4、5、6、7、8、9

English: a、b、c、d、e、f、g、h、i、j

phrase: 的、一、不、是、了、我、人、在、有、这

symbol: .,?!@*() ;:

5.13 Drivers

5.14 Other

5.14.1 Shared lib

Shared Lib provides related API and is used by developers.

5.14.2 Bootloader

BootLoader is the boot program for start-up and can be upgraded. The user can do testing in BootLoader.

5.14.3 Testing

Testing program mainly tests hardware conditions of the system, such as RAM、LCD、KB and SOUND etc. Press a special key (“1”~“9”) + RESET key to enter Testing mode and check all the hardware in order.

Annex A: C8000 Menu Tree

[1] Handset

Demo (Only when there is no SIIM card)

Phonebook

Enter

PB mixed list

Add new

IP dial

Modify

Delete

Send SMS

Send name card

Speed dial

Copy to phone (SIM card)

Move to phone (SIM card)

Copy and edit

Dial

Search

By surname

By keyword

By initials

Add new number

Capacity

New entry storage

SIM card

Phone

Delete all

SIM card

Phone

Copy all

SIM to phone

Phone to SIM

Move all

SIM to phone

Phone to SIM

Call 24ard

Group settings

IP number

Own info

Modify own info

Delete own info

Send own info

Display own info

Call list

Recent Call

IP call

Send message

Delete

Save (if the number is not in Phonebook)

Call

Call meters

Last call

Last GPRS call

Call timers

Outgoing call timer

Incoming call timer

Reset timers

Call forward

Unconditional

Enable

Phonebook

Voice mail

New number

Disable

Status

When busy (the same as “Unconditional”)

No reply (the same as “Unconditional”)

Not reachable (the same as “Unconditional”)

Cancel all

Status

Call settings

Minute reminder

On

Call 24ard

Off
Any key answer
On
Off
Auto redial
On
Off
Auto answer
On
Off
Active flip
On
Off
Call waiting
GSM call
On
Off
Status
GPRS call
On
Off
Send ID
On
Off
Default
Status

Security settings

PIN code
On
Off
Call barring
Roaming calls
All incoming calls
Local calls only
All outgoing calls
International calls
On
Call 24ard

off

Inquire

Change Code

Change PIN

Call barring

Guard settings

Power on protection

On

Off

Change password

Network Settings

Preferred networks

Show preferred

Delete preferred

Add available

Add existing

Add network code

Attach GPRS

Always

During PDP session

Register again

In-flight mode

On

Off

[2] Messages

SMS

Write message

Option

Send now

Save

Save as user defined

Namelist

Send&Save

Insert user defined

Inbox

SMS list

Call 24ard

Option

- Reply
- Forward
- Delete
- Save to favorites
- Store number
- Dial

Sent box

SMS list

Option

- Send
- Forward
- Delete

Unsent box

SMS list

Option

- Send
- Forward
- Delete

Favorites box

SMS list

Option

- Reply
- Forward
- Delete
- Save to favorites
- Store number
- Dial

Settings

Service center

Input number

Validity period

- 12 hours
- 1 day
- 1 week
- Maximum

Status report

On

Call 24ard

Off

Reply path

On

Off

New entry storage

SIM card (Default)

Mobile phone

User define sms

Add

Send

Modify

Delete

Delete SMS

Delete all

Inbox

Sent box

Unsent box

Favorite

SMS in SIM card

SMS in phone

Delete 1 day before

Delete 3 days before

Delete 10 days before

Delete 1 month before

Delete 3 months before

Delete 6 months before

Capacity

Voice mail

Call voice mail

Voice mail number

Broadcast SMS

Reception

On

Off

Channel list

MMS

Write MMS

Add text

Call 24ard

Edit text(if already add text)

Insert picture

Insert audio

Insert new page

previous page (If the user insert multi pages)

Next page (If the user insert multi pages)

Delete page (If the user insert multi pages)

Preview

Page timing

Text color

Text color,all page

Background color

Remove objects

Inbox

Inbox list

Options

View

Reply

Reply to all

Forward

Delete

Delete all

Refresh

Detailed info

Back

Sent Message Box

Outbox list

Options

View

Delete:

Delete all:

Edit:

Send now

Refresh

Detailed Info

Back:

Back

Outbox

Call 24ard

Option

View

Delete:

Delete all:

Edit

Send now

Refresh

Detailed Info:

Back:

Back

Draft box

Draft box list

Option

View

Edit message

Delete

Delete all

Send now

Refresh

Detailed info

Back

Template box

Template box list

Option

View

Create message from Template

Delete

Delete all

Refresh

Detailed info

Back

MMS settings

MMS Center

Sending

Validity period

1 hours

12 hours

Call 24ard

1 day

1 week

Max

Read report

On

Off

Delivery report

On

Off

Priority

Low

Middle

High

Reply charging

Reply charging

Reply charging deadline

Reply charging size

Show number

On

Off

Auto save

On

Off

Page timing

Delivery time

Immediate

In one hour

In 12 hours

In 24 hours

Retrieval

Home network

Roaming network

Send read report

Delivery report allowed

Filters

Immediate server

Immediate limit

Treat as delayed

Call 24ard

Max retrieval size
Anonymous senders
Personal message
Advertisement message
Informational message
Auto message
String message

Network

Connection type
Network account
WAP gateway
Login
Password
Realm
Secure port
HTTP port

Capacity

WAP

Profiles list

Add
Delete
Edit
Connect/Release

WEB

Option

Forward
Backward
Homepage
Refresh
Bookmarks
 Add Bookmarks
 Edit
 Go
 Delete
 Delete all
History
 Go
 Delete

Clear all

Settings

Edit homepage

Select Profile

rename Profile

Connection

Data account

Connection Type

Timeout

Proxy address

Proxy port

Sec. proxy port

Proxy user name

Proxy password

Proxy realm

Security

Browser options

Enable CSS

Enable Refresh

Enable narrow render

Show image

Show movies

Show flash

Play sounds

Load objects with no MIME

Profiles

Rename current profile

Save current settings

Profile list

Cache

Cache mode

Clear cache

Cookies

Enable Cookies

Clear Cookies

Push settings

Push SL settings

Push security

Clear history list

Enter select mode

Set as homepage

Offline pages

Quit

STK

(The menu can be available only with the SIM which has STK function for GSM service.)

[3]Multimedia

DC

Option

Meter mode

Single(default)

Continuous

Self-timer 10 sec

White balance

Auto(default)

Sunny

Cloudy

Incandescent

Fluorescent

Image quality

Normal

Fine(default)

Super fine

Image size

1280*1024

640*480

320*240(default)

160*120

Photo effect

Off(default)

Neutral

Vivid

Sepia

Cold

Reversal

B&W

Exp.compen

Call 24ard

Night mode
On
Off
Storage location
SD card
Phone(default)
Display
On(default)
Off

DV

Option
White balance
Auto(default)
Sunny
Cloudy
Incandescent
Fluorescent
Image size
320*240(default)
160*120
Photo effect
Off(default)
Neutral
Vivid
Sepia
Cold
Reversal
B&W
MMS mode
On
Off(default)
Exp.compen
Storage location
SD card
Phone(default)
Display
Call 24ard

On(default)

Off

Record

Option

Audio player

Record again

Storage location

Send via MMS

Tag-It

Option

Undo

Redo

Copy

Cut

Paste

New

Open

Send MMS

Save

Save as

Cancel edit

Back

Image browser

Option(For a single picture)

Browse

Delete

Edit

Send via MMS

Detailed info

Rename

Add frame effect

Option(in browser screen)

Zoom (Only in picture display screen)

Zoom in

Zoom out

Call 24ard

Fit in
Original size

Set as wallpaper
Delete
Edit
Send via MMS
Detailed info
Add frame effect

Audio player

Option

Play
Delete
Send mms
Detailed info
Rename
Flip exit

Video player

Option

Play
Delete
Select all
Send bt MMS
Detailed info
Rename
Flip exit

On

Off

[4] Mobile office

Calendar & Schedule

Day view

Option

New
Monthly view
Weekly view
Delete

Selected event

Call 24ard

Due event
All events
Input date
Capacity
Settings:
Default view
Monthly view
Weekly view
Daily view
Weekly type
Monday
Sunday
Week view
Option
New
Daily view
Month view
Delete
Due event
All events
Enter date
Capacity
Settings:
Default view
Weekly type
Exit
Month view
Option
New
Daily view
Week view
Delete
Due event
All events
Enter date
Capacity
Settings:
Default view

Weekly type

Exit

Notepad

Option (Notepad list)

New

Open

Rename

Delete

Detailed info

Back

Option (create or open a file)

New

Save

Save as

Delete

Search

Search next

Chinese-English 2-way Dictionary

Enter

Option

Spelling check-up

Page up

Page down

View explain word

Option

Last word

Next word

exit

Exit

Calculator

Option

CE

MC

MR

MS

M+

Alarm clock

Clock one

Time

Call 24ard

Repeat method

Once

Everyday

On weekday

Except Sunday

Close

Clock two

Clock two

Ring type

World time

Option

Set as local

Daylight saving

Stopwatch

Start

Exit

Count-down timer

Start/Reset

Sync

[5] Settings

Sounds settings

Ringr type

Ringer list

Ring volume & alert

Volume

Alert type

Ringe

Vibrate

Light

Message alert

Volume

Alert type

Ringe

Vibrate

Call 24ard

- Ringer setting
- Alarm clock
 - Volume
 - Alert type
 - Ring
 - Vibrate
- Ringer setting
- Calendar alert
 - Volume
 - Alert type
 - Ring
 - Vibrate
- Ringer setting
- Key tone
 - On
 - Off
- Touch panel tone
 - On
 - Off
- Power on/off tone
 - On
 - Off
- Battery alert
 - On
 - Off

Interface Settings

- Idle screen type
 - Digital
 - Analogue
 - Monthly view
 - World time
- Wallpaper
 - Option
 - Preview
 - Icon view
 - List view
 - Set as wallpaper
- Idle screen content

Time
Week
Chinese calendar
Wallpaper
Year and month

Screen theme

Theme list
Set (OK key)
Preview

Phone settings

Language

English
Simplified Chinese (简体中文)
Traditional Chinese (繁体中文)

Input method

T9 Simple Chin. Pinyin
On
Off
T9 Simple Chin.strokes
On
Off
T9 Traditional Chin. Zhuyin)
T9 Traditional Chin. strokes
T9eng
On
Off
abc
On
Off
123
On
Off

Power on greetings

Auto power on/off

Auto power on
On/Off
Time
Auto power off

Call 24ard

On/Off

Time

Brightness

LCD sleep interval

10 seconds

30 seconds

1 minute

3 minutes

5 minutes

10 minutes

Quick Settings

Normal

Enable

Personalize

Here are same with sounds settings except “Ringr type”

Change name

Silent

Meeting

Outdoor

Car

Clock settings

Hotkey settings

Keystroke list (Key2-9)

Function list

Touch panel adjust

Resource manager

File management

Open

Cut

Copy

Paste

Delete

Uoward

Select all

Program management

Factory settings

Call 24ard

**[6] User define
JAVA manager
Games**