TechLab *2000*   R & D   C o m p a n y

User's Guide

GSME_B11_20090112

Dear User, thank you for choosing our product. The Xaos gamma is a high class encrypting GSM business phone designed to work in standard cellular telephone network. It belongs to a family of cryptographic devices called SYLAN, together with other encrypting phones working within GSM, PTSN, ISDN and also currently under development IP and satellite phones designed by TechLab 2000. The characteristic feature of the SYLAN family is cryptographic compatibility.

Our phone offers comfortable and safe communication. An encrypted call between two Xaos gamma phones is resistant to any attempts of overhearing thus ensuring security of voice and data communication.

You are welcome to visit our web site at www.tl2000.pl, where more information on our SYLAN family products can be found.

Contents

Introduction

The encrypting phone set we present you with implements not only standard functions available in classic GSM phone but also sophisticated high power cryptographic solutions even exceeding those used in high class professional devices of this type. Very short times of encrypted call settlement (1,5 .. 2s) and short delays in voice channel (shorter than 0,5s) are additional features that place the phone over standards approved for commercial solutions.

χaos gamma offers the following functionality:

✔ performing open voice connections with arbitrary telephone set.

✔ performing encrypted voice connections with other **Xaos gamma** phones and SYLAN system devices

✔ Sending encrypted text messages (SMS).

✔ Managing up to 5000 contacts.

The phone is very easy to use. It stores both the numbers and the information concerning the type of connection (open/encrypted) which allows to optimise the number of user operations. The phone works so fast that the user does not have to wait until an action is performed. The use of the phones comes naturally and actions are indicated to the user. During the encrypted call the user is presented with information on the cryptographic algorithm used. The phone offers long standby time and up to 5 hours of talk time both open and encrypted.

The use of the phone does not require any knowledge nor support from the GSM operator. The phone also works properly on the prepaid SIM cards. The device works in roaming and foreign networks too. The telecommunication solutions applied in the phone are standard for any service provider. The phone comprises EDGE/GPRS modem allowing internet connection for a PC.

Xaos gamma implements security mechanism to prevent unauthorized use when stolen or lost. It is a special keypad lock mode making access to the phone's functions unavailable until a long PIN code is entered. When the lock mode is active the keypad is locked automatically.

Limitations

The **Xaos gamma** encrypting phones can be used on the territory of EU and most of the world countries, with restrictions on bringing the phone to countries like North Korea, Iran, Cuba, Sudan, etc. Information on restrictions concerning this matter may be found at the Ministry of Foreign Affairs and the Ministry of Economy offices.

Overview of the phone

The functions keys

Power/
profiles
key
Volume key

Speed
access

Left
selection
key

Dial key

OK

Right
selection
key

End call/
Exit key

Scroll keys

Through the user's guide the following scheme has been adopted for differentiating the functions of the keys from the soft menu functions and its structure:

Dial – name (function) of a key

Exit – description of a key available in the Menu bar at the bottom of the display

Messages – option (function) of the phone's Menu

„Dialing..." - information displayed on the screen during action, or text of a voice message played on the phone's speaker

Key	Function
Power/ Profiles	If the phone is off pressing and holding the key (approx. 2s) will turn it on. The user is asked to enter the security code first and then SIM card PIN if required. The 60 seconds time limit on entering correct codes is set in both cases. After that time limit the phone turns off automatically. ## How to change PIN of the SIM The user can change the SIM code. To change the PIN key in the sequence: **04* old PIN*New PIN*New PIN# and then press key Dial e.g. : **04*1122*1357*1357# Dial Note: It is not possible to change the PIN of the phone.
	If the phone is on, pressing this key will invoke menu **Profiles**. By default option **Turn Off** is selected. If the key is held down the phone will turn off.
Volume control	Adjust the volume of the earpiece or the loudspeaker, or the headset when it is connected to the phone with the use of the two buttons + and -. This function is available only while the call is in progress. The new settings are stored.
Speed access	The function of this button is reconfigurable. It can be assigned function of Dial or Menu button. Depending on current configuration of the speed access key the display changes.
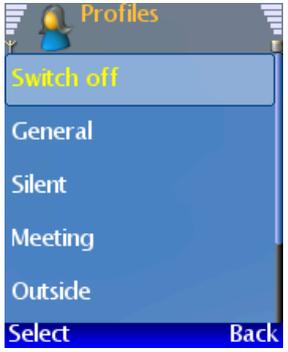
Speed access = Dial	Speed access = Menu

| Left selection | The function of this key is shown on the display menu bar presented above. Typically the key points to Options or functions depending on the context |
| Right selection | The function of this key is shown on the display menu bar presented above. Typically the key allows to exit from current menu function. |

Key	Function
Dial	Dials a phone number and answers a call. In the standby mode it shows the list of the most recently called numbers.
End	Ends an active call. Exits from Menu.
Scroll	Enables scrolling through menu functions, contacts, messages etc.
OK	The function of this key is shown on the display menu bar presented above. If not, it allows to enter the menu functions

The display

Signal power
max. 5 strips

Current time or
the icon of
current menu
funtion

Current date

Functions of
the keys

Battery
max. 5 strips

Status bar

Operator's name
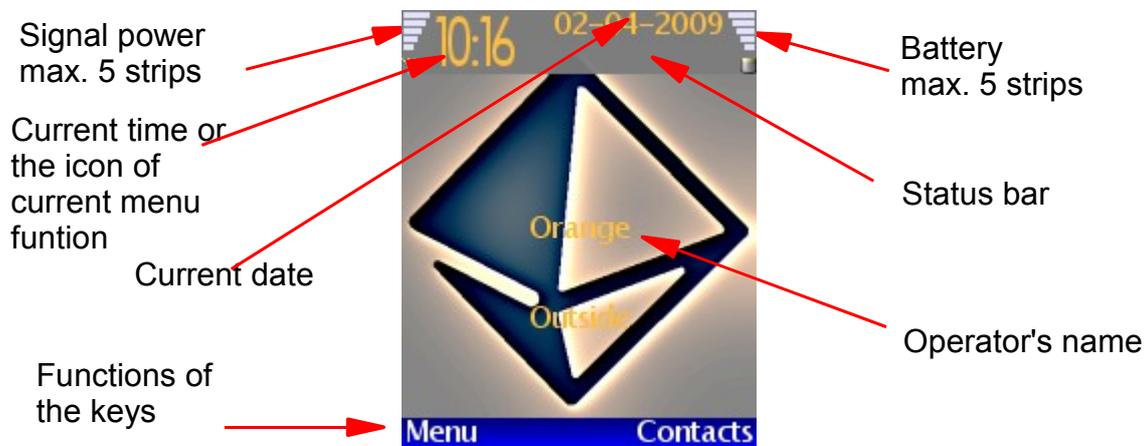
The status bar indicates various states and actions of the phone:

One or several text messages have been received. Number of messages is given.

The message memory is full. No new messages can be received until some old messages are deleted.

Sending messages.

The keypad is locked.

The phone works in roaming.

There has been a missed call. Number of missed calls is given.

A headset is connected to the phone.

CSD data connection.

GPRS/EDGE connection.

A data transmission cable has been connected to the phone

Data transmission between the phone and the device connected through the cable is enabled. This function requires that the device type is chosen in the phone's menu

The alarm clock is on

Getting started

Installing the SIM card and the battery

✔ Remove the back cover from the phone by pushing the release button and moving the cover upwards

✔ Remove the battery by lifting it from the end by the finger grip

✔ Release the SIM card holder by sliding the card holder to the left (direction indicated by the arrow and OPEN sign) and open it by lifting

✔ Insert the SIM card into the SIM card holder making sure that the SIM card's golden contacts area is facing down with the cut corner to the top right

✔ Gently close the SIM card holder and slide it to the right to lock it (direction is given by the arrow and LOCK sign)

✔ Insert the battery moving it at an angle to the back of the phone so that the electric contacts of the battery match with the contact fields of the phone and the locking catches of the battery lock with the caches of the phone. Then press gently to lock the battery into place

✔ Replace the back cover by placing the bottom of the back cover underneath the locking catches of the phone and then pushing the top of the cover towards the back of the phone pushing the release button.

Charging the battery

✔ The battery is delivered in preliminary charged state and it needs charging before use.

✔ Connect the lead from the charger to the socket on the bottom of your phone and connect the charger to an AC wall socket.

✔ The charging is indicated with green light in the left corner above the display.

✔ The charging process ends when the green light goes off. This indicates the battery has been fully charged.

✔ After charging disconnect the charger from the phone and the AC wall socket.

Note:

✔ Red light on when switching the phone on indicates low battery state.

✔ When the battery goes low while the phone is on the display shows: „***Warning: Low battery***" reminding the user to charge the battery

✔ The charging progress is indicated with the icon shown in the top right corner of the display

Switching the phone on

✔ Before first use make sure the SIM card is inserted and the battery is charged

✔ Press and hold the power on button

✔ Turning on the phone is indicated with the blue light in the top left corner of the phone and the welcome screen on the display

✔ At the first switching on of the phone the user is asked for a security PIN. The security code is a 4-digit number created by the user to secure data stored in the phone. Note down the security code and key it in. After entering the proper security code the phone will ask the user to enter the code again to verify. Remember to keep the note of the security code away from the phone.

✔ If this phone has been in use and the security code has been already defined the user is asked to enter it.

✔ Then key in the PIN code of your SIM card (if asked)

✔ Wait a while until the phone is ready

✔ Go into the phone's Menu and start configuration of the phone settings entering the **Phone settings** menu

Note: If the **Phone lock** function in the **Phone settings** is set the security code will be required to unlock the phone.

Switching the phone off

✔ Press and hold down the `Power` key

✔ The display will show „***Switch off***"

✔ Press the `Select` key or hold down the `Power` key

NOTE

Switching on the phone again will require entering the 4 digit security code.
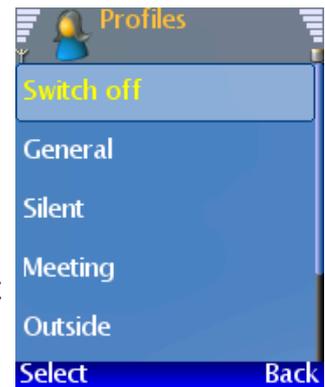
Call functions

The phone allows to establish connections in two modes:

- ✔ Standard open connection.
- ✔ Encrypted connection.

During those connections you can use the headset supplied with the phone. Before starting the conversation connect the headset to the port connector on the bottom side of the phone next to the power supply connector.

Note: Encrypted connection can only be established with other Xaos gamma phone or other phone from SYLAN family.

Important:

Before dialing a number it is necessary to decide the mode of connection. After the connection is established changing the mode is not possible. In case the open connection is active and the information to be passed is to be kept secret the connection should be terminated and established once again in encrypted mode.

Standard calls

Making a standard call

Way 1:

- ✔ Key in the phone number. By default the number is set to be an open connection number. The screen shows the description.
- ✔ Dial the number pressing Dial key.
- ✔ The number can be corrected by pressing Delete key.

When establishing or terminating a connection the display shows appropriate messages on the screen. If the dialed number exists in the **Contacts** phone book, in place of the number the contact name will be displayed.
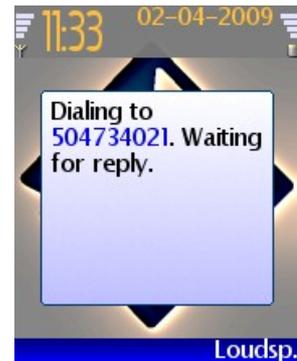
Way 2:

All the connections are registered in the **Received**, **Missed** and **Dialed numbers** lists. Each connection registered is noted down together with the connection mode in the form of icon shown next to the number or name:

Open connection

Encrypted connection

The **Dialed numbers** list is accessible directly by pressing the Dial key. The remaining lists are accessible from the **Call register** folder by pressing left scroll key or entering the **Call register** from the Menu.

To dial a number:

- ✔ Open the list
- ✔ Search for open connection
- ✔ Press the Dial key

It is possible to change the connection mode e.g. from encrypted to open. To do that select the dialed number, press Options key and select the command **Use the number**. This invokes the editing window. Press Options and change the connection mode selecting Open (by default opposite mode is given) and then press Dial.
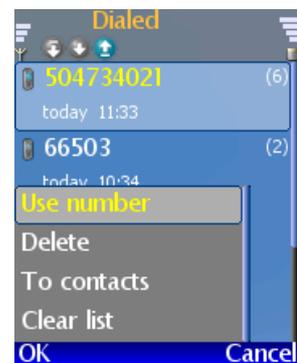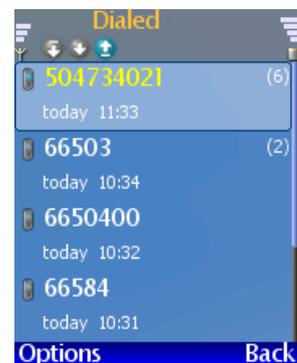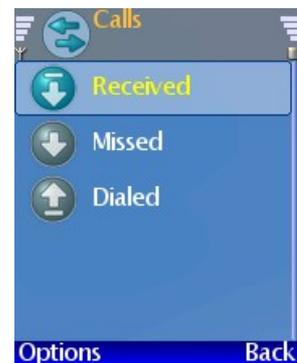
Way 3:

To dial a number:

- ✔ Open Contacts list
- ✔ Choose a contact. If more than one number has been assigned to the contact they are available through scrolling left/right.
- ✔ Press the `Dial` key.

To change the connection mode see the „Way 2".

During the call the display indicates open mode of the connection. If the number exists in the **Contacts** phone book in place of the number dialled the display shows the name. Open connections are indicated with black colour. The connection can be terminated any time by pressing the `End call` key. Pressing the right selection key `Loudsp.` turns on the loud-speaker mode. Pressing the key once again turns the loud-speaker off.

Answering or rejecting an incoming standard call

The mode of the incoming call (encrypted/open) is recognized automatically no matter whether the number exists in the **Contacts** or not.
The incoming call is announced by a message „**Open call. ... calling**" on the screen. If the number exists in the Contacts the name of the caller is presented.

While the call is coming you can do one of the following :

- ✔ Accept the call pressing the `left selection` key `Answer` or pressing the `Dial` key
- ✔ Reject the call pressing the `End call` key
- ✔ Press `Mute` to turn the tone off and keep it waiting. You can either accept the call pressing `Answer` or `Dial` key or reject the call pressing `End call`.

After answering the call you can always turn the loud-speaker mode pressing the `Loudsp` key.

Encrypted calls

Background information

Encrypted connections are carried on as data transmission in so called transparent CSD mode. The voice quality is comparable with the quality of open connections. To perform an encrypted connection the phone needs to:

- ✔ agree the encryption key

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✔ use encrypting algorithm

In both cases strong cryptographic mechanisms are used and make any attempts of monitoring the call practically impossible.

It is worth to know that :

✔ The encrypting key is agreed independently for each connection and since it is a random sequence it is unpredictable. At the end of connection the key is erased and there is no way to create it back.

✔ The phone does not save any secrets that could be used to decrypt the conversation after it is finished, e.g. an attempt to record a conversation to have it decrypted later on will be unsuccessful.

✔ Based on current advances in electronics and our knowledge in the field of cryptography, no person including the manufacturer possesses knowledge that would allow to set an attack on confidentiality of the conversation.

Making a call

Encrypted calls are carried out in slightly different way than open connections. After dialing the number the session key is being set. While authorization is taking place the voice message „**Authorization in progress, please wait**" is played. Typically the process of setting the session key takes 2 seconds and the user will hear only words „**Authorization**". This operation may take longer in case the phone works in poor signal conditions. Then the voice message will be played a few times.

There are three ways to initiate encrypted call.

Way 1:

✔ Key in the number. By default the number is set to be an open connection number.

✔ Press the left selection key Options. The screen shows a menu, where first on the list is change of the connection mode to encrypted.

✔ Choose the encrypted mode pressing the left selection key.

✔ The message on the screen changes to: „**Enter phone number for encrypted call**"

✔ After selecting the complete number press Dial

The process of establishing a connection is indicated with the following messages on the screen: „Encrypted call„, „Dialing ...", „Waiting for reply." Following that, messages informing about authentication and key negotiation are displayed.

Way 2:

All the connections are registered in the **Received**, **Missed** and **Dialed numbers** lists. Each connection registered is noted down together with the connection mode in the form of icon shown next to the number or name:

Open connection

Encrypted connection

The **Dialed numbers** list is accessible directly by pressing the key Dial. The remaining lists are accessible from the **Call register** folder by pressing left scroll key or entering the **Call register** from the Menu.

To dial a number:

- ✔ Open the list
- ✔ Search for encrypted connection
- ✔ Press the Dial key

It is possible to change the connection mode e.g. from open to encrypted. To do that select the dialed number, press Options key and select the command **Use the number**. This creates number editing window. Press Options and change the connection mode selecting Encrypted (by default opposite mode is given) and then press Dial.
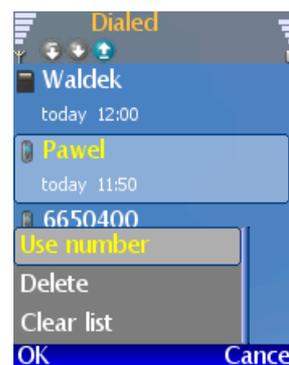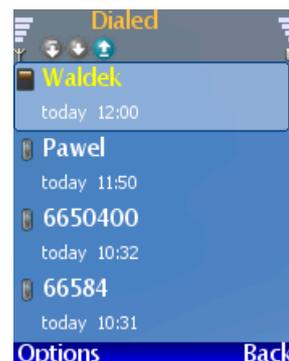
Way 3:

To dial a number:

- ✔ Open Contacts list
- ✔ Choose a contact containing number for encrypted connections. If more than one numbers have been assigned to the contact they are available through scrolling left right.
- ✔ Press the Dial key.

To change the connection mode see the „Way 2".

During the call the display indicates encrypted mode of the connection. If the number exists in the **Contacts** phone book in place of the number dialed the display shows the name. Encrypted connections are indicated with red color. The connection can be terminated any time by pressing the Disconnect or End call key.

To view the details of cryptography settings used during current connection press left selection key. The following information is available:

- ✔ *digest:* a digest of the session key. A short of the key must be equal on both sides of the connection. For full confidentiality of the connection it is advised to read the short to the recipient of the call.
- ✔ *algorithm:* encrypting algorithm used;
- ✔ *ECC:* the scheme of session key negotiation (according to the NIST nomenclature);
- ✔ *auth. time:* time of setting the key and authentication;
- ✔ and a message informing that the key needed to send encrypted message is saved.

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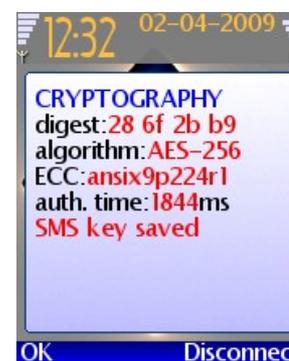
Answering or rejecting an incoming encrypted call

The mode of the incoming call (encrypted/open) is recognized automatically no matter whether the number exists in the **Contacts** or not.

The incoming call is announced by a message „**Encrypted call. ... dialing.**" on the screen. If the number exists in the Contacts the name of the caller is presented.

While the call is coming you can do one of the following:

- ✔ Accept the call pressing the left selection key `Answer` or pressing the `Dial` key
- ✔ Reject the call pressing the `End call` key
- ✔ Press `Mute` to turn the tone off and keep it waiting. You can either accept the call pressing `Answer` or `Dial` key or reject the call pressing `Disconnect` or `End call` key.

After accepting the call the phone will play a voice message „Authentication, please wait" similar to the situation when encrypted call is initiated. The process of negotiating session parameters takes usually less than 2 seconds. After this process is ended the conversation can be carried on.

Note:
The loud-speaker mode is not available for encrypted connections.

To terminate the connection press `Disconnect` or `End call` key. The screen will show the summary of the connection.
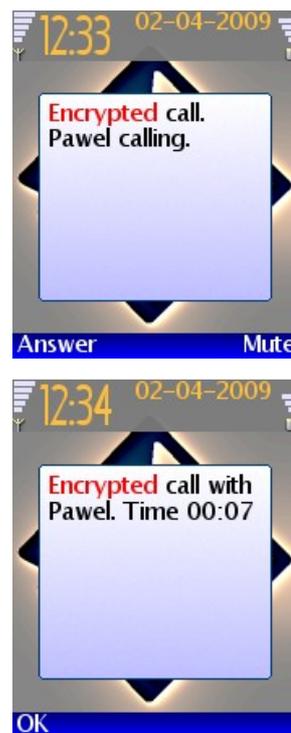
Using the menu

The menu is accessible by pressing left selection key or directly by pressing speed access key (depending on the configuration of the key `Speed access` this can be Menu or Dialed numbers list). The menu may be presented either in the form of a list or a table. To switch between the view forms choose the option available by pressing the left selection key. By default the opposite view mode is given. To move through the menu use the `Scroll` keys. To choose an option press `OK` key.
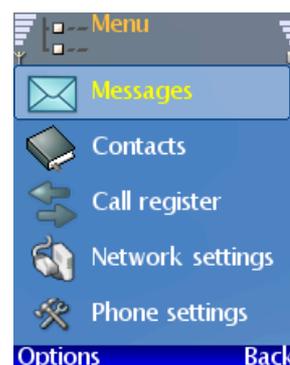
The Menu contains the following folders:

- ✔ **Messages**
- ✔ **Contacts**
- ✔ **Call register**
- ✔ **Network settings**
- ✔ **Phone settings**
- ✔ **Cryptography**
- ✔ **Information**
- ✔ **Alarm clock**

The following functionality is available:

- ✔ The left selection key points to `Options` . Pressing the key shows option **Table/List** allowing to change the view of the menu. To move through the list use the `up/down scroll keys` . To accept a selected option press the `left selection` key or the middle `OK` key.
- ✔ The middle key is not marked and pressing it enters the menu.
- ✔ The `right selection` key exits current menu.
- ✔ Pressing `Back` key on any of the menu levels results in exiting the menu.

Messages Folder

This menu allows to write SMS (Short Message Service) and view received, sent and saved messages.

The **Messages** menu contains the following options:

- ✔ **New message**
- ✔ **Received**
- ✔ **Sent**
- ✔ **Saved**

The Xaos phone menages both the standard and encrypted messages.

The types of messages are indicated with the icons:

Encrypted unread

Encrypted read

Standard unread

Standard read

Create new

This option opens the screen of a new text message. The message screen shows message status field, address field and message content field.

The message status contains the SMS icon followed by the sign „**Message**". Below on the right the screen shows number of characters that can be entered to fill a single message, and in the brackets the number of messages that will be used to send current message content. On the left the screen shows the type of editor currently in use.
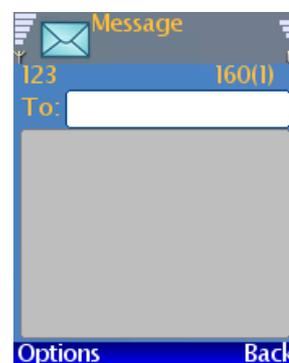
123 – numeric

Abc – first character upper case (capitalized), following lower case

ABC – upper case only

abc – lower case only

To switch between the editor's type press ⌗ key.

The recipient's phone number may be entered in the address field with the sign „**To**". Alternatively the phone number may be searched for in Contacts selecting `Options`>**Contact**. Searching for a contact follows the same rules as in Contacts. To accept the choice press `OK`.

The message should be entered in the message field. Messages sent by the phone are not limited to the single message length maximum provided in the GSM standard. If your message is longer than the limit, it will be send in parts and you will be charged by the GSM operator for as many messages as the parts sent. There are two numbers displayed in the message status field. The second number, given in brackets, shows the message parts number. The first number tells how many characters can be entered for the given message parts number.

The `*` key gives access to the list of symbols. Double press on the `*` key shows the list of emoticons. To navigate within the list use the scroll keys. To enter a particular symbol or icon press `OK` key.

> Note: The number of characters left may depend on the message content. If the message content is too long the message is split and sent in parts.

Pressing the key `Options` gives access to the following operations:

- ✔ **Contact** – choose a recipient's phone number from Contacts (Phone book)
- ✔ **Exit** – go back to the higher menu level
- ✔ **Save** – save the message in the **Saved** folder
- ✔ **Clear text** – clears the message text, leaving the phone number
- ✔ **Clear all** – clears both the message text and the phone number

Encrypted messages may be sent only under the following conditions:

- ✔ the recipients are present in Contacts,
- ✔ at least one encrypted call has been performed with each recipient's entry in the Contacts.

During the encrypted call an encryption key for the text messages is set. This is indicated during the call and noted in the Contacts with „**sms**" sign shown next to the recipient's name when viewing Contacts.
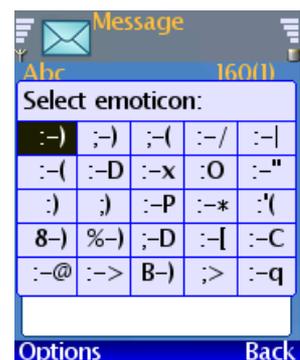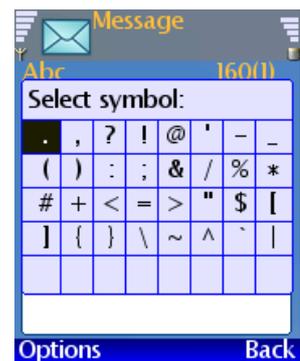
Received

Contains received text messages. To move between the stored messages use the **up/down scroll** keys.

Selected message is shown after pressing `OK` key.

Pressing the `Options` key gives access to the following operations:

- ✔ **Reply** – allows to edit and send a reply message. The „*To*" field should contain the recipient's phone number. The message field contains the received message text, which may be deleted by pressing right scroll key named `Clear`. It is possible to change the recipients of the message to pass the received message on. To send a message press `OK` key named `Send`.

- ✔ **Delete** – deletes the message

- ✔ **Add to contacts** – this option is available when the sender is not present in the Contacts. This option allows to add the sender to the Contacts.

- ✔ **Copy** – saves the message in the **Saved** folder. The „To" field needs to be filled in.

- ✔ **Info**– shows detailed information on the messages such as: the sender, SMS center, time of sending, time of reception, type, length.

Sent

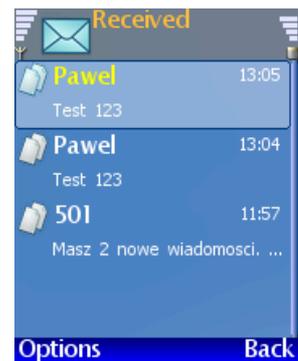This folder contains sent text messages. To move between the stored messages use the **up/down scroll** keys.

Selected message is shown after pressing `OK` key.

Pressing the `Options` key gives access to the following operations:

- ✔ **Edit** – allows to edit the message text and the recipient and send it forward. The „*To*" field should contain the recipient's phone number (name). The message field contains the sent message text, which may be deleted by pressing right scroll key named `Clear`. It is possible to change the recipients for the message. To send a message press `OK` key named `Send`.

- ✔ **Delete** – deletes the message

- ✔ **Add to contacts** – this option is available when the sender is not present in the Contacts. This option allows to add the sender to the Contacts.

- ✔ **Copy** – saves the message in the **Saved** folder. The „To" field needs to be filled in.

- ✔ **Info**– shows detailed information on the messages such as: the sender, SMS center, time of sending, time of reception, type, length.

Saved

This folder contains text messages saved by the user. Saving messages is particularly useful when for some reason editing of a message has to be left uncompleted to another time to be finished. To move between the stored messages use the **up/down scroll** keys.

Selected message is shown after pressing `OK` key.

Pressing the `Options` key gives access to the following operations:

- ✔ **Edit** – allows to modify the message text, change the recipient and send the message forward. To send a message press `OK` key named `Send`.

- ✔ **Delete** – deletes the message

- ✔ **Copy** – saves the message in the **Saved** folder. The „**To**" field needs to be filled in.
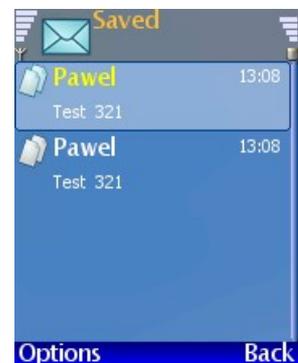
Contacts Folder

The phone book allows to store 5000 entries. Each entry consists of a full name, company name, four phone numbers including encrypted phone number etc.

Searching through the Contacts may be performed with the use of filters and through defined groups of contacts.

The Contacts menu contains the following folders:

- ✔ **Entries**
- ✔ **Groups**
- ✔ **Configuration**

To enter the folder press OK key.

To move between the folders use the **up/down scroll** keys.

Entries

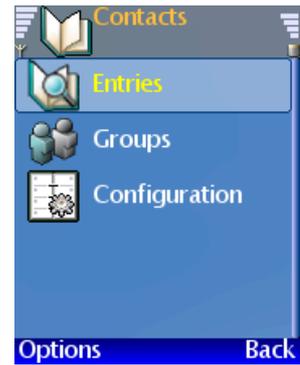This folder contains contacts presented in alphabetic order. Two modes of listing are available.

- ✔ Extended; each contact takes two lines where the first line shows name and the second line shows available phone number. In this mode four entries are shown at a time.
- ✔ Normal; only the active contact takes two lines. In this mode up to 9 entries are shown.

To switch between the modes select Options>**Change view**.

If a contact contains more than one phone number, this is indicated with an arrow sign on the right side of the second line. Scrolling between the phone numbers is possible with the **up/down scroll** keys. The type of a phone number is indicated with the following icons:

- Cell phone
- Encrypting phone
- Work
- Home

When browsing through the contacts the screen shows the phone number selected Options>**Default number** or the first from the list.

If a particular phone number has been assigned an encryption key for text messages, the right upper corner following the contact name will be signed „**sms**".

Pressing Dial key will start dialing the number currently shown.

By pressing middle key of the scroll keys all contact entries will be presented (look at Details)
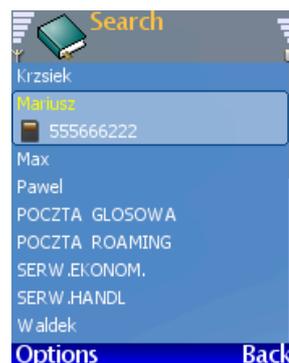
Pressing the key Options gives access to the following operations:

- ✔ **Use number** – exits the contact list and allows to edit the number chosen. This option differs from pressing the Dial key in the way that dialing does not start automatically. The number, and the mode from the standard to encrypted and vice versa can be changed.
- ✔ **New** – enter new contact
- ✔ **Edit** – edit existing contact
- ✔ **Delete** – delete existing contact. This operations requires confirmation.
- ✔ **Change view** – switches between the extended and regular view
- ✔ **Show** – shows the details of the contact, similarly like the middle scroll key.
- ✔ **Default number** – this option is available only when more than one phone number exist. Choosing the current number to be default makes it to appear as the first on the list of numbers in an entry
- ✔ **Send business card** – allows to send currently active contact in the form of a business card, to a given phone number. The recipient's phone number may be keyed in or chosen from the **Contacts.**
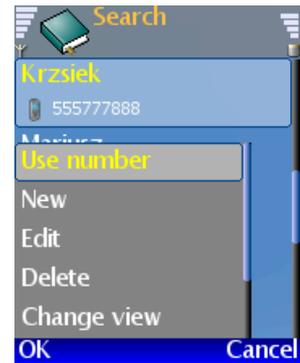
Details

Pressing the key OK on selected entry shows all the information saved under this entry. Pressing the middle scroll key Edit opens an entry for editing.

Pressing the key Options gives access to the following operations:

- ✔ **Edit entry**
- ✔ **Delete entry**

Selecting **Edit entry** is analogue to pressing the key Edit.

Pressing the Dial key on entry field containing a phone number starts dialing.

The menu options also contain command **Delete entry** that performs the same operation as **Delete entry** in the options for entries.
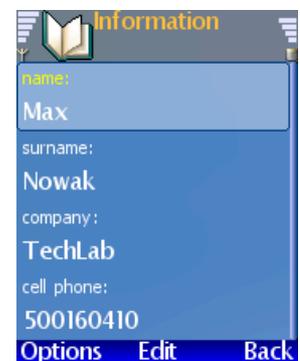
Edit entry

Each entry contains a number of fields. Only one of the „**first name**", „**surname**" or „**company**" fields is required for an entry. To move between the fields use the **up/down scroll** keys or the **OK** key allowing to move down the list only. When the last entry field is selected the **OK** key shows Save function.

Pressing the **Options** key gives access to the following operations:

✔ **Save**

✔ **Previous**

✔ **Exit**

Editing an entry may be ended at any filed by selecting **Exit** or **Save**.

Pressing the **Previous** allows to switch to the last edited field, e.g. when filling in the „**surname**" field, pressing **Previous** will move to the „**name**" field.

Groups

The entries in the **Contacts** folder can be organized into user defined groups. A maximum of 30 groups can be created. Each entry may be assigned to an unlimited number of groups.

To enter the **Groups** folder press the OK key.

Pressing the Options key gives access to the following operations:

- ✔ **New group**
- ✔ **Delete group** (operation not available when no group exists)

To create a new group select **New group**. You will be asked to entry the name for the group. A new created group is empty.

To delete a group select **Delete group**. Deleting a group does not delete entries from the **Contacts** folder.

To enter a selected group press the OK key. If the group contains entries they will be listed. If no entries exist in this group the message „*The list is empty*" will be shown.

Pressing the Options key gives access to the following operations:

- ✔ **Add to group**
- ✔ **Delete from group** (operation not available when the list is empty)

To add an entry to a group select **Add to group**. This will open the **Contacts** folder where you can choose one or more contacts to be added to a group.

Note: The contacts stored on the SIM card can not be added to a group

To call a subscriber select an entry in the **Groups** and press Dial key.

To edit an entry select it in the Group and press OK key

Selecting an entry in Groups and pressing OK key allows to edit an entry. You can modify an entry if required.
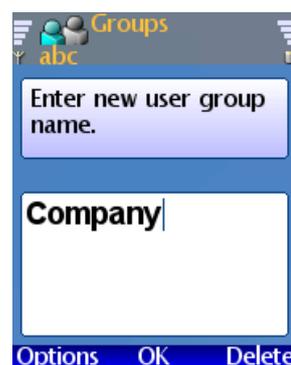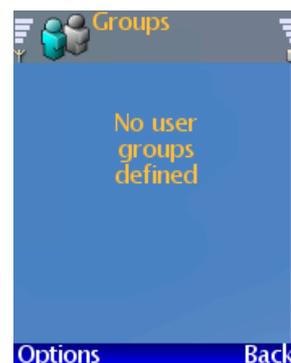
Configuration

This folder allows to adjust the view of Contacts data to the user's preferences.

To enter the **Configuration** folder press the OK key. The following folders are available:

- ✔ **Field search order**
- ✔ **Field presentation order**
- ✔ **Copy from SIM to phone memory**

To enter the folder, first select it and then press OK key.

Field search order

The following settings are available:

- ✔ **Default**
- ✔ **Name Surname**
- ✔ **Surname Name**
- ✔ **Company Surname Name**

To set a selected display format press the OK key. To leave this menu level press Back.

Field presentation order

The following settings are available:

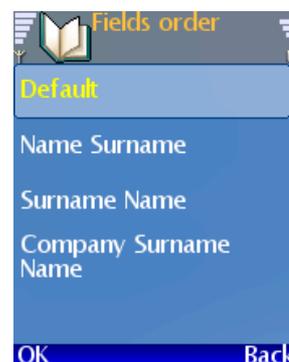- ✔ **Surname Name**
- ✔ **Name Surname**
- ✔ **Company Surname Name**

To set a selected display format press the OK key. To leave this menu level press Back.

Copy from SIM to phone memory

This operation copies the phone book stored in the SIM card to the phone memory.

To start the copying process press OK key.

The copying process is indicated with the messages shown on the screen.

Call register Folder

This folder contains information on the last numbers dialed, calls received and missed. Each call entry is marked with date and time, the mode (standard or encrypted – icon) and the number of calls to and from the given number.

Pressing the Dial key starts establishing the connection in the mode stored in the register list.

To enter the **Call register** folder press the OK key. The following folders are available:

- ✔ **Received**
- ✔ **Missed**
- ✔ **Dialed**

To enter the folder, first select it and then press OK key.

Each of the folders contains the list of calls. To move between the folders use the left/right scroll keys. To access the dialed numbers list directly press the Dial key.

Pressing the Options key in the **Received** and **Dialed numbers** gives access to the following operations:

- ✔ **Use the number**
- ✔ **Delete**
- ✔ **To Contacts**
- ✔ **Clear list**

Pressing the Options key in the **Missed calls** folder gives access to the following operations:

- ✔ **Delete**
- ✔ **Clear list**

Selecting the **Use the number** option allows to edit the phone number details. You can change the connection mode standard/ encrypted, and then make a call.

Selecting the **Delete** option starts the process of deleting the entry from the current folder. „*Delete entry?*" message will be shown. To confirm the operation use the scroll keys: „Yes" - left key, „No" - right key.

The option **To Contacts** appears only when the phone number is not registered in the Contacts list (phone book). Selecting this option allows to edit the phone number and add other details to a new entry in Contact list.

More information can be found in the „Entry edit" chapter.
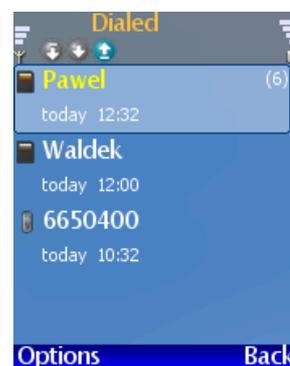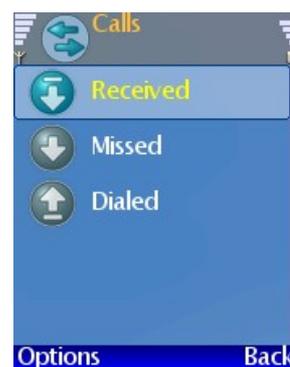
The **Clear list** option allows to delete all entries from the current list. „**Delete all entries?**" message will be shown. To confirm the operation use the `scroll` keys: „Yes" - left key, „No" - right key.

Network Settings Folder

This folder allows to view the list of network operators currently available and choose the operator in manual or automatic mode.

To enter the **Network Settings** folder press the `OK` key.
The following folders are available:

- ✔ **Show operator**
- ✔ **Automatic mode**
- ✔ **Manual mode**
- ✔ **Band**

Show operator

This folders contains information on current network operator, the mode and status.

The screen displays the following information:

Current operator:

.... – *(Orange, Era, Plus GSM, etc.)*

Mode:

.... – *(automatic or manual)*

Status:

.... – *(registered, only alarm emergency calls, roaming)*

Pressing the `Back` key allows to return to the upper Menu level.

Automatic mode

In this mode the phone selects the preferred network operator according to the information stored on the SIM card. The screen shown above will be displayed.

Pressing the right selection Back key allows to return to the upper Menu level.

Manual mode

This mode allows to choose the network operator manually. Entering this mode runs a process of searching for all networks currently available. During the search process the display shows a message „**Searching for networks...**". After the searching is finished the list of the available networks is presented. Each item on the list contains the operators name and icon:

    ✓   Registration is allowed.

    ✗   The operator denies the access to the network. When registered in this network the phone will work in the „emergency call only" mode.

To register in the selected network press the Select key. Registration is confirmed by the message shown on the screen.

Pressing the right selection Back key allows to return to the upper Menu level.
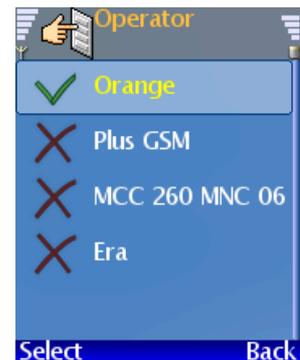
Phone settings Folder

This folder allows to adjust the behavior of the phone to the user's preferences and situations in which the calls will be managed.

To enter the **Phone settings** folder press the `OK` key. The following folders are available:

- ✔ **Profiles**
- ✔ **Date and time**
- ✔ **Phone lock**
- ✔ **Color scheme**
- ✔ **Background**
- ✔ **Ring tones**
- ✔ **Keypad tones**
- ✔ **Schemes**
- ✔ **Speed access**
- ✔ **Signaling**
- ✔ **Speed dials**
- ✔ **Language**
- ✔ **Restore settings**
- ✔ **Modem options**
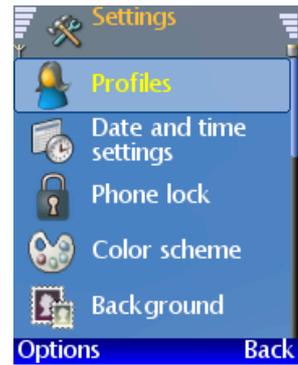
Profiles

Profiles of the phone are combinations of settings defining the phone behavior in different environments.
This folder allows to change the current profile and modify the existing profiles:

- ✔ tones (tones, type, volume) for each of the call and message modes,
- ✔ keys tones,
- ✔ vibrations,
- ✔ name.

To enter the folder press the **OK** key. The following profiles are available:

- ✔ **General**
- ✔ **Silent**
- ✔ **Meeting**
- ✔ **Outside**
- ✔ **Profile 1**
- ✔ **Profile 2**

Pressing the **Options** key allows to choose from two options:

- ✔ **Personalize**
- ✔ **Select**

Pressing the right selection **Back** key allows to return to the upper Menu level.

To activate a chosen profile first select it from the list using the **up/down scroll** keys and then choose **Select** or press **OK** key.

To modify the current profile select **Personalize** option. This will enter the profile settings screen with the following options:

- ✔ **Ring tones**
- ✔ **Keypad tones**
- ✔ **Change name**
- ✔ **Vibrating alert**

Changing the type of tone and key tones is described in **Tones and keys tones** chapter.

The option **Name** allows to change the name of the profile. You can enter your preferred name for a profile. To save the name press the left selection key **Save**. To correct the name use the right selection key **Clear**.

The **Vibrations** offers the following settings:

5
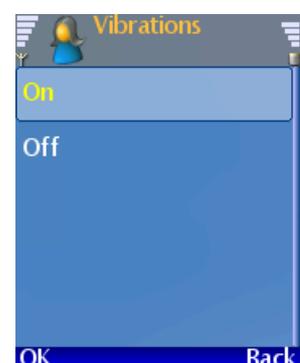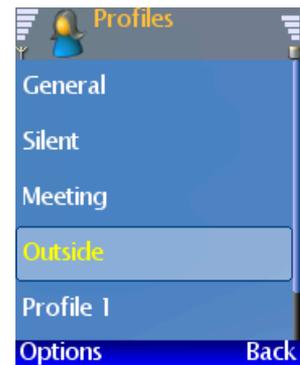
Date and time

This menu allows to set current date and time and choose the way they are shown, and select the time zone.

To enter the folder press the OK key. The following profiles are available:

- ✔ **Time**
- ✔ **Date**
- ✔ **Date format**
- ✔ **Timezone**

To modify the current time or date enter the Time or Date option and use the Scroll keys. Pressing the right selection key Exit allows to return to the upper Menu level.

The **Date format** contain the following settings:

- ✔ **Time** *(On/Off)*
- ✔ **Date** *(On/Off)*
- ✔ **Time format** (*24h/12h*)
- ✔ **Date format**
- ✔ **Date separator** (*- . /*)

To change the above setting (excluding the **Date format**) enter the **Settings** folder and use the left/right scroll keys. To change the format of the date enter the **Date format** and select the preferred format from the list of 7 different schemes. To activate the selected format press the middle scroll key or the left selection Select key. Pressing the right selection Back key allows to return to the upper Menu level.

The **Time zone** folder allows to choose one of the following:

- ✔ **Australia**
- ✔ **Asia**
- ✔ **CET**
- ✔ **EET**
- ✔ **Europe**
- ✔ **MET**
- ✔ **Indian Ocean**
- ✔ **Pacific**
- ✔ **US**
- ✔ **UTC**
- ✔ **WET**
- ✔ **Africa**
- ✔ **America**
- ✔ **Antarctic**
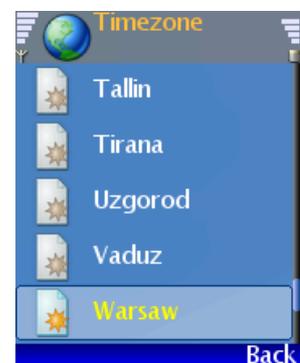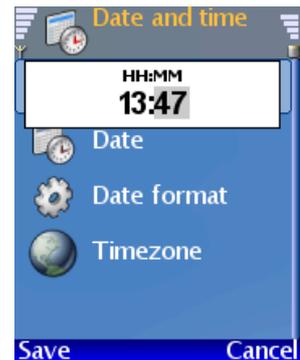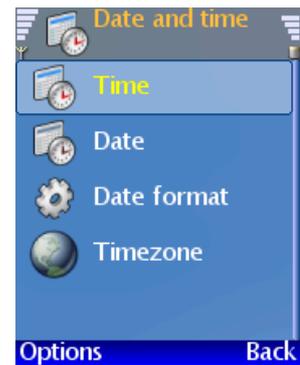
- ✔ **Arctic**
- ✔ **Atlantic**

Entering any of the zones listed above shows the list of towns, from which one can be chosen for the time zone.

To store the selected time zone press the middle scroll key.

Pressing the right selection key Exit allows to return to the upper Menu level.

Phone lock

The security code allows to lock the phone from unauthorized use. When this function is activated the phone is secured with a 4 digit PIN code in the following situations:

- ✔ when the display goes to standby mode (in this case the keypad is also locked automatically),
- ✔ when the keypad is locked by the user pressing the OK and ⁎ keys.

To unlock the phone it is required to:

- ✔ Unlock the keypad by pressing the OK i ⁎ keys.
- ✔ Enter the phone security code.

In case of three unsuccessful attempts to enter the security PIN code the phone will be locked for 5 minutes.

Note: the Answer and Dial keys are not locked when the call is coming.

To activate the phone security code lock press OK, The screen will show:

Lock the phone Yes/No

To choose the right option use the left/right scroll keys and confirm your choice pressing the left selection key Save. Pressing the right selection Exit key allows to return to the upper Menu level.

Note:

In order to prevent accidental keys pressing (without full phone lock) use OK and * for locking/unlocking of the keypad.
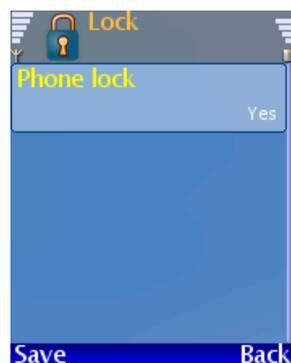
Schemes

This menu allows to choose one of available color schemes for the display:

- ✔ **Dark**
- ✔ **Bright**

To activate selected option press `OK` key.

Background

This menu allows to choose the main display background view. To choose the preferred picture for the wallpaper use the `up/down scroll` keys. The preview of the wallpaper is shown on the display. To set selected picture for background press `Select`. Pressing the right selection key `Back` allows to return to the upper Menu level.

Ring tones

This option allows to configure tones for each of both connection and message modes in currently selected profile. This operation is adequate to selecting **Profiles >** *(Current Profile)* **> Tones**.

Tone settings include changing the melody, the volume and the type.

To enter the folder press the OK key. The following are available:

- ✔ **Open call**
- ✔ **Encrypted call**
- ✔ **Data call**
- ✔ **SMS**

For each of the above the following options are available:

- ✔ **Tone**
- ✔ **Volume**
- ✔ **Type**

Pressing the left selection key Play plays currently set tone for each of the connection types. Pressing the Back key allows to return to the upper Menu level.

To change the tone select the **Tone** option and press the OK key. Choose one of 16 listed tones. To select the tone use up/down scroll keys. Every time you select the tone it will be played. To accept the tone press left selection Select key. Pressing the right selection Back key allows to return to the upper Menu level.

To change the volume of the tone use the left/right scroll keys in the **Volume** option.

To select the type of the tone enter the **Type** option, where one of the following can be chosen:

- ✔ **Continuous** – uniform volume ringing, continuous.
- ✔ **Ascending** – ascending volume ringing, continuous.
- ✔ **Ring once** – uniform volume ringing, played once.
- ✔ **Short ring** – user defined short ring.
- ✔ **Silent** – ringing is off.

To accept selected type press OK key. Pressing the Back key allows to return to the upper Menu level.
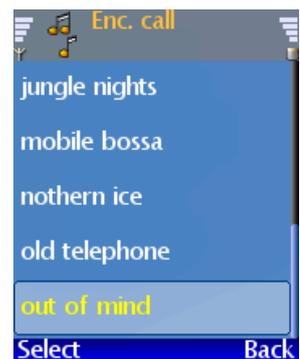
Keypad tones

This menu allows to adjust the keypad tones of the current profile. This operation is adequate to selecting **Profiles > *(Current Profile)* > Keypad tones**.

To enter the folder press the `OK` key. The following are available:

- ✔ **Keypad tones** *(On/Off)*
- ✔ **Volume** *(volume bar)*

To change the settings for these options use the `left/right scroll` keys.

To accept selected options press `OK` or `Save` key. Pressing the right selection `Back` key allows to return to the upper Menu level.

Display

This menu allows to change the brightness of the display.

NOTE:
Please note that increased brightness of the display may influence the battery talk and standby time.

To enter the **Display** folder press the `OK` key. The following are available:

- ✔ **Show Profile name** *(Yes/No)*
- ✔ **Display brightness** *(bar)*

To change the settings for these options use the `left/right scroll` keys.

To accept selected options press `OK` or `Save` key. Pressing the right selection `Back` key allows to return to the upper Menu level.
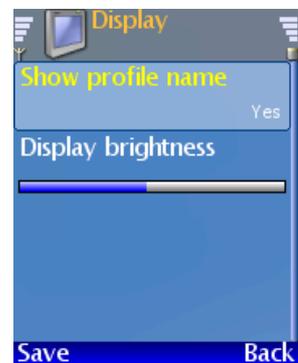
Speed access

This menu allows to define the function of the Speed access key and left selection key.

To enter the folder press the OK key. The following are available:

- ✔ **Call**
- ✔ **Menu**

Selecting the option **Dial** and pressing the Choose key configures the speed selection key to open the **Dialled numbers** list. The left selection key becomes a shortcut to the Menu.

Choosing the **Menu** option sets the Speed access key to open the main Menu. The left selection key will point to the **Messages**.

Notifications

This menu allows to set the way the phone informs the user about missed calls and SMS messages.

It is possible to define different types of indication including light blinking, display back light or the sound. Any combination of the above is possible.

To enter the folder press the OK key. The following are available:

- ✔ **Blue light**
- ✔ **Display back light**
- ✔ **Sound**

To set the preferred type of signaling select one by one the required types and press middle scroll key OK. This operation will place the *X* mark to the left of the signaling type. To store the settings press OK.

To leave the menu press the right selection key Back.

Indications show up when the phone goes to the suspend mode – display in suspend mode:

- ✔ the light blinks every 5 seconds,
- ✔ the display turns on every minute for about 20 seconds,
- ✔ short beep sounds every minute.

The display shows the message informing about the number of missed calls. To view the missed calls press the middle scroll key Show. This operation will turn signaling off.
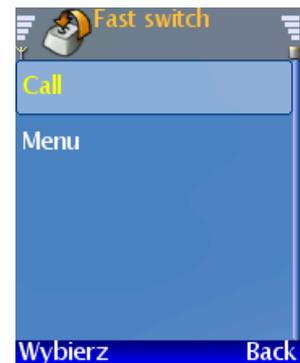
Speed dials

This function allows to assign phone numbers from the Contacts to the keypad keys 1,2....0,* and # , for easy communication with numbers often in use.

To dial the speed dial number press and hold the key to which the number has been assigned.

Assigning the number to a key.

Press the **OK** key to enter the menu. The screen shows the list of 12 items corresponding to each speed dial key available. If no number has been assigned to a key the line shows **<not assigned>** . To navigate through the list use the Up/down scroll keys. To set the number for selected key choose the Option>**Set** key. This opens the Contact list where you may choose a phone number to be assigned to the speed dial key.

Selecting the list item with number assigned to it and pressing the Option key opens available options.

- ✔ **Change**
- ✔ **Delete**

The options allow to modify the phone number or to delete it.

Pressing the right selection key Back allows to return to the upper menu level.

Language

This menu allows to change the language. To enter the folder press the **OK** key. The following are available:

- ✔ **English**
- ✔ **Polski**

To activate selected option press the **OK** key.

Recovery

This menu function allows to delete all user messages and restore factory settings of the phone.

To enter the folder press the OK key. The following operations are available:

- ✔ **Remove messages**
- ✔ **Restore access points setup**

To take selected action press the OK key. The screen will show the warning that this action cannot be undone and thus there is a threat of losing data.

To proceed with the selected action press the Continue key which will delete the messages or restore the Menu factory settings accordingly.

To move back to the menu with no changes press the Back key.

Pressing the right selection Back key allows to return to the upper Menu level.
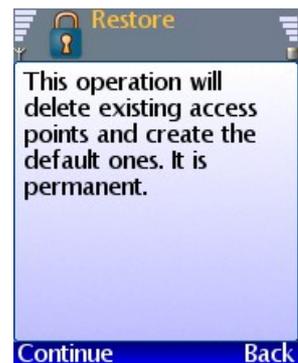
Modem

This menu allows to define the access points to be used for connections to the Internet (modem function) and remote telephone administration (enables remote administration over web browser).

To enter the folder press the OK key. The following are available:

- ✔ **GPRS/EDGE outgoing**
- ✔ **CSD outgoing**
- ✔ **CSD incoming**
- ✔ **Services settings**

Selecting each of the options above shows the list of access points and pressing key Show displays access point settings.

Pressing the left selection key Options the following operations are available:

- ✔ **Delete**
- ✔ **Edit**
- ✔ **Add new**

Selecting **Delete** will delete data from a given item on the list.

Choosing **Edit** allows to modify existing settings.

To add a new access point press key Add new . In the case of GPRS/EDGE this setting comprises of four fields to be filled in, in CSD seven fields. Some of the edit fields contain default values.

Pressing the key Options gives access to the following actions:

- ✔ **Save**
- ✔ **Previous**
- ✔ **Exit**

Selecting **Save** stores the settings and exits to the upper menu level. Pressing **Previous** returns to the last edited field. Pressing **Exit** returns to the upper menu level without storing any data.

To move to the next editing field press Next key.

To correct data entered use the right selection Delete key.
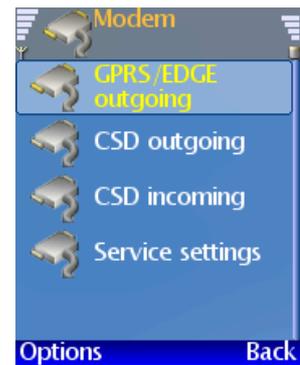
Cryptography Menu

This menu allows to configure cryptographic settings of the phone.

Note: None of the settings causes the cryptographic power/ability loss to the extent that the connection decrypting would be possible or setting up a connection would be impossible. If it turns out that while setting up a connection the phones are configured in different ways, the option ensuring the best accessible cryptographic mechanisms is chosen.

To enter the folder press the OK key. The following are available:

- ✔ **Minimal key lengths**
- ✔ **Diffie-Hellmana elliptic group**
- ✔ **Session key verification**

Minimum key lengths

This menu allows to define the lowest acceptable power of the encryption mechanisms required to establish a successful connection. It ensures compatibility with stationary encrypting telephone sets. This option is skipped when connection is established between two **Xaos gamma** phones.

To enter the folder press the OK key. The following settings for the keys are available:

- ✔ **192 bits**
- ✔ **256 bits**

To accept selected option press Ok key. Pressing the right selection Exit key allows to return to the upper Menu level.
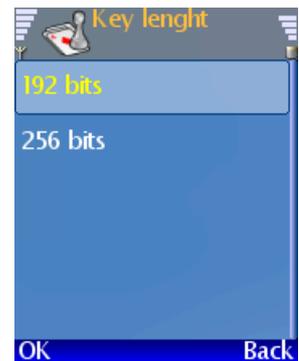
Diffie-Hellman elliptic group

This menu allows to choose preferred elliptic group for the session key setting algorithm. Choosing larger groups increases the strength of the mechanism and also increases the time of setting the key.

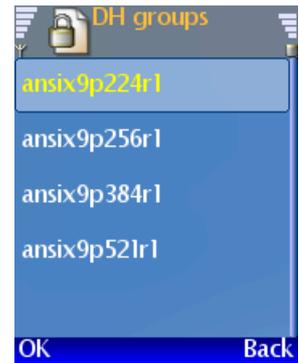Note: If the size of the key is different for both sides of the link, the time taken to establish connection will be longer due to the fact that stronger group is negotiated.

To enter the folder press the **OK** key. The following group sizes are available:

- ✔ **ansix9p224r1**
- ✔ **ansix9p256r1**
- ✔ **ansix9p384r1**
- ✔ **ansix9p521r1**

To accept selected options press **OK** key. Pressing the right selection **Back** key allows to return to the upper Menu level.

Session key verification

This menu allows to define weather or not to verify the session key and perform an authentication based on the scrambled pattern.

This option secures from the attack called masquerade. When this option is on the key settlement time slightly extends.

To enter the folder press the **OK** key. The following options are available:

- ✔ **Verification not required**
- ✔ **Verification required**

To accept selected options press **Ok** key. Pressing the right selection **Back** key allows to return to the upper Menu level.

Information

This menu allows to view general information concerning the phone and the software.

To enter the folder press the **OK** key. The following information is available:

- ✔ **Serial number**
- ✔ **Software version**
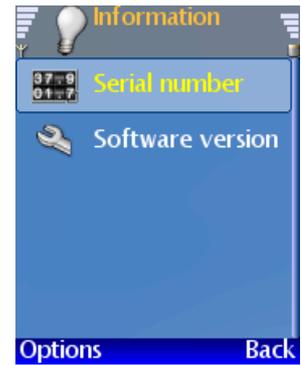
Serial number

This option displays serial number of the phone.

Pressing the right selection **Back** key allows to return to the upper Menu level.

Software version

This option displays the version of the software currently running on the phone.
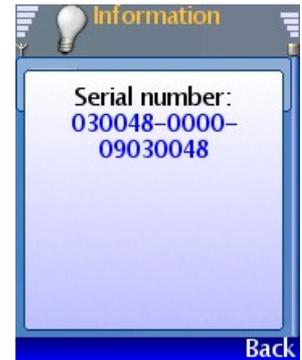
Pressing the **right selection** **Back** key allows to return to the upper Menu level.

Alarm clock

The phone may be used as an alarm clock. This menu gives access to the following settings:

- ✔ **Alarm time**
- ✔ **Repeat alarm**
- ✔ **Alarm repeat days**
- ✔ **Alarm tone**

The options listed above allow to set the alarm time, repetition and alarm tone. To enter selected setting press OK key.

When the alarm clock is set the screen shows bell icon on the status bar next to the battery capacity indicator.

The alarm goes on at the defined time with selected tone, with the screen showing the clock.

To turn the alarm off press Turn off.

Pressing the Snooze key will terminate alarm tone and repeat it in 10 minutes.

Alarm time

If the alarm is not set or the alarm clock is off, pressing the OK key will start alarm time setting procedure as described below in **Change time**.

If the alarm time is set entering this menu will show the following options:

- ✔ **Set alarm clock**
- ✔ **Turn off alarm clock**

To change the alarm time select the **Set alarm clock** option and press OK key. Then change the time shown on the screen using the Scroll keys. To set the time press OK.

If you want to resign from setting the alarm time press Cancel.

To turn the alarm off select Turn off . This action will return to the upper Menu level.

Repeat Alarm

This option allows to set repetition of the alarm clock on selected week days. You can choose **Yes** or **No**.
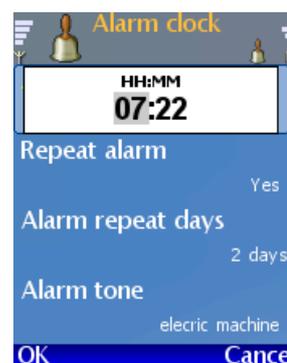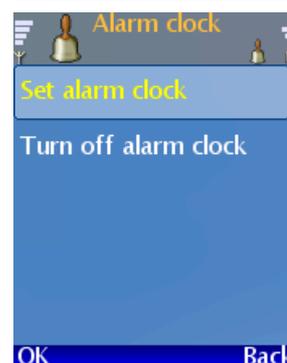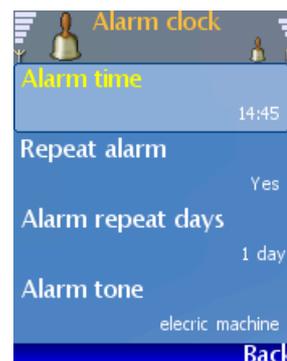
To set the alarm on every selected week day choose **Yes**.

To set the alarm clock to go on once select **No**.
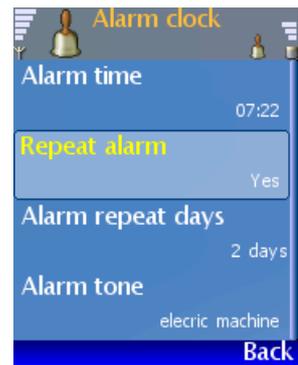
Alarm repeat days

This menu allows to choose week days on which the alarm clock will be active at the preset time.

To enter the menu press the OK key. The screen will show the list of week days. To move through the list use the up/down scroll keys.

To set the alarm on required week days select them one by one and press OK key. This operation will place the *X* mark to the left of the week day. To clear the choice press OK key again. To store the settings press OK.

To leave the menu press the right selection key Back.

If you choose at least one week day for alarm clock repetition, this will be indicated with the number of days selected shown next to the **Repetition days** folder.
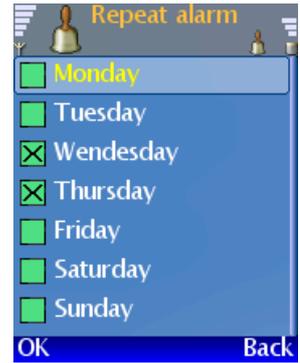
Alarm clock tone

This menu allows to choose the tone of the alarm. To enter the menu press **OK** key. The screen will show the list of available tones. Currently active tone is highlighted. To move through the list use **up/down scroll** keys. Every time you select a tone it will be played. To accept the tone press **left selection** key **Select**. Pressing the right selection key **Back** allows to return to the upper Menu level.

Security precautions

Please read the information below before the first use of the phone and obey the recommendations.

General rules of safe use of the equipment

- ✔ The phone should be treated with care and should not be exposed to hard shocks.
- ✔ Protect the device from humidity, water and dust.
- ✔ Protect the device from exposition to extended temperatures.
- ✔ Protect the device from direct sunlight.
- ✔ Protect the device from open fire.
- ✔ Do not attempt to dismantle or disarrange the device or fix by yourself.
- ✔ Service can only be carried out by authorized personnel.
- ✔ It is forbidden to use the device in places like airplanes, oil stations, areas of high explosion risk, close to the medical devices.
- ✔ Avoid storing the phone near to the heart stimulator devices.
- ✔ Keep the phone and it's accessories in places out of reach of small children.
- ✔ While driving use the device according to the local rules.

Rules of safe use of encrypting equipment

Xaos gamma is an encrypting phone designed to pass information of great importance to the user, thus it is necessary to obey the following safety precautions.

✔ Keep safe both PIN codes from unauthorized use.

✔ It is strongly advised not to keep the PIN codes together with the device noted down somewhere, e.g. underneath the battery cap.

✔ Keep the device safe from loosing it or theft.

✔ To protect the device from unauthorized use it is advised to use the phone security lock. Locking the phone with the security PIN code does not block reception of calls.

✔ When making an encrypted call (passing information important to the user) it is advised to avoid making conversation in public areas, where the user is exposed to acoustic monitoring.

✔ It is advised to use the highest of elliptical group for setting the session key although this will result in longer time for establishing a connection.

✔ After an encrypted connection has been established it is advised to verify the short form of session key. This can be done by checking the first two and the last two characters of the short form of the key.

✔ It is advised to use the rule of limited trust when making the phone accessible to third party, especially to unknown person.

✔ Do not leave the phone in places that look safe but are accessible to unknown persons, e.g. offices

✔ any service should be carried out by service facility authorised by the manufacturer to minimize the risk of manipulating the phone on purpose.

Using the power supply – battery charger

The power supply should be connected to the mains according to the precautions marked on the product to minimize the risk of mechanical damage or chemical or environmental endanger.

The power supply should be plugged in the mains socket in an easily accessible place.

To disconnect the device from the mains supply pull the plug from the mains socket.

To charge the cellular phone use only dedicated power supply type CMA-80-230.

> Note:
> There is a risk of explosion if the battery used is not original or of the wrong type.

Battery

It is advised that the battery is fully charged before first use of the phone. Charging should take place in room temperature.

Warning!

There is a risk of explosion if the battery is thrown into the fire.

Disposal of used equipment

Used equipment must be taken to collection point for disposal of electronic and electric equipment. Information on disposal points is available in local administration offices or product selling points.

Disposal of used batteries

Do not dispose of batteries as unsorted municipal waste. Batteries should be taken to the disposal points.

Declaration of Conformity

We, TechLab 2000 Ltd Company, Śniadeckich 10/1 street, 00-656 Warsaw declare that the product **Xaos gamma** encrypting phone set is in conformity with the provisions of the following directives:

✔ health care and safe use – art. 3.1a of a directive 1999/5/WE,

✔ electromagnetic compatibility (EMC) – art. 3.1b directive 1999/5/WE,

✔ effective frequency use – art 3.2 directive 1999/5/WE.

CE no 044/2008 issued by the LBUT National Institute of Telecommunications -PIB 04-894 Warsaw, Szachowa 1 street.

Technical and maintenance data

General data

Network	GSM 850/900/1800/1900
Battery	Li-Ion, 1000mAh
Standby time (max)	200 h
Standard and encrypted call time (max)	300 min.
Internal memory	8 MB
Weight including battery	120 [g]
Dimensions – length x thickness x width	117 x 25 x 51 mm
Display	TFT 176x220 pixels, 262 000 colors
Battery charging	From power supply or the USB port

Cryptography and security

Scrambling	AES256
Encrypting key agreement	For each connection independently with Diffie-Hellman elliptic algorithm using one of the curves NIST P-224, NIST P-256, NIST P-384 lub NIST P-521.
Authentication of scrambling keys	SHA-256 short function of the key presented on display
Encrypted connection setting time	1,5s with no interference in the network and without an authentication
Voice delay on encrypted voice channel	constant 450ms
Encrypted messages keys	Coming from the last connection session key in given direction.
Data security	Encrypted file system, the key is not issued, secured by hardware and unique for each phone set.
Protected resources	Software, user data: phone book, messages

Data transmission and configuration

GPRS	10 class
EDGE	10 class
Connection to a PC	USB 2.0 FullSpeed
Local configuration	Through the user interfaces of the phone (the display and keypad) and from a PC through the www. Allows to update software in safe mode with the use of software supplied (Audit.exe)
Remote configuration	Through the www. Enables for remote software update and cryptographic settings configuration.
GPRS modem	Open public PPP with user defined access points.
CSD modem	Open and encrypted asynchronous (9600/14400bps).

Messages and Contacts

SMS	Open and encrypted
Maximum number of contacts	5 000
Fields	First name, surname, company, encrypting cell phone, stationary phone, office phone, home phone, address, function, e-mail, www. Possibility of setting the default number.
Ordering	Surname, First name, company
Searching	With filtering, configurable
Groups	Up to 30 groups
Phone number association	The phone numbers of received calls and dialed numbers are checked with the phone book for match of the phone number and type of connection (open and encrypted)

User interface and others

Tones	True tone
Loud-speaker mode	Available only in open connection mode
Headset	Supplied with the phone. The use of headset allowed in both the open and encrypted mode.
Vibrations indication	yes
Time measuring	Date and time. The time is presented with 1 minute accuracy. One month accuracy in room temperature 30s.
Profiles	Configurable. Up to 5 profiles can be managed. The profiles menu is accessible by pressing the On/Off switch.

Environmental parameters

Operating temperature	-20 C to +55 C
Charging temperatures	0 C to +45 C
Storage temperature	-20 C to +60 C
Humidity	20% to 90%

The phone set

Encrypting phone	
Charger	CMA-80-230
USB cable for connection to a PC	1,3m
Battery 1000mAh	BBL80N
CD	User manual, administration pack software