



SED OPH-810R

User Manual





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Warning

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No part of this manual may be reproduced in any form or by any means without the written consent of Shenzhen SED Wireless Communication Technology Co., Ltd.

This manual describes the features and functions of the SED OPH-810R handheld only. Due to product version upgrades or other reasons, this manual is subject to change without notice. Unless otherwise stated, this manual serves only as an instruction manual. Any statements, information, and suggestions in this manual do not constitute a warranty of any kind, explicit or implied.

Version: B

Chapter 1 Getting Started

The wireless device described in this manual runs on GSM-R networks. For more information about applicable networks, consult your service provider.

Your handheld is a low-power radio transmitter and receiver. It receives and transmits radio frequency signals during use. When you use the handheld for communication purposes, the system for call processing controls the transmitted power level of your handheld.

Safety Precautions



Read the following safety precautions to avoid danger and comply with the law.

Children:

Store your handheld in a safe place beyond the reach of children. Do not let children play

with the handheld or its accessories. Improper use by children may damage the handheld or its accessories and cause injuries. Children may also swallow removable parts of the handheld, such as the SIM card and battery.

Environmental protection:

Do not dispose of the handheld or electronic accessories, such as the battery charger, headphone, and battery, with organic waste. Observe the local law, and recycle all parts of the product.

Traffic safety:

Strictly observe the local law and regulations governing the usage of handhelds when driving. If the local law allows you to use a handheld while driving a vehicle, follow these instructions:

- Focus on steering the vehicle and pay attention to traffic;
- Use the headphone to make calls;
- If driving conditions are not ideal, stop the vehicle at the roadside before using the handheld.

Do not place your handheld above or near the

airbag when it is unfolded as the expanded airbag generates a strong external force to cause injuries.

Consult your automobile manufacturer to ensure that electronic devices used in your vehicle are not affected by radio waves.

Public places:

Switch off your handheld in public places if required.

Airplanes:

Comply with the law. The use of handhelds on airplane interferes with flight controls. Switch off your handheld before boarding.

Near an explosion site:

To avoid interfering with demolition works, switch off your handheld at demolition sites or in places where it is necessary to switch off bi-directional radios. Observe rules and regulations.

Near dangerous articles:

Switch off your handheld at gas stations or near dangerous substances, such as fuel and chemical reagents.

Hospitals:

Switch off your handheld in hospitals and near medical devices.

Pacemakers:

Keep a distance of at least 15 cm between the handheld in standby mode and a pacemaker.

Do not place the handheld in a chest pocket. Use the ear the furthest away from the pacemaker to answer calls.

Switch off your handheld if you feel uncomfortable.

Hearing aids:

If you use a hearing aid, consult your doctor and hearing aid manufacturer to check if your hearing aid is sensitive to interference from handhelds.

Interference:

All handhelds may suffer from interference, thus affecting performance.

Headphone and batteries:

Using the receivers, headphones, speakers or earpieces at a high volume may result in permanent hearing loss.

Please check the model of the charger firstly

before using it with this handheld. This handheld is intended for use when supplied with power from the charger HKA00605008-3B.

Only use batteries and chargers approved by Shenzhen SED Wireless Communication Technology Co., Ltd. with the particular model. Using any other types of batteries and chargers will invalidate the approval or warranty, and may be dangerous. Please grasp and pull the plug instead of the cord when you disconnect the power cord of any enhancement. For a pluggable device, the socket shall be installed near the device and shall be easily accessible.

Note: *When inserting the battery charger to charge the handheld, do not remove the battery from the handheld or insert the battery charger into a handheld without a battery; otherwise, the handheld might be damaged.*

Do not short circuit the battery. If a metal object contacts the exposed electrode of the battery, short-circuiting occurs, which can cause damage or injuries. To prevent

accidental leakage, store charged batteries properly. Take care not to place the battery in your pocket, wallet or bag with other metal items.

Emergency calls:

Ensure that the handheld is switched on in a service area. Dial the emergency number in standby mode. Then, press the call key. Inform the operator of your location. Do not end the call without instruction.

Temperature range:

The temperature range for using the phone is -20°C to +55°C and the ambient temperature for adapter operation is 0°C to +40°C (Relative Humidity 20% to 80%).

Voltage range:

The voltage range of the phone battery is 3.6 V to 4.2 V.

Altitude:

It is recommended that the phone be used at an altitude from -100 m to 2500 m at minimum.

Specific absorption rate (SAR) information**THIS PRODUCT MEETS THE INTERNATIONAL RECOMMENDATIONS FOR EXPOSURE TO RADIO WAVES**

Your handheld is a radio transmitter and receiver. It is designed and manufactured to not exceed the limits for exposure to radio frequency (RF) energy defined by the international standards. These recommendations have been established by the International Commission on Non-ionizing Radiation Protection (ICNIRP) that forecasts a substantial safety margin for assuring the protection for all persons, regardless of age and health. The exposure recommendations for handheld use a measurement unit known as the SAR. The SAR limit recommended by the ICNIRP for the handheld used by the general public is **2.0 W/kg averaged over ten grams of tissue.**

While there may be differences between the SAR levels of various handhelds and at various positions, they all meet the international protection standards for

exposure to radio waves.

The highest SAR value for the OPH-810R handheld when tested for compliance against the standard is 0.668 W/kg for ICNIRP recommendation.

Tests for SAR have been conducted to use recommended operating positions with the handheld transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR levels of the handheld while operating are generally below the maximum SAR value. This is because the handheld is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to the base station antenna, the lower the power output. For limiting radio wave exposure, it is recommended to reduce the handheld call duration or use a headset. The purpose of those precautions is to keep the handheld away from the head and the body.

Environmental care

Observe local regulations regarding the disposal of packaging materials, exhausted batteries and old handhelds and promote their recycling. SED Wireless has marked the battery and packaging with standard symbols designed to promote recycling and the appropriate disposal of waste.



Do not dispose of the battery with the general household waste.



The packaging material is recyclable.



The plastic material is recyclable (This symbol also identifies the type of plastic).

WEEE Marking: "Information to the Consumer"



Product disposal

The product is designed and manufactured with high quality materials and components, which can be recycled and reused.

When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC.

Please be aware of the local collection regulations for electrical and electronic products.

Please act according to your local rules and do not dispose of old products with the normal household waste. The correct disposal of old products will help prevent potential negative consequences for environment and human health.

This device may contain commodities, technologies or software subject to export law and regulations from the US or other countries, which you must follow.

Declaration of Conformity

We, **Shenzhen SED Wireless Communication Technology Co., Ltd.**
11/F, SED Science and Technology Building, Nanshan District,
Shenzhen 518000
China

declare under our sole responsibility that the product

SED OPH-810R

R-GSM 900/GSM 1800

is in conformity with the following standards:

SAFETY: IEC60950-1:2005(2nd Edition)

EN 60950-1:2006+A11:2009

HEALTH: EN 50360:2001

EN 62209-1:2006

EMC: EN 301 489-1 V1.8.1: 2008

EN 301 489-7 V1.3.1: 2005

SPECTRUM: EN 301 511 V9.0.2: 2003

We hereby declare that the above named product is in conformity with the essential requirements of Directive 1999/5/EC.

The Conformity assessment procedure referred to in Article 10 of Directive 1999/5/EC has been followed with the involvement of the following Notified Body or Bodies:

PHOENIX TESTLAB GmbH

Königswinkel 10
D-32825 Blomberg, Germany

The product is marked with CE and the Notified Body number according to the Directive 1999/5/EC:

CE 0700

Date: 20 May 2014

Authorization:

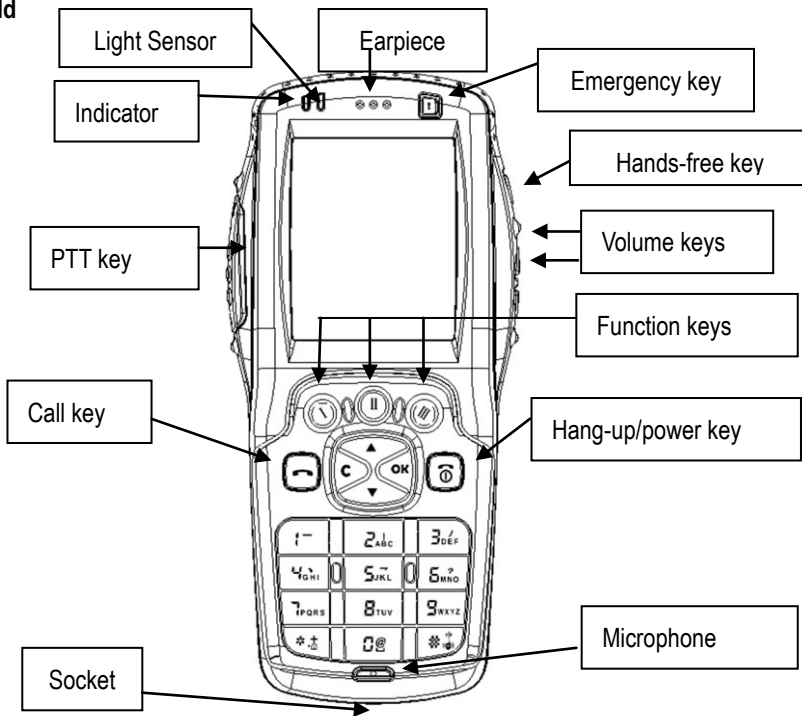
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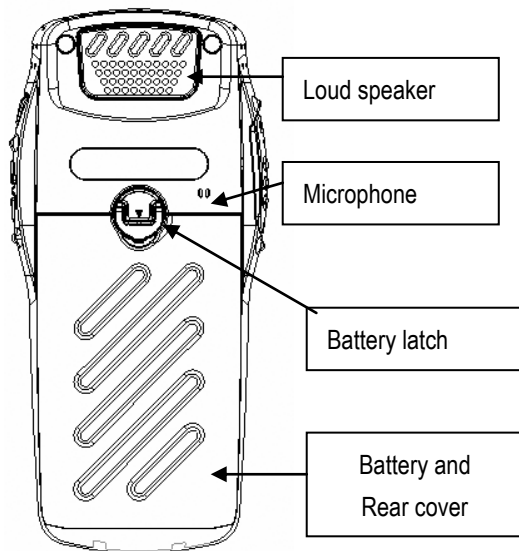


Name: Frank HE

Position: Vice President















Your Handheld














Note: The pictures in this manual are for function illustration purposes only and may differ from your handheld. The keyboard allows for device operation even when wearing gloves.

Description of Icons

	Signal strength: The number of strips indicates the signal strength in ascending order.
	Network not found: The handheld is out of network coverage.
	Battery capacity: The number of grids indicates capacity.
	Clock: Setting an alarm displays this icon on screen.
	Vibration mode: Incoming calls (and SMS) prompt the phone to vibrate.
	Ring and vibration: Incoming calls (and SMS) prompt the phone to ring and vibrate.
	Mute mode: No tone will sound upon an incoming call.
	Headphone mode: The handheld is set to use headphones or a remote control speaker.
	New message: Indicates a new text message. The icon blinks when storage capacity is full.
	Call divert: The call divert function is enabled.
	Roaming: The handheld is in roaming mode.
	Power on attaching: GPRS will be attached when powered on.
	GPRS attached: GPRS is attached successfully.
	GPRS activated: The GPRS function has been activated and data is being transmitted.

	GPRS error: Errors occur in GPRS dialing or state.
	No ASCII feature: The current network does not support ASCII features.
	Function number synchronization: A function number requires synchronization.
	Bluetooth: Bluetooth device powers up.
	Bluetooth: Bluetooth device is connected successfully.
	GPS Open but has not found the star
	GPS Open and has been found the star
	Working alone alarm has been open
	Cell lock or Cell forcing has been open

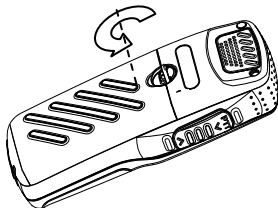
Preparations

Insert a valid SIM card before using the handheld. SIM cards are provided by network service providers.

Note: *Keep SIM cards beyond the reach of children.*

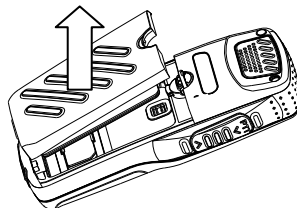
Installing the SIM card and battery

1. Open the handle on the battery latch. Turn the battery latch counterclockwise so that the arrow points to UNLOCK.

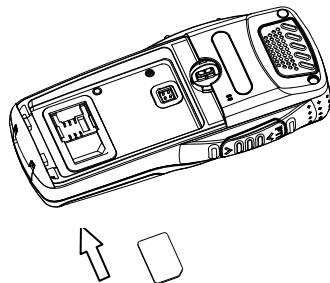


2. As shown above, remove the battery from the end nearest to the battery latch.

Note: *Before removing the battery, switch off your handheld and disconnect the handheld from any other devices.*

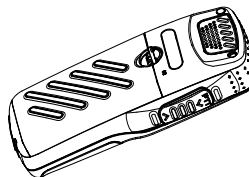
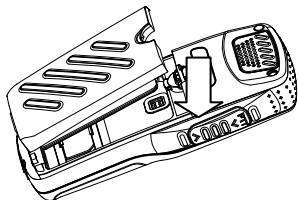


3. Ensure that the gap in your SIM card and the gap in your SIM card and the gap for the SIM card slot point in the same direction and that the side with a metal part faces down. Then slide the SIM card into the SIM card slot.

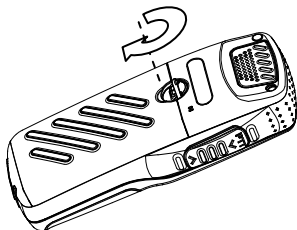


Note: *The SIM card and its contact may be easily damaged due to scratching or bending; therefore, use, insert, and remove the SIM card carefully.*

4. Open the handle on the battery latch by pointing the arrow to UNLOCK. Insert the end of the battery in the battery slot, beginning at the lower end of the handheld, and then insert the top end. Ensure that the metal contacts on the battery align with the contacts in the handheld. Maneuver the battery until it is completely mounted in the battery slot.



5. Turn the battery latch clockwise so that the arrow on the latch points to UNLOCK. Then place the handle back on the latch.

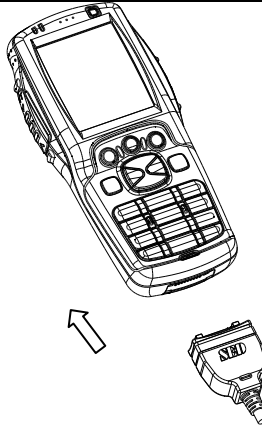


Charging the battery

Using a travel charger:

Connect the charger to the socket at the bottom of the handheld. Ensure that the side marked with "SED" on the charger is consistent with the front of the handheld.

After the handheld indicates that charging is complete, remove the charger connector from the handheld and then remove the other connector from the power socket.



Attention: Please check the model of the charger before using it with this handheld. This handheld is intended for use when supplied with power from the charger HKA00605008-3B.

Charging mode : Handheld using constant current and constant voltage charging mode.

If the battery is in the over-discharge state, enter the trickle charging stage. In normal times, First entered the constant current charging stage, charging voltage is 5V and the charging current keep the 800mA.

Entered the constant voltage charging stage when the battery voltage reaches a predetermined value, the predetermined value needs to be calculated according to the battery calibration data. In the constant voltage charging stage, the charging current decreases, when the charging current is reduced to 90mA, the end of charging.

Chapter 2 Basic Operations

Switching On/Off

1. Press and hold the power key for about three seconds to switch on the handheld. If the battery is low, the handheld automatically switches off after being switched on. Then change or charge the battery. The handheld performs a self-test. This can take several seconds.
2. If no SIM card is inserted in your handheld, a screen prompt is displayed requesting you to insert a SIM card. After you insert a SIM card, the handheld automatically checks that the SIM card is valid.
3. If your SIM card is set with PIN check, enter the PIN and then press **OK**. After the PIN check succeeds, your handheld connects to the network.

Note: *If you enter incorrect PINs three times consecutively, the screen displays a message*

indicating that the PIN is locked. You need to enter your personal unlock code (PUK).

4. After the handheld finds a network, you will see the network name, signal strength, time, date, and standby image on the screen. If the handheld is out of the service area, an onscreen message informs you that no network is available. In this case, you cannot make or answer calls. You can obtain network services only after entering a service area.

5. Hold the power key slightly for about five seconds to switch off your handheld. If you remove the battery when your handheld is in use, all unsaved information is lost and the handheld or SIM card may be damaged.

Warning: *Do not switch on your handheld when the use of a handheld is forbidden or can cause interference or danger.*

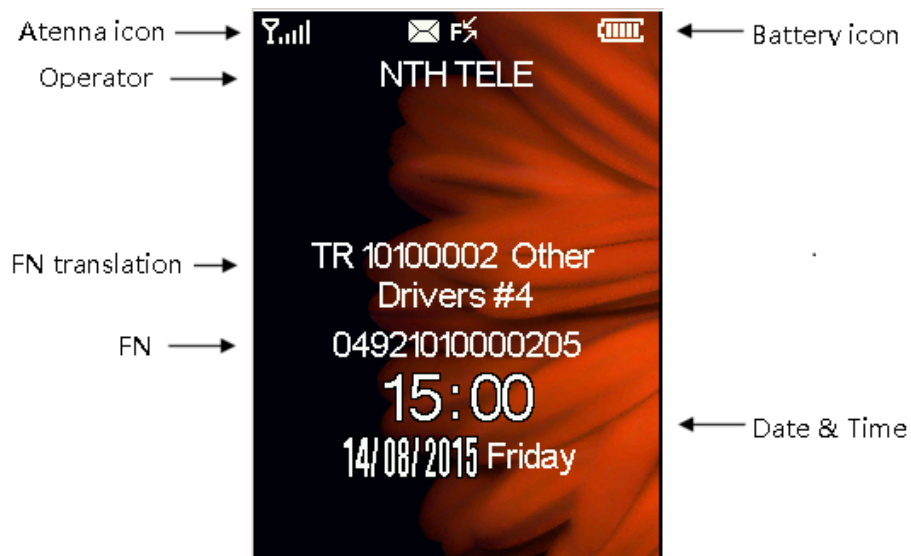
Handheld Modes

Standby Mode

Standby is the basic mode. After you press the power key to switch on your handheld, the handheld enters standby mode. Here, you can view the date and time, battery status, and ringing mode. After you enter a phone number, you can press the call key to dial the number or press OK to save the number in a phonebook or the SIM card.

When entering a menu, you can press the hang-up key or repeatedly press the C key to return to the standby mode.

Note: *You can press the hang-up key to end a call. The screen will display that the call has ended and the handheld will automatically enter standby mode.*



Call Mode

When you make or answer a call, the handheld enters call mode.

Basic Call Functions

Making a Call

Make a call as follows:

1. In standby mode, enter a phone number.
2. Press the call key to call the number. If the connection fails, a call failure message is displayed. The dialed phone number is automatically saved in the call log. You can press the call key in standby mode to access a list of recent calls.

Making an International Toll Call

Enter the country code, area code, and phone number (without spaces), and then press the call key to make an international toll call. To dial the + key when entering the country code, hold the 0 key.

Using the Phonebook to Make Calls

Select a phone number from the phonebook to make a call, and then press the call key to

dial the number.

Redialing the Last Number

In standby mode, press the call key twice to dial the number you dialed/missed/received last time. The last dialed number is automatically saved in the phone. In standby mode, press the call key to access a list of call logs, select a number, and then press the call key to dial the number.

Note: *Your network service provider has set one or multiple emergency call numbers (for example, 112). You can call these emergency numbers even if no SIM card is inserted in your handheld.*

Answering a Call

When you receive an incoming call, the handheld displays information about the call. If you have subscribed to the incoming number display function (contact your network service provider for commissioning), the incoming number is displayed on the screen of your handheld. The default answer mode is by pressing the call key. To change

the answer mode, choose

Menu>Settings>Call Setup>Answer Mode and select **Send Key** or **Any Key**.

If the answer mode is set to **Send key**, press the call key or the OK key to answer a call.

If the answer mode is set to **Any Key**, you can press any key except the hang-up key, C key, emergency key, hands-free key and side up/down keys to answer an incoming call.

***Note:** At present, the handheld supports call answering by any key for calls in standby mode.*

During the call, the duration of the call and the caller number are displayed on the screen (if the number is in your phonebook, the name is displayed).

***Note:** An incoming call will interrupt any other menu operation or function.*

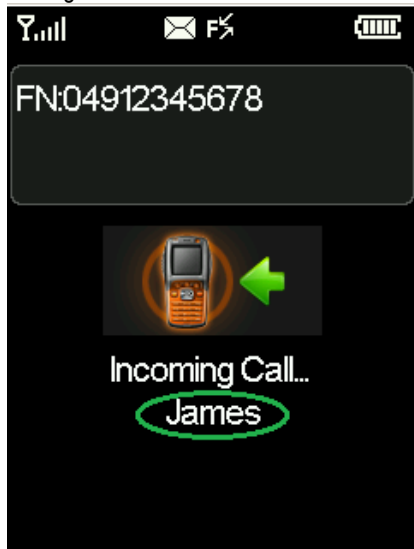
Ending a Call

To end a call, press the hang-up key.

After the call ends, the duration of the call is displayed on the screen.

Rejecting a Call

You can press the hang-up key to reject an incoming call.



Adjusting the Volume

You can press volume keys on the right side

of the handheld to adjust the volume in standby mode, and on the time counter interface during a call. The + side key increases the volume, and the - side key decreases the volume. You can press the hands-free key on either the time counter or number entry interface to enter the hands-free mode during a call. The loud speaker will become active and emit a sound. The word **Handsfree** will be displayed on the screen. Press the hands-free key again to exit the hands-free mode.

Note: *After the handheld enters the hands-free mode, the speaker may be loud. Therefore, do not place the handheld near your ear before pressing the hands-free key.*

Dialing an Emergency Number

When no SIM card is inserted

Switch on your handheld. When the screen prompts you to insert a SIM card, press the call key or OK key and then dial the emergency number.

When a SIM card is inserted

In standby mode, enter the emergency number and press the call key.

Viewing Missed Calls

If you do not answer an incoming call, the missed call number is automatically saved in a call list. Choose **Menu>Call Logs>Missed calls** and open the list. You can press the call key to directly call the number in a missed call. When you miss a call, the number of missed calls is displayed on the screen in standby mode.

Press the OK key in the list of missed calls to display details about each missed call, including the total number of missed calls and the time of the last three missed calls from a single number. Press the OK key again to display the following menu:

1 Call: Calls this number.

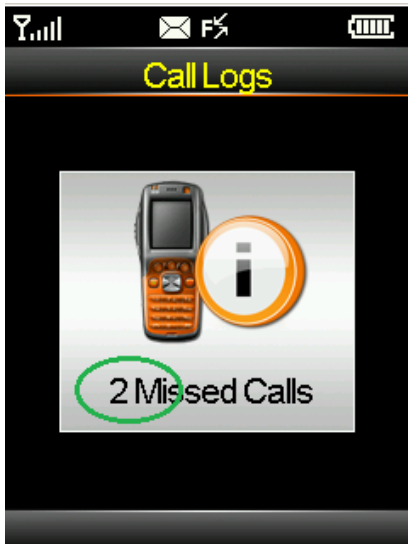
2 Write message: Writes a message to this number.

3 Save to Phone: Saves this number in the phonebook or the SIM card.

4 Edit and Dial: Edits this number and then

calls the new number.

5 Delete: Deletes this call record.



Menu during a Point-to-Point Call

During an ongoing call, you can press the function key I to enter a menu. You have the

following options: **Phonebook**, **SMS**, **Mute/Unmute**, **Cell Forcing** (Optional), **Cell Lock** (Optional) and an additional item **Switch to BackMic/FrontMic** when the handheld is in hands-free mode. You can also press the function key III to select **Hold/Unhold** to hold or retrieve the current call.

Managing Multiple Calls

Before using this function, you may need to obtain this service from the service provider. During an ongoing call or when a call is held, you can make a second call.

When you make a second call during an ongoing call, the first call is held and the handheld calls the second number. If the second call is answered, the numbers of the ongoing call and the held call are displayed on the screen. You can follow the screen prompt and press the function key III to switch between the current call and the held call, or press the function key I to access the following menu:

1 Drop Active: Drops the current ongoing

call.

2 Drop Hold: Drops the held call.

3 Drop All: Drops all ongoing and held calls.

4 Build Multi-Call: Sets up triple calls in teleconference mode.

When setting up a telephone conference, the operation menu will show two additional items:

1 Split to Private Call: Makes possible a private call with any party in this telephone conference.

2 Drop Remote Party: Hangs up the call of any party in this telephone conference.

GSM-R Operations

The GSM-R function is a dedicated function of this handheld, specifically designed and developed for railway-related services. It needs to be supported by the GSM-R network and a dedicated SIM card.

Description:

Point-to-point call: Indicates a point-to-point voice call.

Group call: A group call that allows multiple listeners but only one speaker at the same time. The user presses and holds the PTT key to gain the right to speak, and releases the PTT key to stop speaking. The listener can press the PTT key to gain the right to speak when available. After successfully seizing the right to speak, the user can do so.

Broadcast call: A broadcast call is similar to a group call. Only the initiator of the call is allowed to speak, and does not need to hold the PTT key. Other users can listen to the call, but cannot gain the right to speak.

Initiating a point-to-point call

In standby mode, you can enter the phone number, short number or function number of the called party, and press the call key or function key III to initiate a call according to screen prompts. Refer to the procedure for making a call in the basic call functions.

Initiating a group call

In standby mode, you can enter a group call number and press function key I to initiate a group call. You can also choose **Menu > GSM-R Func > Group Calls** and select **Group Call**.

Initiating a broadcast call

In standby mode, you can enter a broadcast call number and press function key II to initiate a broadcast call. You can also choose **Menu > GSM-R Func > Group Calls** and select **Broadcast**.

Note: *If you enter an incorrect or non-activated group/broadcast call number on*

the standby interface, the screen does not provide a soft key for initiating a group or broadcast call, and you will be unable to initiate a group or broadcast call.

Ending a group call

Only the initiator of a group call can end the group call. as follows:

Press the hang-up key during the ongoing group call. The screen informs you that function key I means 'Terminate', and function key III means 'Leave'. Press function key I to end the group call.

Note: *The dispatcher can also end a group call. Others except the group call initiator can exit a group call but cannot end the group call.*



Ending a broadcast call

Only the initiator of a broadcast call can end the broadcast by directly pressing the hang-up key.

Note: *The dispatcher can also end a*

broadcast call. Others except the broadcast call initiator can exit a broadcast call but cannot end the broadcast call.

Exiting a group call

The initiator of a group call can exit the group call as follows:

Press the hang-up key during the ongoing group call. The screen informs you that function key I means 'Terminate', and function key III means 'Leave'. Press function key III to exit the group call.

The recipients of the group call can press the hang-up key to exit the group call.

Leaving a broadcast call

When you receive a broadcast call, you can exit the ongoing call by pressing the hang-up key.

Note: *Users cannot exit certain high-priority broadcast calls.*

Joining a group call/broadcast call

You can join a group call or broadcast call in the following ways:

- 1 When you receive the alert tone for a group or broadcast call, you can join the call.
- 2 During a group or broadcast call, you can enter the number of the group or broadcast call in standby mode. The handheld automatically joins the group or broadcast call.

Occupying uplink during an ongoing group call

During a group call, the screen prompts you to press the PTT key if the right to speak is available. In this case, you can hold the PTT key to gain the right to speak. If you successfully gain the right to speak, the handheld prompts you to speak. In this case, you can address the group; otherwise, an audible and visual indication will be given. If you release the PTT key, you will resume listening only. If no prompt for speaking is

displayed on the screen, you can only listen to the group call.

Note: *You cannot occupy the uplink of an ongoing broadcast call.*

Receiving a point-to-point call in an ongoing group call or broadcast call

When you receive a point-to-point call during a group or broadcast call, the handheld notifies you that you have a new paging message. Press the call key to wait for the alert tone message of this paging message. Before this:

If you have the right to speak in a group call, release this right, and exit the group call.

If you are a listener during a group call, exit the group call.

If you are the initiator of a broadcast call, end the broadcast call.

If you are the recipient of a broadcast call, exit the call temporarily.

After viewing the alert tone message of a new point-to-point call, press the call key to answer this call or press the hang-up key to

reject the call.

After the current call is rejected or the call ends, and if the previous group call or broadcast call is not completed, you will automatically join the previous group or broadcast call.

Note: *If the wait for the new point-to-point call message times out, the current call is regarded as having ended. If the priority of the incoming point-to-point call is at a high level, you will automatically exit the current group call or end the current broadcast call and return to the standby mode to wait for the alert tone of this point-to-point call. In this case, you can choose to answer or reject this call. If the priority of the ongoing group call or broadcast call is at a certain level, you will not be able to answer the point-to-point call.*

Receiving a group call or broadcast call during an ongoing group call or broadcast call

If you receive the alert tone for a new group or

broadcast call while another is in progress, you can press the hang-up key to reject the new call or press the call key to answer the new call. Before answering the new call: If you have the right to speak in the previous group call, release the uplink and exit that group call.

If you are a listener in the previous ongoing group call, exit that group call.

If you are a recipient of the previous broadcast call, exit that broadcast call.

If you are the initiator of the previous broadcast call, end that call.

Receiving a group/broadcast call in an ongoing point-to-point call

If you receive the alert tone of a group call or broadcast call during an ongoing point-to-point call, you can press the hang-up key to reject the new call or press the call key to answer the new call.

Receiving a point-to-point call in an ongoing point-to-point call

Refer to the instructions on processing multiple calls in Basic Call Functions.

Receiving multiple calls in a call at the same time

If you receive multiple calls in a call at the same time, you can choose to answer one of the calls through a list on the screen.

Automatic high priority answering

If the priority of a call received in idle mode meets automatic answering, your handheld automatically answers this call.

If the priority of a received call during an ongoing call is higher than that of an existing call and the received call has automatic answering priority, your handheld automatically answers the new call.

Note: *In the call process, before automatically answering a call of high priority, the handheld*

handles the previous call according to the type of the previous call and whether you are the initiator of the previous call.

Railway emergency calls

If railway emergency calls are allowed, you can press the emergency call key and confirm with PTT key when you wish to initiate a railway emergency call. You may also choose **Menu > GSM-R Func > Group Calls** to make a railway emergency call. You can press the PTT key to confirm it.



Operations of function numbers

In standby mode, you can directly enter the character string of a function number and then press the call key to register, de-register, interrogate, or forcibly de-register the function number. You can also choose **Menu > GSM-R Func > FN Management** to perform operations related to the function number.

Chapter 3 Input Modes

When using a handheld, you need to input text information from time to time. For instance, when you want to add a new phonebook, write a new message, or set a certain function, you need to use the correct input mode.

In German, the handheld provides several input modes:

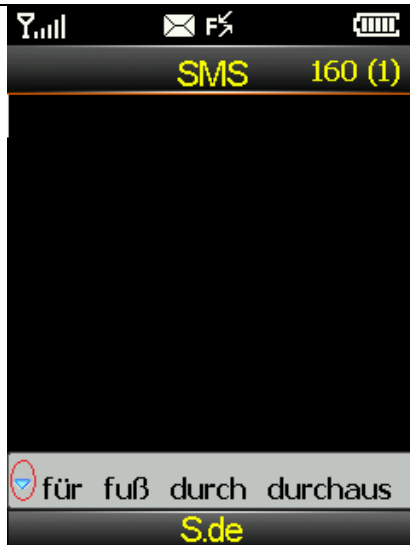
- Smart German: You can enter German words in this mode.
- German alphabet: You can enter a single German alphabet in this mode.
- Smart English: You can enter English words in this mode.
- English alphabet: You can enter a single English alphabet in this mode.
- 123: You can enter digits in this mode.
- Sign: You can enter signs in this mode.

Switching between input modes

When you access text input, the current input mode is displayed at the bottom of the screen. You can press the # key to switch to another input mode, or hold the # to select the upper case or lower case.

English input

In English input mode, you may sequentially press the key of a letter in a word, and the system searches the library and then displays the matched words. You may also hold the # key to switch between the upper case and the lower case.



You can press up or down button to view words, and press OK button to select words, and then use numeric button to input words.



English letter input

The letter input modes are abc and ABC. After entering the letter input mode, press the corresponding number key for a letter to enter that letter. For instance, press the number key '2' once to enter A, press it quickly twice to

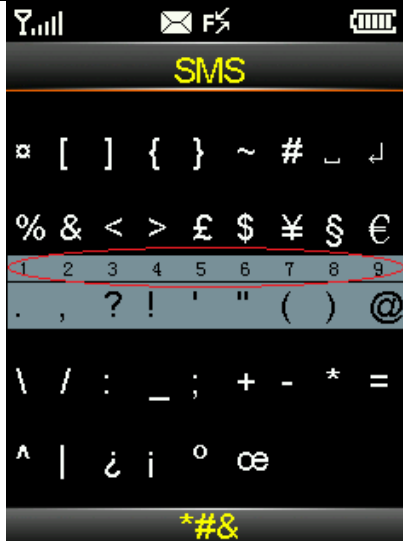
enter B, and three times to enter C.

Digit input

The digit input mode is identified by “123”. You can press the # key to switch to the digit input mode and enter digits in a text area. Press the corresponding number key to enter the desired digit.

Symbol

You can enter signs in the main text area. Press * to switch to “*#&” symbol input, and press C to exit. Method for entering signs: Press the up or down key to select a line, and then press the number key to select a sign.



Cursor roll

Press the up or down key to move the cursor horizontally. Press volume keys to move the cursor vertically.

Chapter 4 Menu

Using a Menu

This handheld provides a series of functions to suit your needs. These functions consist of menus and sub-menus. You can press the OK key and direction keys or use shortcuts to access the desired menus and sub-menus.

Selecting a menu through arrow keys

1. In standby mode, press the OK key to enter a main menu.
2. If the main menu contains certain sub-menus such as **SMS**, you can find the desired sub-menu by pressing direction keys and OK key. If the sub-menu you choose contains sub-menus, repeat this step.

Note: Press the C key to return to the previous menu. This operation does not change menu settings.

Note: If a menu option is marked by a digit,

you can also press the number key to select the option.

Entering a menu by shortcut

In standby mode, you can press shortcut keys to enter menus and sub-menus. To set shortcut keys, choose **Settings > Phone Setup > Shortcuts**.

GSM-R function

GSM-R function is a dedicated function of this handheld specifically designed and developed for railway-related services. It requires support from the GSM-R network and dedicated SIM cards. This menu covers the following functions: making railway calls, managing special-purpose railway function numbers, and making and managing group or broadcast calls.

FN management

If your SIM card supports registering a function number, you can perform operations related to function numbers through this menu.

This menu provides function number management, such as function number registration, de-registration, interrogation, forced deregistration, and switching. You can directly enter a character string on the standby interface and press the call key to register, de-register, interrogate, and forcibly de-register a function number with the network. The results of registration, de-registration, interrogation and forcible de-registration are related to network settings and the input number

1 Registration: In the GSM-R network, you can register a function number using one of the following methods:

1) Quick Register FN: Enter the function number to be registered on the function number entry interface, press the OK key, and confirm the registration. The handheld sends a registration request to the network. The result is displayed in a pop-up box on the screen.

Note: The result of function number registration depends on network

conditions and the validity of the function number.

Note: If you enter common function numbers during common number maintenance, you can press the function key I to open a list of common function numbers and select one function number from the list.

2) FN Register Guide: This menu provides registration guide for train function numbers, engine function numbers, and coach function numbers. You can enter the corresponding TFN, EFN, CFN, MSFN, Dispatch FN according to prompts, press the OK key, and then confirm the registration. The handheld sends a registration request to the network. The registration result is displayed through a pop-up box on the screen.

Note: When entering the number, you can press the function key I to open a list and select one number from the list.

3) Please Input IC: This menu allows

you to enter the international code of a country or an area. Enter the international code, and press **OK**. The international code is saved in the handheld. When you use the function number registration wizard to send a request for registering a function number, the saved international code is automatically added in front of the function number.

2 Deregistration: You can de-register a function number. This menu lists all registered function numbers. Select one, press the OK key, and then confirm the de-registration.

3 Forced Deregistration: If you have permission to forcibly de-register the function numbers of other users, you can forcibly de-register a certain function number of a certain user. The function number input window are available. Press the OK key to de-register the numbers after confirming that the numbers are correct.

Note: *The forced de-registration of a function number may affect normal use for other users.*

Therefore, exercise caution with this operation.

4 Interrogation: You can use this menu to interrogate the current registration information of a function number. You can enter the desired function number in the input window, and press the OK key. The inquiry result is displayed through a pop-up box on the screen.

5 Change Current FN: If you have registered multiple function numbers, you can select one function number to be displayed. To switch to another function number, press direction key to select a function number and then press the OK key.

For an outgoing call, the functional number and the functional identity are transferred via UUIE. If several functional registrations were made, the most recently registered number is transferred. And when changed current FN, then the current FN is displayed in idle screen, and be transferred in call.

6 Deregister All FN: You can use this menu

to de-register all registered function numbers.

Note: *This function is only for temporary function numbers.*

7 Synchronization FN: If your function number is forcibly de-registered but the handheld does not receive a network message, you can use this menu to synchronize your function number to the network. The synchronization result is displayed in a pop-up box on the screen.

Note: *Operations related to a function number require interaction with the network, so it may take a while to finish the synchronization operation.*

Group calls



You can use functions in this menu to make group calls, broadcast calls, and emergency calls. You can also directly enter a number or string on the standby interface and press the call key to initiate a call.

1 Group call: This menu lists the group call numbers provided by the SIM card that are activated. You can select one number and



press the OK key or the call key to initiate a call.

2 Broadcast: This menu lists activated group call numbers provided by the SIM card. You can select one number and press the OK key or the call key to initiate a call.

Note: *During an ongoing group call, if the right to speak is available, you can press the PTT key to gain the right to speak. You can speak when the screen prompts you to do so.*

3 GRP ID Management: This item lists the group call numbers provided by the SIM card. You can select or de-select one or multiple numbers according to the actual condition to facilitate selection during a call. To select a number, press the direction key to reach the number, press , confirm the prompt, and then press  again. The result of this operation depends on the permission settings of your SIM card.

4 BCT ID Management: This item lists the broadcast numbers provided by the SIM card. You can select or de-select one or multiple numbers according to the actual status

to facilitate selection during a call. To select a certain number, press the direction key to the number, press , confirm the prompt, and then press  again. The result of this operation depends on the permission settings of your SIM card.

5 Emergency call: This item enables you to initiate an emergency call. Press the OK key and confirm the prompt. Then press the OK key to initiate an emergency call.

Phonebook

You can use the phonebooks in the SIM card and that in the handheld to store contact records.

Handheld Phonebook: This phonebook can store 1000 records. Each record consists of name, phone number, common number, mobile number, company number, facsimile number, email address, and group information.

Phonebook in the SIM card: The phonebook in the SIM card stores contact information in the format of a name and a number. Its

capacity varies with the SIM card model. Choose **Menu > Phonebook** to enter the phonebook.

View

The current record is displayed in the first line. You can press direction keys to browse the current record. During browsing, you can choose to dial the number related to the current item. If the record is in the handheld phonebook and relates to multiple numbers, the handheld prompts you to select one of the numbers to dial.

Select a contact person, and then press the OK key. The following options are available:

1 Call: Select this option to dial the number related to this record. If the current record is in the phonebook in the handheld and is related to multiple numbers, the handheld prompts you to select one of the numbers to dial.

2 Write SMS: Select this option to send a text message to this record. A short message input window is displayed. After entering a message, select the related number to send

the message (if the current record is related to only one number, the handheld sends the message to this number directly).

3 Edit: Select this option to delete details about the current record.

Note: *If this item is set with a group tone, the group tone is used; otherwise, the default tone is used.*

4 Delete: Select this option to delete this item.

5 Copy to Phone/SIM: If the item is originally saved in the SIM card, select this option to copy that item to the handheld. If the item is originally saved in the handheld, select this option to copy it to the SIM card.

Note: *When a record originally saved in the handheld is copied to the SIM card, only the name and phone number of this record are copied.*

6 Send vCard: Select this option to send the information of the current contact in vCard format by SMS to other terminals.

Write SMS

Select this option to send a text message to this record. A short message input window is displayed. After entering a message, select the related number to send the message (if the current record is only related to one number, the handheld sends the message to this number directly).

Add Entry

The **Add Entry** menu has two options:

1 SIM card: You can add a record of a contact person to the SIM card.

2 Phone: You can add a record of a contact person to the handheld.

The method for adding a new record to the handheld is as follows:

- 1) After selecting **Phone**, enter the interface for adding a record. Press direction keys to select the desired input items for editing the record.
- 2) For the **Group** item, press the function key I according to screen prompts to obtain the group option and select the desired content.

- 3) After editing is complete, press the OK key to save the content.

Note: *The method for adding a record to the phonebook in the SIM card is the same except that only the name and number are added.*

Storage Status

This function checks the total capacity and storage status of the phonebooks, including the SIM card phonebook and the handheld phonebook.

Delete All

This menu contains two options:

1 In SIM: You can delete all phone numbers in the SIM card.

2 In Phone: You can delete all phone numbers in the handheld.

Copy All

This menu contains four options:

1 SIM to Phone: You can copy the records of all contact persons in the SIM card to the

handheld.

2 Phone to SIM: You can copy the records of all contact persons in the handheld to the SIM card.

Note: *When you copy a record in the handheld to the SIM card, the name and phone number of the record are copied, and the rest information is lost.*

3 Phone to MMC: You can copy the records of all contact persons in the handheld to the MMC card.

4 MMC to Phone: You can copy the records of all contact persons in the MMC card to the handheld.

My Number

You can edit and store the number from the SIM card for inquiries.

SMS

The SMS is a network service. The network you are using may not support this service.

For details, contact your network operator. Depending on different network support, the SMS can be sent through text, email, or fax. Before sending a text message, obtain the relevant service center number from your network operator.

In standby mode, press user-defined shortcut keys or choose **Menu > SMS** to enter the SMS menu.

Write Message

You can choose **Write message** from the SMS menu. You can enter and edit a maximum of 10 pages of messages. You can also edit a text message on an SMS template. When you start to enter characters in the window for editing a message, the screen displays the number of allowed characters and number of current pages at the upper right corner. You can press the # key to switch between input modes, such as Smart English, English, and 123.

Press the C key to delete one character. Hold the C key to delete all characters. After editing

a message, press the OK key to choose one of the following options:

1 Send and Save: Sends the message to the destination and saves it in the outbox.

2 Send Only: Sends the message to a number. In this case, you need to enter or select a number from the phonebook.

3 Save: Saves the message in the outbox.

4 Insert: You can insert vCard or phrases in the message.









1) Insert Number: Select a contact number in the phone book and insert it into the current short message. If this contact has multiple numbers, the screen prompts you to select one from the list.

2) Insert vCard: Select a contact number from the phonebook and send it in vCard format.

3) Phrase: Select a phrase coming with the handheld on the edit interface.

4) Template: Select a previously edited short message template from the edit interface.



5 Input Language: Select English, German.

ICON	TYPE	ICON	TYPE
	Unread SMS		Updated long SMS
	Read SMS		Partial received long SMS
	Unread vCard		Unread status report
	Read vCard		Read status report

6 Exit: Exit without saving the message.

Inbox

When you receive a message, the handheld gives off a set alert tone or vibration. The new message is saved automatically in an inbox.

The  icon is displayed on the screen to indicate the arrival of a new message. You can choose to read it at any time you wish. If the number of short messages saved in the inbox reaches a maximum number, the  icon blinks.

Select the **Inbox** option to display messages in the inbox on the screen. The message types are shown below:

Press the OK key to read the message, or press the function key III to delete it. When you read a short message, press the OK key to choose one of the following options:

1 Reply: Replies a message to the sender.

2 Dial Back: Calls the sender.

3 Delete: Deletes the message.

4 Use number: Extracts numbers from the message. After you select a number, press the OK key to choose one of the following options:

1) Reply: Replies to a message at the specified number.





2) Dial Back: Calls the specified number.

3) Save to PB: Saves the specified number in the phonebook. You can choose to save the number in the phonebook in the handheld or the SIM card.

5 Forward: Forwards the message to others.

6 Delete All: Deletes all messages in the inbox. After you select this option, the handheld displays a pop-up box for you to confirm the operation. Press the OK key to confirm the operation, or press the C key to cancel the operation.

Outbox

Messages in the outbox marked with  have been sent. Messages marked with  have not been sent.  means the vCard has been sent and  means the vCard has not been sent. For a saved message, only the first several characters of the message are displayed. Press direction keys to select a message, and press the OK key to read the message or press the function key III to delete the message.

When reading a message, press the OK key to choose one of the following options:

1 Forward: Forwards the message to others.

2 Delete: Deletes the selected message.

3 Delete All: Deletes all messages in the outbox. After you select this option, the handheld displays a pop-up box for you to confirm the operation. Press the OK key to confirm the operation, or press the C key to cancel the operation.

Template

You can use common short messages as a template through this function. Select **Template** in the **SMS** menu to access a list of SMS templates.

If no SMS template exists in the menu, the handheld prompts you to add an item. You can press the OK key to edit the first SMS template, or press the C key to exit.

If the menu contains SMS templates, you can press direction keys to select an SMS template, and then press the OK key to choose one of the following options:

1 Add Entry: Adds an SMS template.

2 Edit: Accesses the window for editing a

message and then edits the current SMS template.

3 Send: Sends the message to a number.

4 Delete: Deletes the current SMS template.

5 Delete All: Deletes all SMS templates. After you select this option, the handheld displays a pop-up box for you to confirm the operation. Press the OK key to confirm the operation, or press the C key to cancel the operation.

Settings

You can set all parameters related to short messages. Short messages are sent and received according to the parameter settings. Enter the **Settings** menu. You can choose one of the following options:

1 Setting: Press the OK key to choose one of the following options:

1) Message Center Number:

Enter the message center number, which is required to send a text message.

Press the OK key to save the number.

You need to obtain this number from your network operator.

2) Message Types:

You can reset the message type, including text, fax, email, and user-defined messages. The message type must be supported by your network service provider.

3) Validity Period:

You can set the period during which the messages can be kept in the message service center before being deleted.

2 Storage Position: Sets the storage position of messages: **Phone First** or **SIM First**.

Note: *You can save 500 messages in the handheld. The short message storage capacity of a SIM card varies.*

3 Status Report: Enables or disables the status report.

If the status report is enabled, the network informs you that a message has been successfully sent after the recipient receives your message, and the report is saved in your inbox.

4 Storage Status: Displays the message storage status of the SIM card and handheld.

Broadcast

This function is a service provided by your system consultant service center to users in the system. For example, weather forecast and traffic services may be available.

Received cell broadcast messages are automatically displayed on the screen. You can directly read the messages. Check with your service provider whether this service is available.

Reception: Enables or disables the receiving of broadcast short messages.

Channel: Adds a channel or edits an existing channel.

Language: Sets the language allowed for receiving messages.

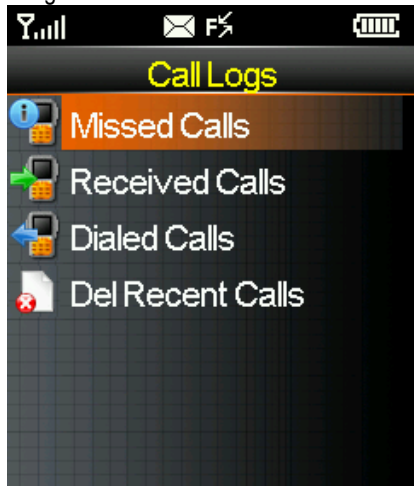
Read: Reads a received broadcast short message.

Call Logs

The call log records three groups of calls:

missed calls, received calls, and dialed numbers. Each group contains 20 records for easy inquiry and use.

You can choose **Menu > Call Logs** or press the shortcut key in standby mode to access a call log menu.



Missed Calls

Enter this menu. The list of missed calls is displayed on the screen. Select a missed call, and press the OK key to display details about the call, including the phone number, the time of the last three missed calls from the number, and the total number of missed calls from the number. Press the OK key again to enter an operation sub-menu, which contains the following options:

1 Call: Calls this number.

2 Write Message: Writes a short message for this number.

3 Save to PB: Saves this number in the phonebook.

4 Edit and Dial: Edits this number and then calls the new number.

5 Delete: Deletes this record.

Received Calls

Refer to the description of Missed calls.

Dialed Calls

Refer to the description of Missed calls.

Del Recent Calls

Enter this menu. Four options are available:
1 Del Missed Calls: Deletes all missed calls. After you select this option, the handheld displays a message for you to confirm the operation. Press the OK key to confirm the operation or press the C key to cancel the operation.

2 Del Received Calls: Deletes all received calls. After you select this option, the handheld displays a message for you to confirm the operation. Press the OK key to confirm the operation or press the C key to cancel the operation.

3 Del Dialed Calls: Deletes all dialed numbers. After you select this option, the handheld displays a message for you to confirm the operation. Press the OK key to confirm the operation or press the C key to cancel the operation.

4 Delete All: Deletes all calls, including missed calls, received calls, and dialed numbers. After you select this option, the handheld displays a message for you to

confirm the operation. Press the OK key to confirm the operation or press the C key to cancel the operation.

Tools

The menu **Tools** consists of submenus **Calendar**, **Calculator**, **Alarm Clock**, **Record**, **USB Mode**, **STK**, **Version Check**, RF Monitoring, Bluetooth, Working Alone(Optional), Cell Forcing(Optional) and Cell Lock(Optional). You can choose **Menu > Tools** to access this menu.

Calendar

You can view the calendar from 1901 to 2100. The calendar provides information including festivals and constellations and is easy to use.



Press the C key to return to the previous menu.

Press the up key to go to the previous month.
Press the down key to go to the next month.
Press the number key 2 to go to the previous week. Press the number key 8 to go to the

next week. Press the number key 4 to go to the previous day. Press the number key 6 to go to the next day. Press the * key to go to the previous year. Press the # key to go to the next year.

Press the function key I according to screen prompts to select **Jump**, or press the OK key to access the interface for selecting a date. You can enter the target date on the screen, and then press the OK key to go to the date or press the C key to exit.

The handheld also provides a calendar entry function. Enter the calendar interface, and press OK key to enter the following entry setting options:

1 Create: You can edit a new entry. The following options are available:

1) Enable/Disable: Enables or disables the entry reminder.

2) Type: The calendar has four types: **Once**, **Every Day**, **Every Week**, and **Every Year**. If **Type** is set to **Once**, **Auto Delete** can be set; **Every Week** will display the week of present day in **Date**

and Time.

3) Date and Time: You can only set the time for the calendar type **Every Day**, and set time and date for other types.

4) Content: You can edit the content of the calendar entry.

5) Ringing: You can set the reminder ring according to your favorites.

6) Auto Delete: This option is valid only when **Type** is set to **Once**. The calendar will be deleted automatically in the next day after reminding.

2 Jump: Accesses the interface for selecting a date. You can enter the date and press the OK key to go to the date or press the C key to exit.

3 Display Day: This option is used to shift between dates, go to the desired date and set or view the current calendar if any.

Note: The "*" icon indicates that the reminder frequency is everyday in the calendar information list

4 Delete All: Deletes all the calendar entries.

5 Storage Status: Displays the number of set

calendar entries and the number of calendar entries that can be set.

6 Display All: Lists all the calendar entries.

You can view, revise or delete an entry.

Note: 1. A green triangle icon is at the lower right of the present date to remind you of the calendar entry if the calendar function is set on a date.
2. The "*" icon indicates that the reminder activated in the calendar information list.

Calculator

The calculator can perform simple operations such as addition, subtraction, multiplication, and division. Press number keys to enter numbers, and press direction keys to select "+", "-", "x", and "÷". Select the "=" sign to display the calculated result. When the sign input field is empty, press the C key to exit the calculator, or press the function key III to restore to zero.

Note: Press the C key to clear one digit from the character input item, and hold the C key to

clear all digits.

Alarm Clock

This function allows you to:

1. Set three alarm clocks.
2. Set the time for the alarm clock to alert.
3. Sound the alarm even if the handheld is switched off.

Alarm clock 1: Enter the first alarm clock and then press the **Edit** soft key according to screen prompts to access the following menu options:

1 Name: By default, the name is alarm 1. You can change the name.

2 Enable/Disable: After an alarm is active, it is marked with an "*" behind the menu bar.

3 Type: Three option buttons are available: **Once**, **Work Day**, and **Every Day**.

4 Set date and time: For a one-off alarm, set the date and time for the alarm to sound. For other alarm clocks, you need to set only the time.

5 Set the alert tone: Select an alert tone for the alarm clock.

The methods for setting alarm clock 2 and alarm clock 3 are the same as the method for setting alarm clock 1.

Cancel All: Select this option, and then press the OK key to cancel all the set alarms.

Note: *When the set time of the alarm arrives, the handheld sounds an alert tone for the alarm clock. At the same time, the name and time of the alarm clock are displayed on the screen.*

Record

Four options are available: **Start Record**, **View Record**, **T-card Space**, **T-card Format**.

1 Start Record: Select this option to start recording and timing. At this time the screen prompts "Recording". Press the OK key or C key to stop and save the recording.

2 View Record: Open the recording list to check the saved recordings. Press OK key and enter the following menu:

1) Play: Plays the selected file in the recording list. Press the OK key to pause or the C key to stop.

2) Delete: Deletes the selected record.

3) Rename: Renames the selected record.

4) Delete All: Deletes all the records in the folder.

5) Attribute: Views information about the selected record, such as the name, format, size, and creation date.

3 T-card Space: You can see the storage conditions in this item, including used space, left space and total capacity of the storage.

4 T-card Format: You can delete all files in your T-card by using this item.

Note: *After formatting, all files in your T-card cannot be restored. Therefore, exercise caution with this function.*

USB Mode

Connect the handheld to a PC by a data line, and select this menu to enter the USB mode. You can view and operate in your T-Card.

Note: *If there is a new incoming call, the handheld will automatically disconnect from the PC and get back to the standby mode. If*

there is a new message, the handheld will not disconnect from the PC but remind you with vibration.

STK

The availability of features in this menu depends on whether or not your SIM card supports STK. If yes, the STK menu will be displayed on the screen.

Version Check

You can see **IMEI** and **S/W Version** in this menu.

RF Monitoring

After entering the menu Tools->RF monitoring, you can look up network information on your handheld. Generally, the first page on your handheld displays the information of serving cell, and page 2 to page 7 display the information of its six strongest neighbor cells. Support serving cell Serving Cell: BCCH, RX, C1, C2, CI, LAI, RQ, BSIC, RM, TX, TS,

Neighbour Cells : BCCH(the Channel), RX, C1, C2, FNO, QBO, BSIC, RM, TX.

Bluetooth

You can make a voice call via Bluetooth device. However, you have to connect your handheld with the Bluetooth device at first. This menu has 5 submenus: ON/OFF, Name, Set Pair PINcode, Bluetooth Scan, Bluetooth List.

1 ON/OFF: Turn on / Turn off the Bluetooth.

The Bluetooth icon  is displayed in status bar after the Bluetooth device powers up, and it will disappear after power off.

2 Name: Set Bluetooth name for your handheld. The default name is SED OPH-810RE.


3 Set Pair PINCode: Set Bluetooth pairing PIN code.

4 Bluetooth Scan: Scan the surrounding Bluetooth devices. Press OK key to scan the surrounding Bluetooth devices. Pop-up box

will display “No Devices” if no Bluetooth device has been found. After finding the devices, select one and press OK key. “Set Success” is prompted if the connection is successful, otherwise prompt “Fail” . The

status bar displays  after the Bluetooth device is connected successfully.

5 Bluetooth List: A Bluetooth device will be in the list once it has been discovered and connected ever. You can press OK key to

view the Bluetooth devices list.  will be displayed in front of the connected device. Select a Bluetooth device, press OK to view the following options:

- 1) **Connect:** Connecting Bluetooth device
- 2) **Pair:** Pairing with Bluetooth device
- 3) **Delete:** Delete device
- 4) **Rename:** Rename device

Working Alone

Working alone alarm might start in the following

conditions:

1. **"No Motion Alarm"** mode : The handset remains stationary without any operation on it in a preset time;

"Tilt Alarm" mode : The handheld tilts over the set angle threshold without any operation on it in a preset time;

Note: default set is "No Motion Alarm" mode.

2. Working alone alarm key has been pressed and held by the users.

ON/OFF: You can use this menu to open or close the working alone function, this option is set to **OFF** by default. An icon will be prompted in the standby interface if open this function.

Cell forcing

You can force the mobile to camp on a target cell in idle or dedicated mode, it will force handover in dedicate mode. An icon will be prompted in status bar. Select Cell Forcing and press OK to enter the setting screen.

You can enter ARFCN of target cell in this menu. Press OK to enable the forcing mode.

Note: *If the forcing ARFCN is not a BCCH ARFCN, your handset will lose service. In Dedicate mode, the forcing ARFCN shall be one of the six strongest neighbor cells that BSICs have been decoded. The success of handover finally depends on the network.*

Cell lock

You can use this function to lock the current serving cell, it will deactivate cell reselection and handover. An icon will be prompted in status bar. You can also select Cell Lock and press OK key to switch between forcing mode and non-forcing mode.

Note: *The priority of **Cell forcing** is higher than **Cell lock**. **Cell lock** and **Cell forcing** cannot be used simultaneously.*

Settings

You can set your handheld to make it unique. Choose **Menu > Settings** or press a shortcut key in standby mode to access the **Settings** menu.

Profiles

You can choose any one of five profiles: General, Meeting, Outdoor, Indoor, and Headphone. When you connect a headphone to your handheld, the headphone profile is automatically activated. You can use the same method to set the volume, alert mode, power-on music, and power-off music. After selecting a profile, press the OK key to display the following operation options:

- 1 Active:** Activates the current profile.
- 2 Volume:** Adjusts the volume of this profile. After selecting this option, press direction keys to adjust the volume, and then press the OK key to confirm or press the C key to cancel the adjustment operation.

3 Call Alert: Sets one of the following alert types: **Ring Only**, **Vibration Only**, **Vibration and Ring**, and **Mute**. Select the desired alert type. Press the OK key to confirm the settings and exit. Press the C key to exit without saving the settings.

4 Power-On Music: Turns on or off the power-on music.

5 Power-Off Music: Turns on or off the power-off music.

Display

1 Back Light: You can set the duration of the back light to 5, 10, 20, or 30 seconds, or 5 minutes as required.

Note: Usually a short duration for the back light is set to prolong the standby duration of the handheld.

2 Greeting: You can set the greetings displayed on the main screen.

3 Set Wallpaper: You can choose different pictures for the standby screen.

You can press direction keys to select a standby interface and then press the OK key

to save the interface.

4 Signal LED: After this option is set to **Enable**, the indicator in the upper left part of the handheld blinks.

During switch-on:

- 1) If no network is available (the handheld is beyond the network service area or enters a blind area), the indicator emits a red light and blinks at an interval of three seconds.
- 2) In the event of a missed call, the indicator emits a green light and blinks at a short interval.
- 3) During normal use and without exception, the indicator emits a green light and blinks at an interval of three seconds.

Charging in powered-off state:

- 1) During charging, the indicator is red and is solid on.
- 2) When charging is complete, the indicator is green and is solid on.

5 Contrast: Select **Manual Adjust**, and press the OK key. Then, press up/down direction

keys to adjust screen illumination. Select **Auto Adjust**, the handheld automatically adjusts screen illumination according to the light of the environment.

6 Auto Keypad Light: Select **Enable** and press the OK key to start the automatic keypad light. The keypad light automatically switches on or off according to the light of the environment. Select **Disable** and press the OK key to close the automatic keypad light. The keypad light remains on.

Note: The keypad is backlit and lights up when a key is pressed.

7. List Ongoing Calls: Select **Enable** and press OK key to start this function. The screen periodically prompts the ongoing group calls and broadcast calls in standby mode. Select **Disable** and press OK key to stop this function.

Tone Setup

1 Call Ring: You can select an alert tone for incoming calls.

2 SMS Alert Ring: You can select an alert

tone for short messages.

3 Group Ring: You can set alert tones for different groups to distinguish calls from different groups.

4 Keypad Ring: You can select **On** or **Off**.

Security Setup

1 Auto Keypad Lock: This option is set to **Close** by default, indicating that the automatic lock function of the keypad is disabled. You can set the time before the keypad is automatically locked to 10 seconds, 30 seconds, or 5 minutes in standby mode.

Note: You can also lock the keypad manually. Press the * key on the standby interface and then press the OK key according to screen prompts. After the keypad is locked, you can press the * key according to screen prompts, and then press the **OK** key to unlock the keypad.

2 PIN Code: You can set the PIN.

1) Enable PIN: You can enable PIN check. When PIN check is enabled, enter the PIN each time you power on

the handheld. No one is allowed to use the handheld without inputting the PIN.

2) Disable PIN: You can disable PIN code check. To enable this service, enter the correct PIN.

3) Change PIN: You can change the PIN according to screen prompts. Enter the old PIN, and then press the OK key.

Enter the new PIN (four to eight digits), and then press the OK key.

Enter the new PIN again, and then press the OK key.

If the screen prompts "PIN Change Success", it indicates that you have successfully changed the PIN.

Note:

1 If you enter the incorrect PIN three consecutive times, your SIM card will be locked. In that case, contact your network service provider immediately and obtain a PUK from the network service provider to unlock your SIM card. Attempting to unlock the SIM card on your own may damage the

SIM card.

2 You can change the PIN only after you enter the correct old PIN.

Phone Setup

You can set the functions, such as time, language, and shortcut keys on your handheld.

1 Time and Date: You can use this item to set the time and date.

1) Time Setting: You can set the current time.

2) Date Setting: You can set the current date.

3) Time Format: You can choose between the 12-hour system and the 24-hour system to display time.

4) Date Format: You can set the date format to "YYYY/MM/DD", "DD/MM/YYYY" or "MM/DD/YYYY".

5) Date Separator: You can set separators between year, month, day to ".", "/", "-", or a space.

2 Language: The handheld supports multiple

languages for display, including English, German. Select a language and press the OK key to save the settings. The menu and prompt messages are displayed in the selected language.

3 Shortcuts: You can set shortcuts to the menus. Press a shortcut in standby mode to directly enter the defined menu. Here you can set five shortcut keys:

1) Up: This is the shortcut key for **Phone Book** by default. You can set the Up key as the shortcut to a particular sub-menu. Press the OK key or a number key to enter the Up key. A list of available sub-menus is displayed. You can choose a sub-menu, and then press **OK** to set it and exit. You can press the Up key on the standby interface to enter the sub-menu, or press the C key to exit directly.

2) Down: Refer to the method for setting the Up key.

3) F1: Prompted as the F1 key on screen. Refer to the method for setting the Up

key.

4) F2: Prompted as the F2 key on the screen. Refer to the method for setting the Up key.

5) F3: Prompted as the F3 key on the screen. Refer to the method for setting the Up key.

6) PTT: Prompted as the PTT key on the screen. Refer to the method for setting the Up key.

4 Default Set: This function can restore factory settings. To perform the operation, enter your password ("1234" by default) and then press the OK key to go to **Default Set**. The following operation options are displayed:

1) Restore Default: Restores factory settings.

2) Phone Password: Enter the new password, and press the OK key. Then enter the new password again according to screen prompts and press the OK key to confirm the operation.

Note: Restart the handheld after restoring factory settings. All setting data previously

recorded in the handheld, will be lost if you restore factory settings. Therefore, back up your data first.

5 Speed Dial Set: You can relate special phone numbers to numeric keys 1 to 9 on the keypad by using this function. After setting, you can quickly make a call by pressing a number key and the dialing key in standby mode.

6 Voicemail: You can set or edit your voicemail number. To call your voicemail number, hold Key 1 on the standby interface.

Call Setup

This function allows you to perform call-related settings. Certain settings in this function require support from the network. For details, consult your network service provider.

1 Answer Mode: You can choose **Send key** or **Any key** as the answer mode.

2 Call Wait: The handheld supports functions such as call hold and call waiting. After this function is enabled, the network notifies you of another incoming call during an ongoing

call. You can hold the current call and answer the new call.

1) Query Status: Select this option to display the current call waiting status.

2) Activate: Use this function to start call waiting. If you have an incoming call during a call, you will hear a light ring tone. In that case, you can hold the current call, and answer the new call. During the call, you can switch between the two calls.

3) Deactivate: Select this option to cancel the call waiting service.

3 Call Divert: Call divert is a network function. This function can divert incoming calls to another designated handheld, voice mail or pager, thus avoiding missed calls. Several divert modes are available:

1) All Voice Calls: All calls are diverted to the designated number.

2) If Busy: During a call, new incoming calls are diverted to the designated number.

3) If No Reply: Incoming calls are

diverted to a designated number if a call is not answered within a certain time limit.

4) If Unreachable: When the handheld is powered off or out of the service area, incoming calls are diverted to the designated number.

5) Cancel All: You can cancel all divert settings.

Note: After you select a divert mode, the handheld requires the network to handle the current settings. A short delay occurs. After responding, the network returns the result of the operation.

4 Call Bar: This service can set restrictions for making or answering calls. This function, however, needs network support. For details, consult your network service provider. To enable call barring, you need to enter a password.

1) All Outgoing Calls: If this function is enabled, you can only receive calls and make emergency calls. If you make other calls except emergency calls, the

system will prompt that the handheld is suspended. You cannot send short messages but can only receive short messages and make toll free calls.

2) International Calls: If this function is enabled, you cannot make international calls, but can only send and receive short messages.

3) International Except Home: In an international roaming, if this function is enabled, you can only make an international call to the network to which your SIM card subscribed, but cannot make calls to other countries.

4) All Incoming Calls: If this function is enabled, you can only make calls and send short messages, but cannot receive calls or receive short messages.

5) Incoming When Roaming: In an international roaming, you can only make calls. You can restrict incoming calls by using this service when not willing to answer the calls.

6) Cancel All: You can cancel all call

barring functions.

7) Change Barring Password: Sets a call barring password. You can enable, disable or inquire all kinds of barring functions by using a 4-digit barring password.

5 Anonymous: You can apply for the Calling Line Identification Restriction (CLIR) service from the network provider if you do not want to display your phone number to the called party. Select **Activate** to conceal your phone number, or select **Deactivate** to display it.

6 Close User Group: The closed user group (CUG) supplementary service applies to speech communication services. Closed user groups are groups of GSM-R mobile telephone subscribers who can only make calls and receive calls from members within the group. Any other calls would be rejected.

1) Index List: Provides configurable group user IDs.

2) Outside Access: You can choose **Disable** or **Enable**. If you choose **Enable**, the handheld allows the group

users to call users outside the group. Disable this item to suppress this function.

3) Default Group: You can choose **Disable** or **Enable**. If you choose **Enable** and do not set a group user ID, the network allocates a group user.

4) Deactivate: You can cancel all the CUG settings.

Note: *This service is NOT applicable to short message services.*

7 Network Selection: This menu is used for selecting the network. You can choose **Automatic Selection** or **Manual Selection**.

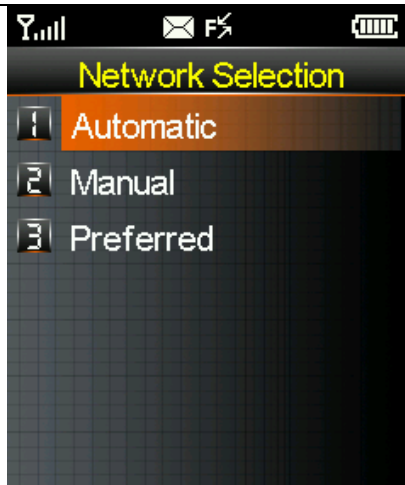
The selection state is displayed in the status bar, for details see description of the icons. The active network will displayed on the idle screen.

1) Automatic: The handheld automatically selects and registers with an available network.

2) Manual: The handheld selects a list of available networks in the current area. You can select a desired network, and press the OK key to confirm and exit, or press the C key to exit.

Note: Automatic selection is recommended. You can manually select a network only when the network enters an effective roaming agreement with your home network provider. If the network service changes, the normal operations of the handheld are affected.

3) Preferred: Lists the names of GSM-R networks in your SIM card.



Data Service

This function allows you to configure data communication settings. This function needs network support. For details, consult your network service provider.

1 Data mode: You can choose **Enable** or **Disable**. If you choose **Enable**, the data communication functions are available.

2 Power on Attach: You can choose **Enable** or **Disable**. If you choose **Enable**, the handheld automatically attaches to GPRS the next time you power on the handheld.

3 Serial Speed: You can set the serial speed to 2400, 4800, 9600, 19200, or 115200. The default speed is 19200 when the handheld is powered on.

Chapter 5 Reference Information

Access Password

The handheld and SIM card support multiple passwords to protect against unauthorized access.

PIN

The Personal Identification Number (PIN) protects the SIM card against unauthorized access. Usually the PIN is provided with the SIM card. When the power-on PIN is enabled, you need to enter this PIN each time you power on the handheld.

Note: *If you enter an incorrect PIN three consecutive times, the SIM card is locked. Then you need to enter the PUK to unlock the SIM card. Certain operators do not provide the PUK. Therefore, if you are asked to enter the PUK, contact your operator immediately. Do not enter any characters on your own.*

PIN2

Usually PIN2 is provided with the SIM card. PIN2 implements certain functions, such as the charge rate. These functions are implemented only when supported by your SIM card.

If you enter an incorrect PIN2 three consecutive times, PIN2 is locked and you need to input PUK2 to unlock PIN2.

PUK

PUK is used for changing a locked PIN. PUK is provided with the SIM card. If it is uncertain, contact your local service provider. If you enter an incorrect PUK ten consecutive times, the SIM card cannot be used any more. Contact your local service provider for a new SIM card. The PUK cannot be changed. If the PUK is lost, contact your service provider.

PUK2

PUK2 is usually provided with certain SIM cards. PUK2 is used to change a locked PIN2. If you enter an incorrect PUK2 ten consecutive times, you cannot use certain functions any more. Contact your local service provider for a new SIM card. The

PUK2 cannot be changed. If the PUK2 is lost, contact your service provider.

Battery use

The handheld uses special rechargeable lithium batteries.

Charge and discharge:

The new battery reaches optimum performance after two or three complete charge and recharge cycles. Therefore, in the first charge cycle, charge the battery for more than five hours. In this case, you can ignore a full-battery message. Deplete the battery until the handheld powers off automatically and then completely recharge the battery. A charged battery will discharge over a certain period if it is not in use.

Precautions for battery use:

- For safety reasons, do not use any damaged rechargeable batteries.
- When you use the handheld near a network base station, battery consumption is low. Therefore, the call

and standby duration is largely affected by the signal strength of the cellular network and parameters set by the network operator.

- The battery charge time depends on the remaining battery capacity and the type of battery and charger. Rechargeable batteries can be used repeatedly but will ultimately malfunction. When the used time of a battery (call time and standby time) declines significantly, consider buying a new battery.
- A fully charged battery will discharge if it is not in use.
- Use the designated battery and charger. Cut off the power when the charger is not in use. Do not connect the battery to the charger for over a week. Overcharging will shorten the service life of the battery.
- Do not store the battery in places of extreme temperatures; for example, in a car in summer or winter; otherwise, the capacity and lifecycle of the battery will degrade. Try to maintain a constant

indoor temperature for the battery. The handheld may fail to work temporarily in an environment that is either too hot or too cold, even if the battery is fully charged. Usually the discharge characteristics of lithium-ion batteries deteriorate in an environment below zero Celsius degrees.

- Do not short the battery contacts. For example: If you put an idle battery in your pocket or bag with metal objects (coins, pins or pens) and the objects directly contact the positive and negative poles of the battery (the metal bars at the back of the battery), the battery will be shorted. This would damage the core or protection circuits inside the battery.
- Dispose of (usually recycle) waste batteries according to local regulations.
- Do not expose batteries to fire.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Careful Maintenance

The following suggestions help you comply with warranty clauses and prolong the lifecycle of your handheld. When you use the handheld, battery, charger or other accessories:

- Place the handheld and all the accessories beyond the reach of children.
- Do not put the handheld in a dusty place; otherwise, its movable parts will be damaged.
- The LCD is a vulnerable part of the handheld. Avoid dropping the handheld or hitting it with other objects. Prevent sharp objects from scratching the LCD.
- Do not put the handheld in hot places. High temperatures shorten the lifecycle of electronic devices, damage the battery, lift the edge of the device, and melt plastic parts.

- Do not put the handheld in cold places. When the handheld is moved from a low-temperature environment to a normal or high-temperature environment, vapor is generated inside the handheld as the temperature rises, thus damaging the electronic circuitry.
- Do not throw, knock or shake the handheld. Rough treatment could damage the internal circuitry.
- Do not use coarse chemical agents, solvents or strong pharmaceutical cleaning agents to clean the handheld.
- Do not paint the handheld. Paint may stick on the movable parts of the device and affect normal operations.
- Use only equipped or designated antennas. Unauthorized antennas, accessories or modifications can damage the handheld, and violate rules governing radio devices.
- If the handheld, battery, charger or any accessory does not work, consult the nearest qualified maintenance service

provider.

Glossary

Antenna

It is a device for transmitting and receiving signals. The size and shape of an antenna depend largely on the frequency of the signals it receives. Handhelds and base stations must be equipped with antennas.

Call Barring

It is a restriction on outgoing calls and incoming calls.

Call Divert

It is the ability to divert voice or data calls to other handhelds or fixed phones.

Call Hold

Call hold allows you to switch between two calls if another incoming call is received during an ongoing call.

Call Waiting

You are notified if another incoming call is received during an ongoing call.

Conference Call

A multi-party call can have a maximum of six

parties. This function requires network support.

Hands-free

With this function, you do not need to pick up or hold a handheld.

LCD

Usually it refers to the screen display of a handheld.

Line Recognition Service

This service allows you to display or hide your own number when making a call.

PIN

It is a security code that protects the handheld against unauthorized access. The PIN is provided with the SIM card by the service provider. The PIN can comprise 4 to 8 digits, and can be changed as needed.

PUK

It is the password for unlocking the SIM card when you enter an incorrect PIN three consecutive times. The PUK consists of 8 digits, and is provided with the SIM card by the service provider.

Roaming

It is a service that allows you to use the handheld in other networks than your home network, for example when you are traveling.

SIM Card

This identification card with a crystal chip contains all information (including network, memory, and subscriber data) required to operate a handheld.

Common SMS

It is a network service that involves sending and receiving information to and from other users. A written or received message (with fewer than 160 characters) can be displayed, received, edited, or sent.

Cell Broadcast

The network service provider sends broadcast information, such as traffic information and weather forecast, to handhelds within network coverage. The information is sent in the form of text messages to your handheld.

Voicemail

If you have subscribed to the voicemail service, callers may leave a message when you cannot answer a call. To call your

voicemail number, hold the number key 1 on the standby interface.

Contact your network operator for more information.

PB

Phone Book

SMS

Short Message Service

vCard

Electronic Business Card

IC

International Code

ISDN

Integrated Services Digital Network

MSISDN

Mobile Station International ISDN Number

CN

Coach Number

CUG

Closed User Group

EN

Engine Number

FC

Function Code

FN

Functional Number

LN

Location Number

MO

Mobile Originated

MT

Mobile Terminated

PTT

Push-To-Talk

PLMN

Public Land Mobile Network

ASCI

Advanced Speech Call Item

STK

SIM Tool Kit

Troubleshooting

If your handheld has a problem, refer to the following symptom descriptions and solutions. If the problem persists, contact the retailer or service provider.

Symptom	Solution
I cannot answer or make a call.	<ul style="list-style-type: none"> • Ensure that the handheld has been powered on. • Ensure that a valid SIM card has been correctly inserted. • Ensure that the signal strength is sufficient. • Ensure that call barring or fixed number dialing is disabled. • Ensure that call divert is disabled. • Ensure that a correct network has been selected.
The call sound volume is low.	<ul style="list-style-type: none"> • Ensure that the call sound volume has been set properly.
The handheld does not ring.	<ul style="list-style-type: none"> • Ensure that the vibration mode or silent mode is not selected for incoming calls. • Ensure that the ringing volume has been set properly. • Ensure that call divert is disabled. • Check if the surrounding environment is noisy.
The other party cannot hear me.	<ul style="list-style-type: none"> • Ensure that mute is off. • Ensure that the handheld microphone is near your mouth.
The PIN is locked.	<ul style="list-style-type: none"> • Contact your service provider to obtain the PUK for unlocking.

The battery cannot be charged.	<ul style="list-style-type: none">• Ensure that the charger is properly connected.• Check that the battery or charger is not damaged.
No network is available.	<ul style="list-style-type: none">• Ensure that the SIM card has been inserted.• Check that your current position is covered by the service network.• Move the location to change the reception status.
I cannot power on the handheld.	<ul style="list-style-type: none">• Ensure that the battery has been installed.• Ensure that the battery is supplying power.• Hold the power key.
The standby time has shortened.	<ul style="list-style-type: none">• Ensure that the battery is fully charged.• Check whether the signal strength in your current location is weak.• Lower the LCD backlight.
I hear an echo or noise.	<ul style="list-style-type: none">• Move to a place with stronger signals.

