SCOPE COMMUNICATIONS UK LTD

User Manual
EPOC-S

Version 1

SCOPE COMMUNICATIONS UK LTD

Table of Contents

1 Abbreviations

EPOC-S	Scope Pager with POCSAG transmission capability
dBm	Decibel referenced to 1 milliwatt, power unit
EEPROM	Electrically Erasable Programmable Read Only Memory
LCD	Liquid Crystal Display
LED	Light Emitting Diode
L/R	Left / Right
MMI	Man-Machine Interface
POCSAG	Post Office Code Standardization Advisory Group, data transmission asynchronous protocol (used for pagers)
RIC	Radio Identity Code
RSSI	Received Signal Strength Indicator
RX	Received signal
TX	Transmitted signal
U/D	Up / Down
USB	Universal Serial Bus

2 Product overview

2.1 EPOC-S

EPOC-S is a POCSAG very light and rugged pager. It can be programmed with 128 numeric and/or alphanumeric addresses. It offers a TX capability.

- Dimensions 97.4x54.7x16.7mm
- Weight 90g
- Screen 96 x 96 pixels up to 8 lines of 16 characters each
- Multiple coloured screen
- Li-ion rechargeable battery
- IP67 compliant
- Accelerometer for lone-worker monitoring and automatic screen rotation
- Powerful flash LED
- User-friendly MMI with arrow keys
- Belt clip and lanyard

EPOC-S Alerter

2.2 EPOC-S cradle

The cradle exists in 2 versions:
- Programming and charging cradle
  - You can charge the EPOC-S battery and program it (see **EPOC-S programming manual**)
  - LED strip light is green
- Charging cradle
  - You can only charge the battery
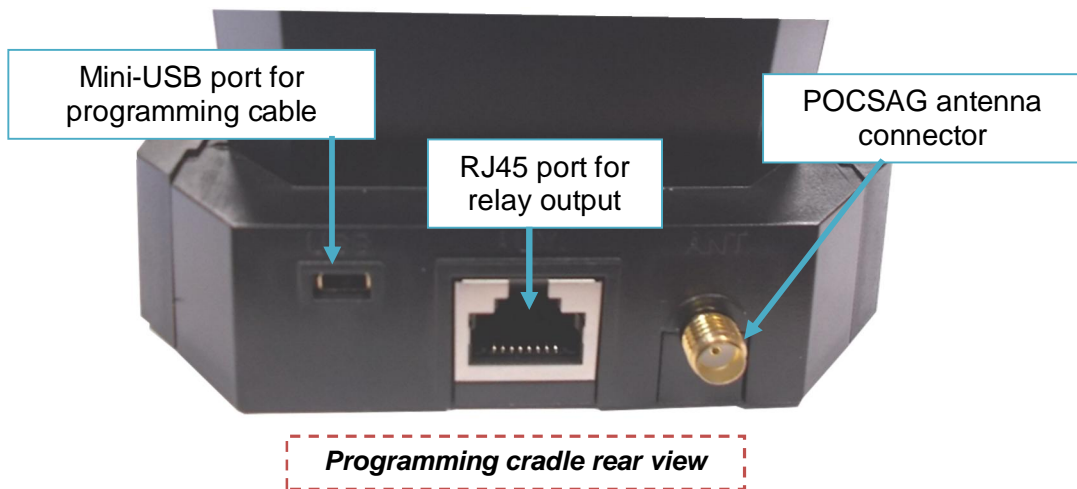 - LED strip light is blue

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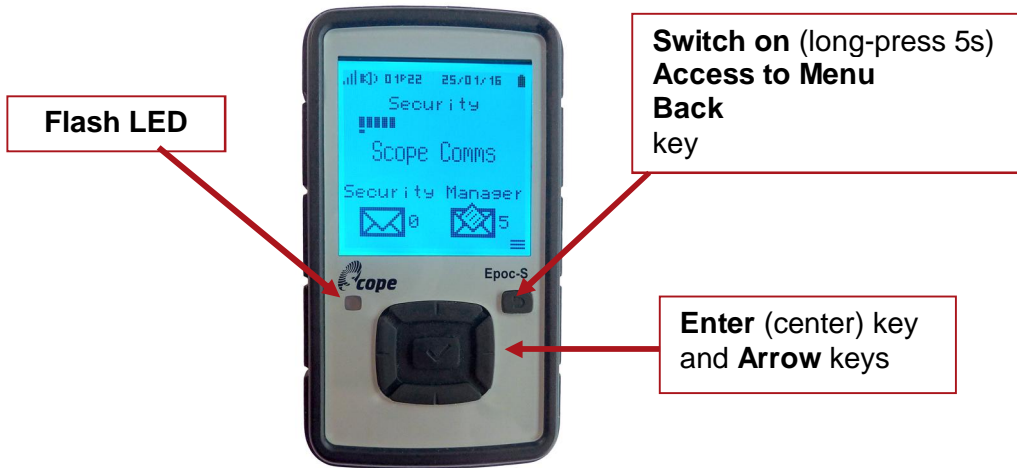EPOC-S programming cradle   programming cable   power sector adapter

Mini-USB port for programming cable

RJ45 port for relay output

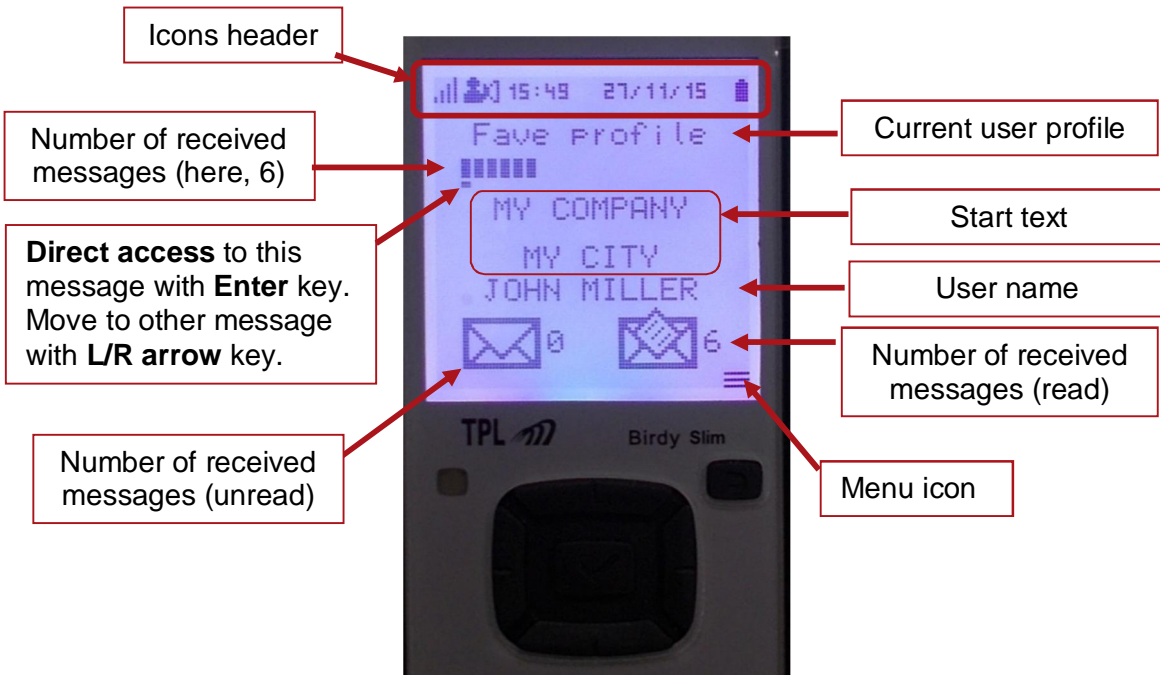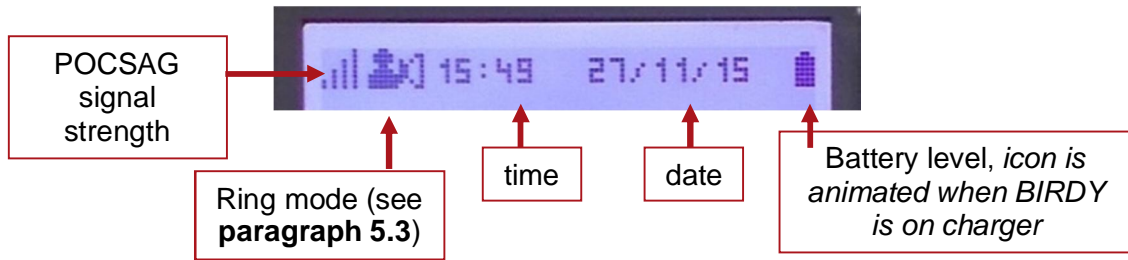POCSAG antenna connector

Programming cradle rear view

When EPOC-S is on charger, LED strip light intensity varies permanently between minimum and maximum.
Green LED   → charging and programming
Blue LED   → charging only

3 EPOC-S keys

Flash LED

Switch on (long-press 5s)
Access to Menu
Back
key

Enter (center) key
and **Arrow** keys

4 Display

Icons header

Number of received
messages (here, 6)

Direct access to this
message with **Enter** key.
Move to other message
with **L/R arrow** key.

Number of received
messages (unread)

Current user profile

Start text

User name

Number of received
messages (read)

Menu icon

POCSAG signal strength

Ring mode (see **paragraph 5.3**)

time

date

Battery level, *icon is animated when BIRDY is on charger*

4.1 Screen rotation

Screen rotates automatically depending on orientation.
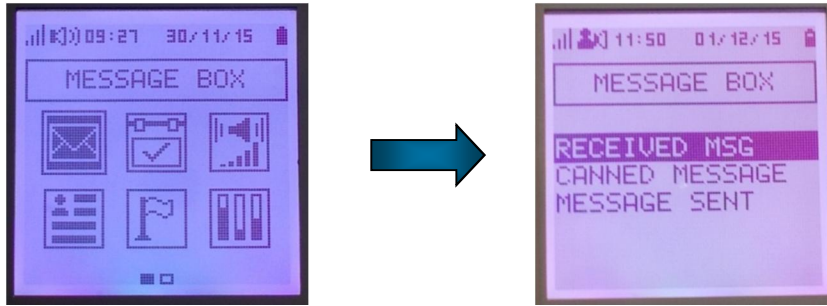This feature must be activated in the programming.

5 Menu

You can access *Menu* by pressing **Menu** key.
You can then navigate into *Menu* with **Arrow** keys. *Sub-menu* under selection is highlighted in **reverse video**. You can enter into a *sub-menu* by pressing **Enter** key.
You can escape from *Menu* or *sub-menu* by pressing **Back** key.
Depending on programming, some sub-menus may be present or not.
When all possible sub-menus are activated there exist **2 menu pages** that you can access with **Arrow** keys.
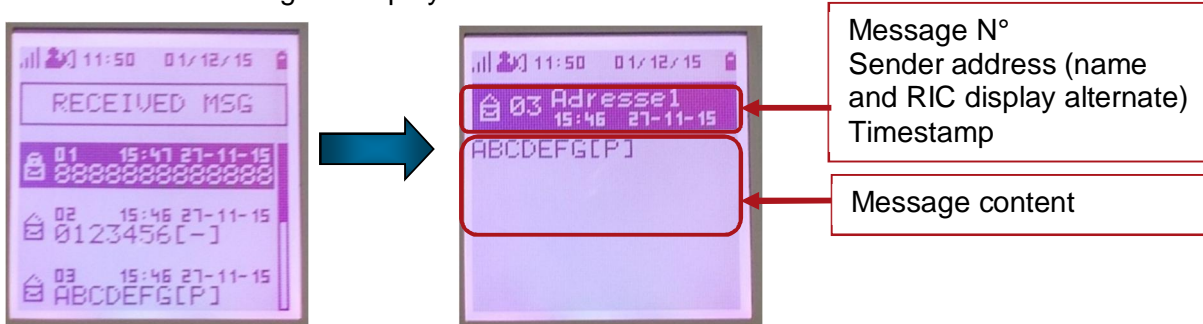

5.1 Message box

To enter *Message box* menu :
- Enter *Menu* with **Menu** key
- Go to *Message box* menu with **Arrow** keys (*Message box* is on top of menu icons)
- Push **Enter** key
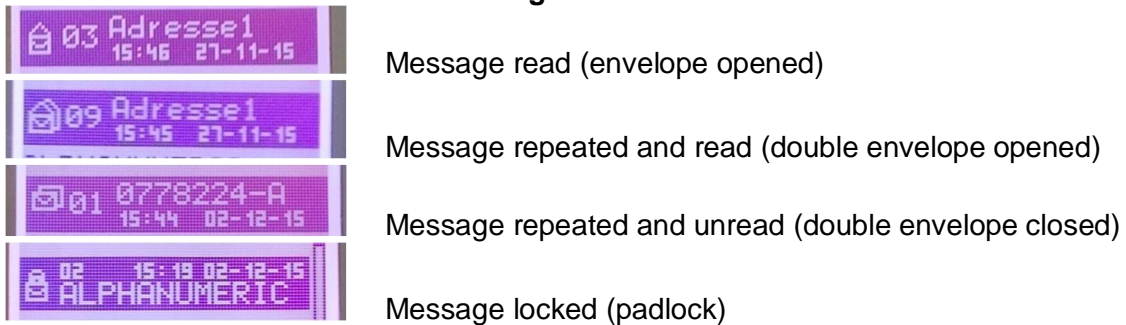
5.1.1 Received messages

To read a message :
- Go to *Received messages* with **Arrow** keys
- Validate with **Enter** key
  - o List of received messages is displayed
- Go to wanted message with **U/D arrow** key
- Validate with **Enter**
  - o Message is displayed

Message N°
Sender address (name and RIC display alternate)
Timestamp

Message content

User can press **Back** key to return to main screen.

Different **icons** are used to show **messages status** :

Message read (envelope opened)

Message repeated and read (double envelope opened)

Message repeated and unread (double envelope closed)

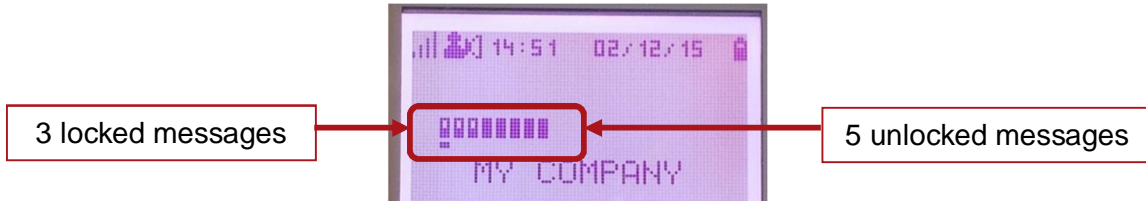Message locked (padlock)

5.1.1.1 Lock message

From message display window, press **Enter** key :
- A menu offers to
  - o *Lock message*
  - o *Delete message*
  - o *Delete all messages*
- Select *Locking* with **U/D arrow** keys
- Validate with **Enter** key
- Select *Yes* with **U/D arrow** keys

- Validate with **Enter** key

When **messages are locked**, message icon in main screen changes:

| 3 locked messages | 5 unlocked messages |

5.1.1.2   Delete message

From message display window, press **Enter** key :
- Go to *Delete message* with **Down Arrow** key
- Validate with **Enter** key
- Select *Yes* with **U/D arrow** keys
- Validate with **Enter** key

Procedure is similar if you wish to *delete all messages*.

5.1.1.3   Acknowledge message

In programming it is possible to demand an "**Operational ACK**" from user to be sure **user has read** the message (refer to **Programming Manual** for more details).
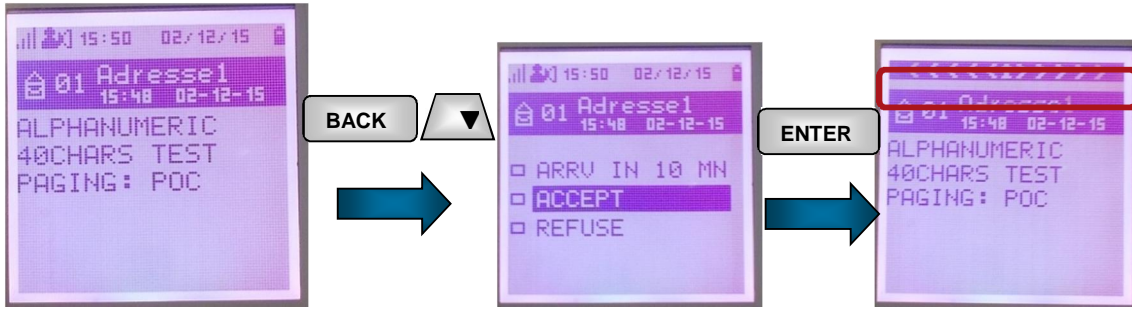If EPOC-S is programmed as such, **user cannot exit message** (go back to main screen with **Back** key) without sending an ACK message.
ACK messages are programmed in EPOC-S and displayed to user in that case.

From message display window, press **Back** key :
- *ACK messages* are displayed to user
- Select ACK message with **U/D arrow** keys
- Validate with **Enter** key
    o ACK message is sent

5.1.1.4   Unread message

unread messages

unread message rectangle is **blinking**
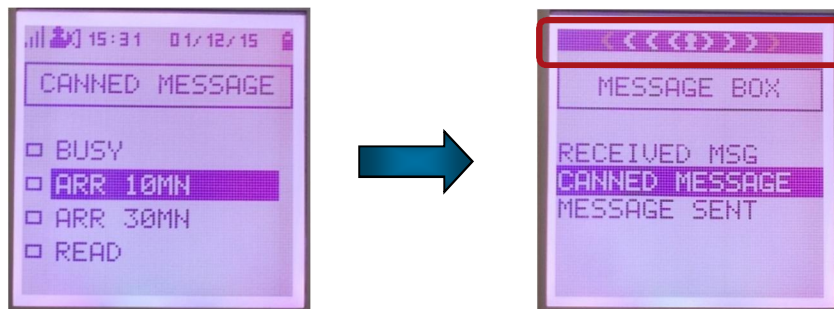
1 unread message

5.1.2   Canned message

In *Canned message*, user can find messages (TX) defined in programming (Refer to **Programming Manual**).

User can send any of these messages on demand :
- Enter *Canned message* menu
- Select message with **U/D arrow** key
- Press **Enter** key
  - o Message is sent immediately. You can see the transmission animation.
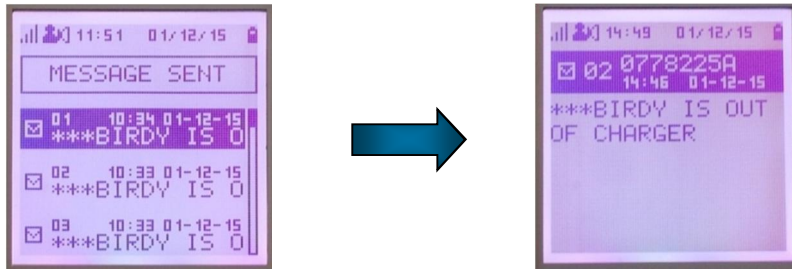 - o Screen goes back to previous menu

5.1.3   Message sent

In *Message sent*, user has the list of messages sent by the EPOC-S.
- Enter *Message sent* list of messages
- Go to wanted message with **U/D arrow** key
- Press **Enter** to display message

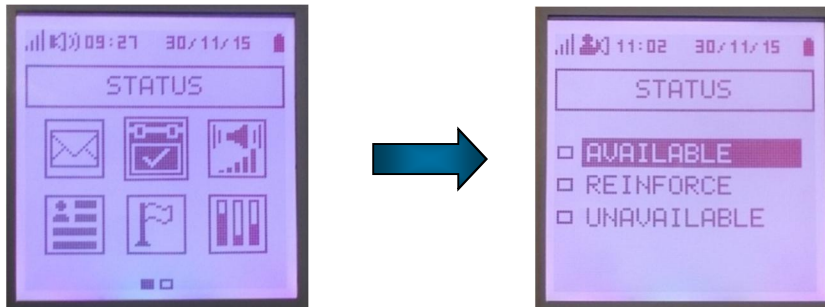o User can see recipient address, timestamp of message, and message content

5.2 Status

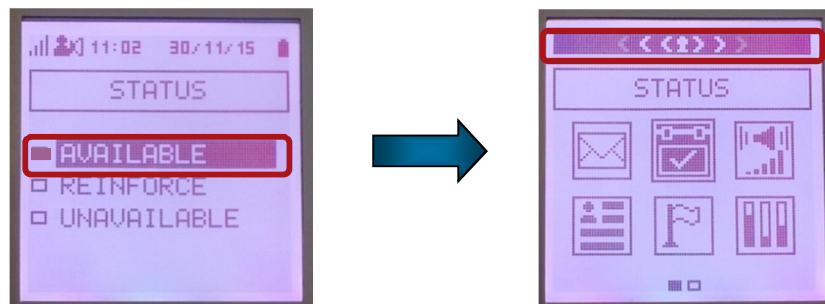*Status* sub-menu availability depends upon status messages programmed.
Status menu enables user to send messages to an address about their availability. Messages and recipient address are pre-programmed in the EPOC-S.

To send a Status message :
- Enter *Menu* with **Menu** key
- Go to *Status* menu with **Arrow** keys
- Push **Enter** key
- Go to desired *Status message* with **Arrow** keys

- Validate with **Enter** key
    - o Message is then selected and sent immediately
        - Message is highlighted in reverse video and left square is blackened
        - You can see the transmission animation
- Exit *Status* menu with **Back** key
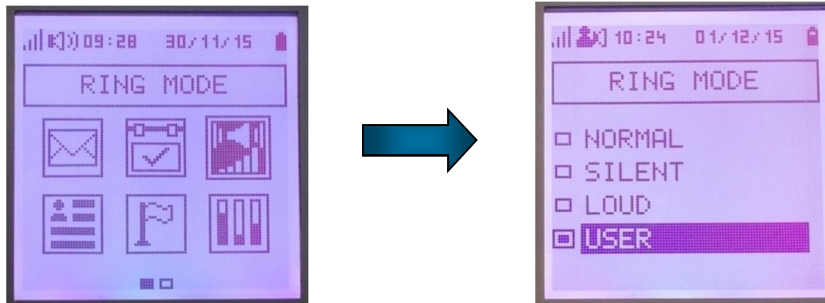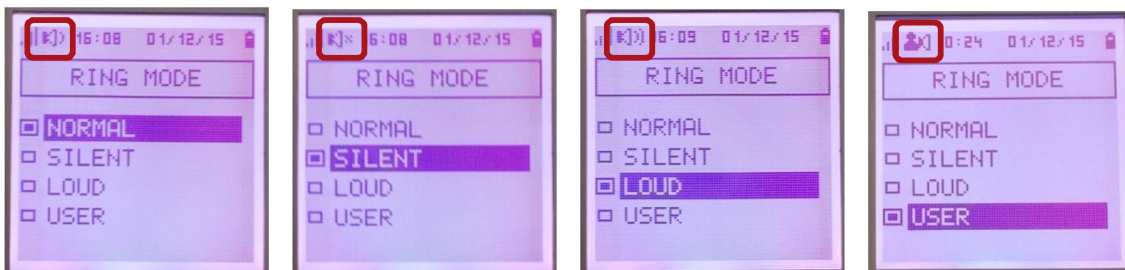

5.3 Ring mode

To modify ring mode :
- Enter *Menu* with **Menu** key
- Go to *Ring mode* menu with **Arrow** keys

- Push **Enter** key
- Go to desired *choice* with **Arrow** keys
- Validate with **Enter** key

Current ring mode is shown in icon header with a specific icon :

Normal mode is defined in the programming for each address and sub-address.
Silent and *loud* modes are defined in programming.
User mode is defined by user with EPOC-S menu ***Settings | Sound & alert | Alert setting***.

If address is defined as priority in programming, normal mode is applied whatever the current ring mode and the user profile.
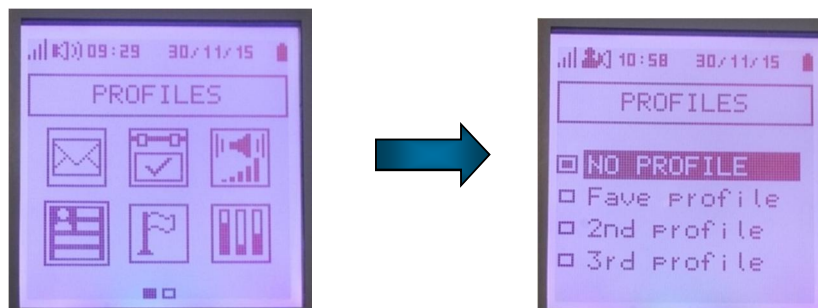
If normal mode is selected, text filters prior to user profiles modes (if defined) will be applied.

If another ring mode is selected (silent, loud, user), this ring mode is applied.

5.4 Profiles

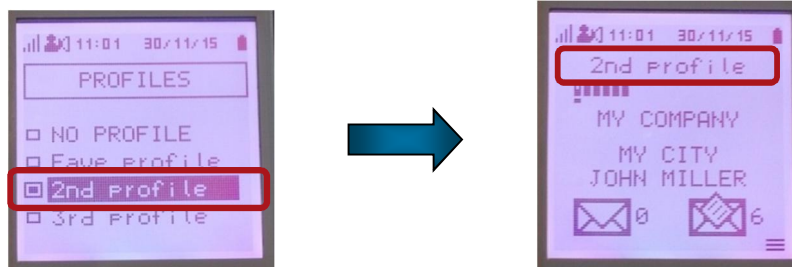*Profiles* sub-menu availability depends upon user profiles programmed.
Profiles is not present if no user profile has been activated in the programming.

To activate a particular Profile :
- Enter *Menu* with **Menu** key
- Go to *Profiles* menu with **Arrow** keys
- Push **Enter** key

- Go to desired *Profile* with **Arrow** keys
- Validate with **Enter** key
  - o Profile is then selected (*2nd profile* on example below)
- Exit with **Back** key
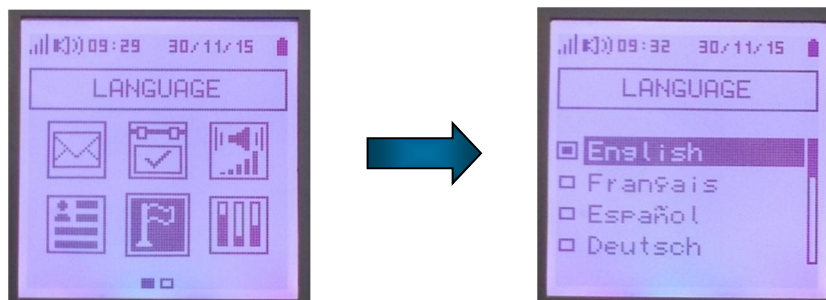 - o You can see selected profile on main screen

5.5 Language

Language sub-menu needs to be validated in programming to be available to user.

To select menu language :
- Enter *Menu* with **Menu** key
- Go to *Language* menu with **Arrow** keys
- Push **Enter** key
- Go to *desired Language* with **Arrow** keys
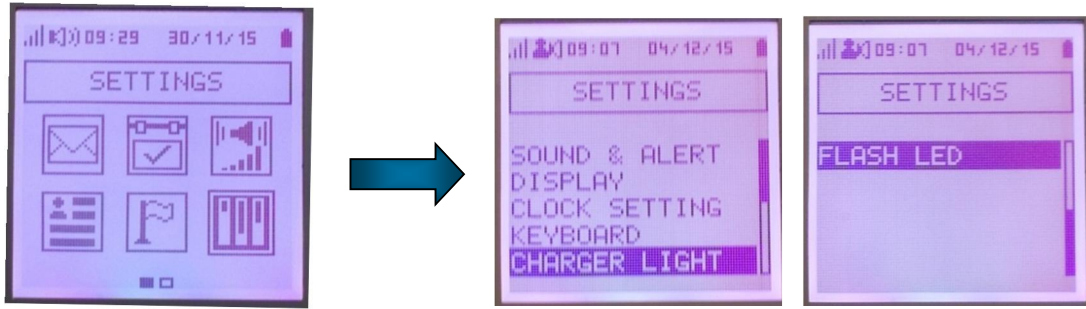- Validate with **Enter** key

5.6 Settings

Settings sub-menu content depends upon programming.
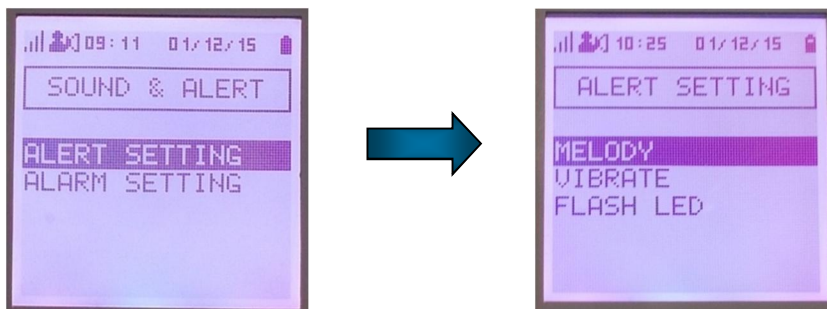Some items may not be available to user.

To go into Settings menu :
- Enter *Menu* with **Menu** key
- Go to *Settings* with **Arrow** keys
- Push **Enter** key
- Go to *desired item* with **Arrow** keys
- Validate with **Enter** key

5.6.1 Sound & alert

In *Sound & alert* you can define ring and display in case of alert message receipt and for alarm (clock feature).

Alert setting will be applied in user ring mode (see **paragraph 5.3**)

- Move with **Arrow** keys
- Validate with **Enter** key

You can play *ringtone* by pushing **Right** key. You stop playing with **Enter** key.

Alarm clock time can be set in *Clock setting* (see **paragraph 5.6.3**)

5.6.2 Display

In *Display* user can define *contrast*, zoom level, and screen backlight colour with *Intensity*.
- Move to *desired item* with **Arrow** keys
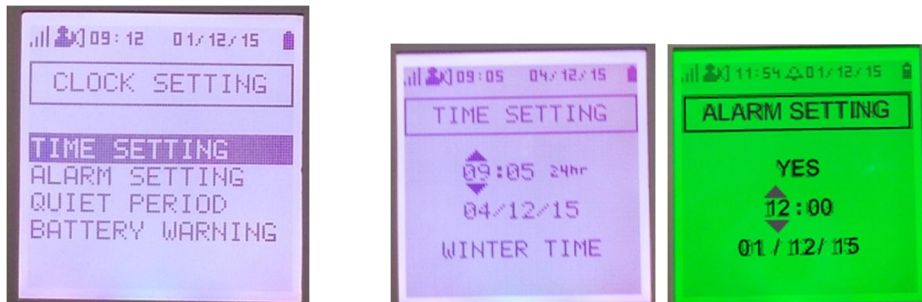- Validate with **Enter** key.

With *Intensity* feature you can define several colour shades.
Rotation feature allow the screen to rotate automatically depending on orientation. This feature must be activated in the programming.

5.6.3   Clock setting

In *Clock setting* user can define *time*, *alarm (clock) time*, *quiet period*, and *battery warning alert period*.
- Move to *desired item* with **Arrow** keys
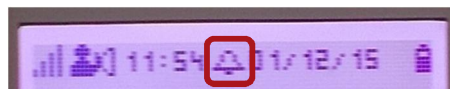- Validate with **Enter** key.

To set a time and/or date
- Move with **L/R arrow** keys
- Change value with **U/D arrow** keys
- Validate with **Enter** key
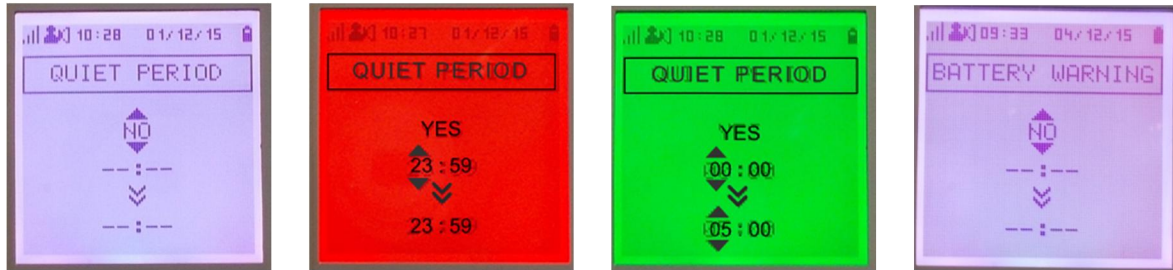 o Winter/Summer time will be displayed if selected in programming

In case alarm clock is not realistic screen backlight colour turns to red.

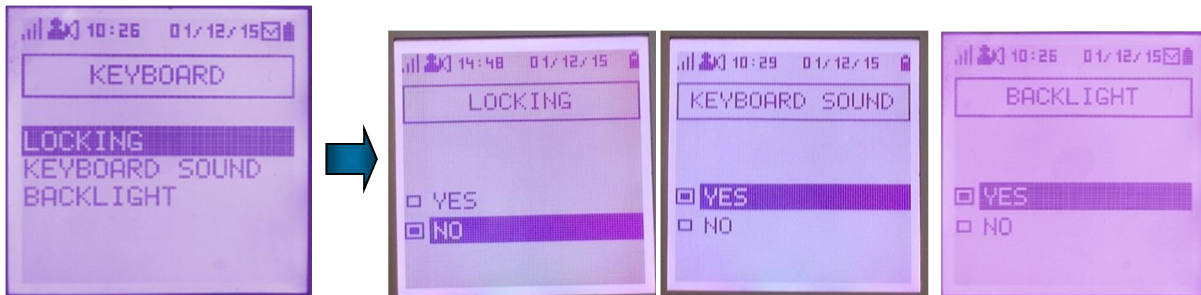When alarm clock is set a ring icon is displayed in the header :

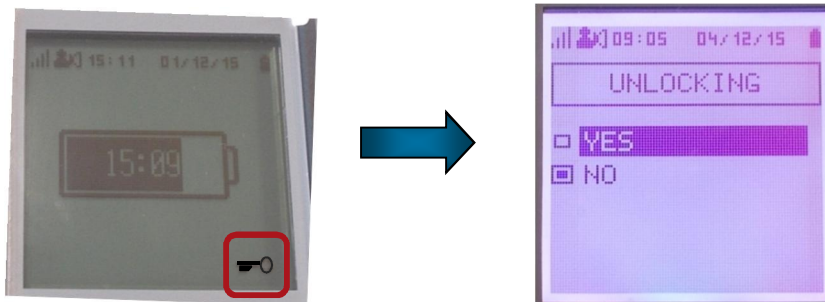To define *quiet period* or *battery warning* period :

In case time period specified is not possible screen backlight colour turns to red.

5.6.4 Keyboard

In *Keyboard* user has menus to :
- Lock keyboard
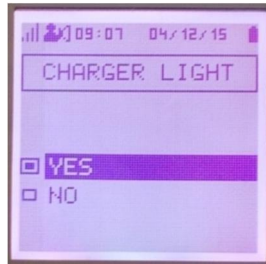 - o *Locking* becomes active when EPOC-S switches to standby mode

  - o Any key press leads to screen menu to unlock keyboard
    - ▪ Select *Yes* with **Arrow** keys
    - ▪ Validate with **Enter** key
      - • Keyboard is unlocked
- Select to play a beep on each key push or not
  - o Select *Yes* or *No* with **Arrow** keys
  - o Validate with **Enter** key
- Select if key press turns backlight on or not.

5.6.5 Charger light

In *Charger light* user can choose to activate charger light when EPOC-S receives a message while being on charger. This feature depends upon programming.
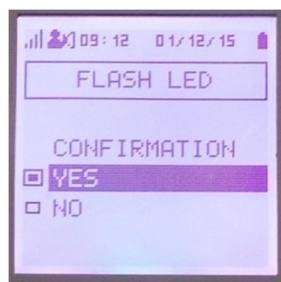
- Select *Yes* to activate the charger light with **U/D Arrow** keys
  - o Validate with **Enter** key
- Select *No* to deactivate the charger light with **U/D Arrow** keys
  - o Validate with **Enter** key

5.6.6 Flash LED

In *Flash LED* user can activate permanently the flash LED.
- Select *Yes* to activate the flash LED with **U/D Arrow** keys
   o Validate with **Enter** key
- Select *No* to switch off the flash LED with **U/D Arrow** keys
   o Validate with **Enter** key

5.7 Technical menu

Technical menu sub-menu needs to be validated in programming to be available to user.
Technical menu items also depend upon programming.

To access the Technical menu :
- Enter *Menu* with **Menu** key
- Go to *Technical menu* with **Arrow** keys
- Push **Enter** key
- Go to *desired item* with **Arrow** keys
- Validate with **Enter** key
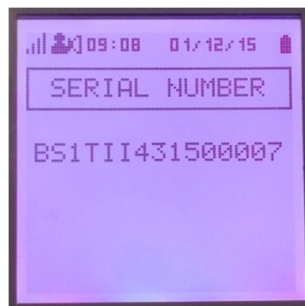
5.7.1   Version

In *Version* you can get info about firmware version.

On example above :
- Firmware version :   v1.00.1__build 15
- EEPROM version :   B5121.1
- POCSAG RX frequency :   446.525MHz
- POCSAG baud rate :   512 bauds
- Boot version :   03

5.7.2   Serial number

In *Serial number* you can read the serial number.

5.7.3   Battery level

In *Battery level* you can read current battery level in Volts.
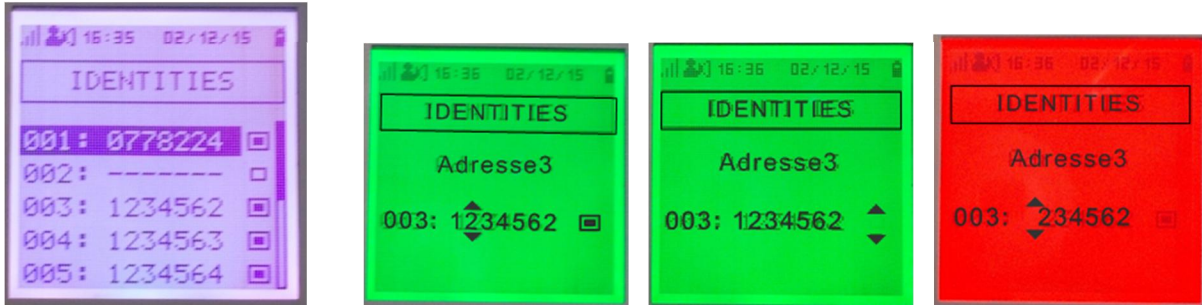
5.7.4   Identities

In *Identities*, you can :
- Change an identity (above N°1)
- Activate or disable an identity (above N°1)

Go to *Identities* menu :
- Go to desired identity with **U/D Arrow** keys
- Validate with **Enter** key
    - o Modify digit value with **U/D Arrow** keys
    - o Move to another digit with **L/R Arrow** keys
    - o Move to activation icon with L/R and change with U/D
        - ▪ If square is black identity is active
    - o Validate with **Enter** key
        - ▪ Possible identity values are in green screen backlight
        - ▪ If identity value is prohibited screen backlight turns to red

5.7.5   Radio

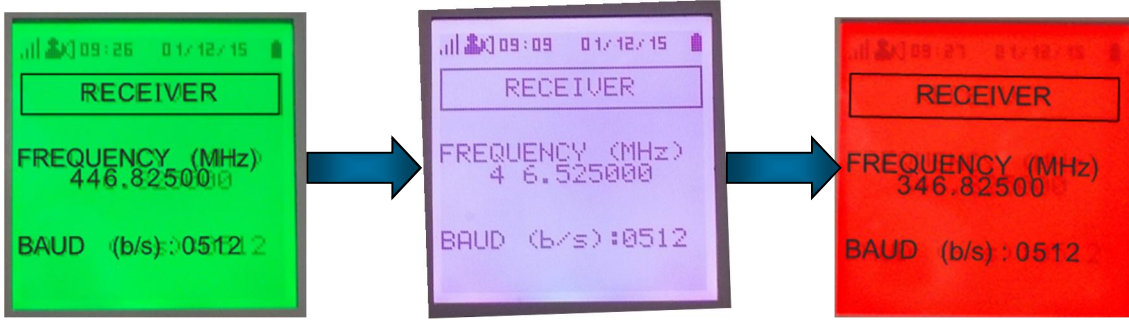The *Radio* menu offers to change POCSAG radio parameters in RX, TX and view POCSAG RSSI.
- Select *Receiver*, *Transmitter* or *POCSAG* with **Arrow** keys
- Validate with **Enter** key

5.7.5.1   Receiver

In *Receiver* you can change :
- RX frequency
    - o Digit under change is blinking, you can modify its value with **U/D arrow** keys. You move to other digit with **L/R arrow** keys
    - o If you enter a wrong value screen back light turns to red
- Data rate
    - o You move to baud rate with **L/R arrow** keys
    - o When rate is blinking you can change it with **U/D arrow** keys
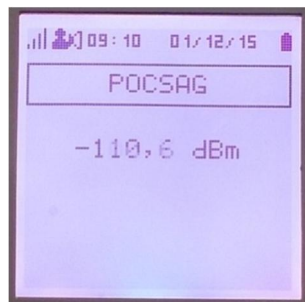   - ▪ Possible values are : 0512, 1200, 2400

5.7.5.2   Transmitter

In *Transmitter* you can change :
- Recipient RIC code and sub-address
    - o   Digit under change is blinking, you can modify it with **U/D arrow** keys
    - o   You move to other digit with **L/R arrow** keys
- TX frequency
    - o   Digit under change is blinking, you can modify its value with **U/D arrow** keys. You move to other digit with **L/R arrow** keys
    - o   If you enter a wrong value screen back light turns to red
- Data rate
    - o   You move to baud rate with **L/R arrow** keys
    - o   When rate is blinking you can change it with **U/D arrow** keys
        - ▪   Possible values are : 0512, 1200, 2400
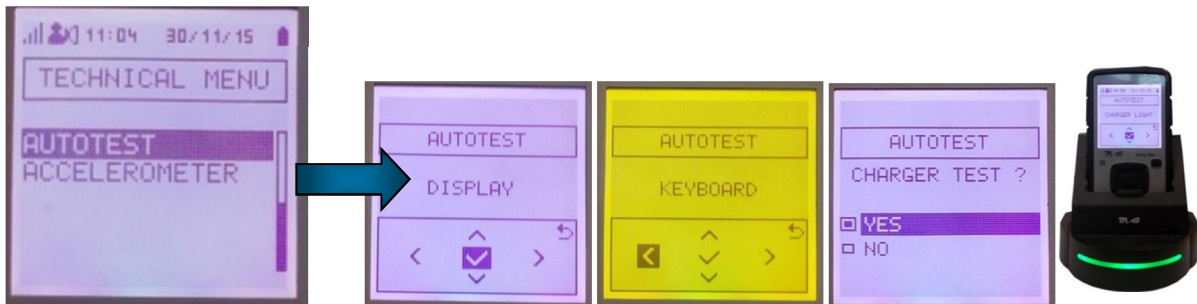

5.7.5.3   POCSAG

In *POCSAG* you can read RSSI level in dBm from POCSAG emitter.

5.7.6   Auto-test
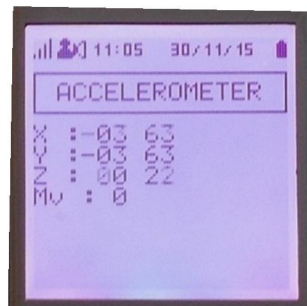
In *Autotest* menu user has the ability to test :

- LCD display
  - o Press **Enter** key to validate and pursue test
- Red / green / blue LED
- Vibrator Buzzer and ring
- Flash LED
- All keyboard keys
  - o Press **highlighted key** under test to validate and pursue test
- Charger light

5.7.7 Accelerometer

In *Accelerometer* you can have access to integrated accelerometer measurements. Measurements are subject to uncertainty and can vary rapidly.
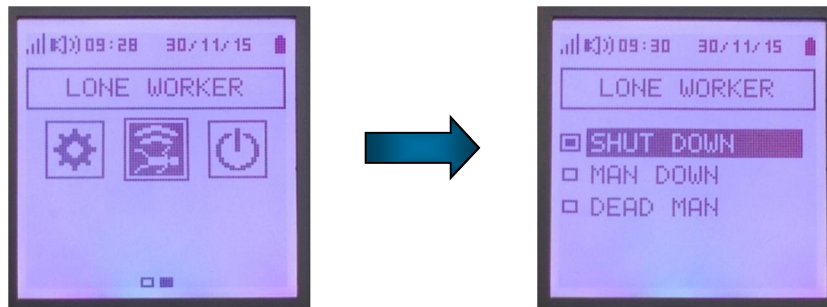

For each axis, second column returns accelerometer measurements raw data.
First column returns angle derived from raw data.
In case of motion, Mv value is at 1.
In case of immobility, Mv value is at 0.

5.8 Lone worker

Lone worker sub-menu needs to be validated in programming to be available to user.

To activate *Man down* or *Dead man* functions:
- Enter *Menu* with **Menu** key
- Go to *Lone worker* with **Arrow** keys
- Push **Enter** key
- Go to desired function with **Arrow** keys
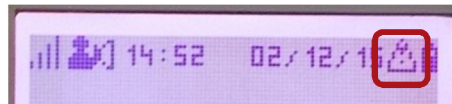- Validate with **Enter** key

Man down and *dead man* functions are active after an "activation time".

When function becomes active EPOC-S plays two successive beeps (at the end of the activation time delay).

Once function is active only user can deactivate it by using "*Shut down*" function in **Lone worker** menu, or a press on any key.

Refer to **programming manual** for more details.

When dead man or man down functions are active, an **icon** is displayed in the header:

5.9 Shut down

Shutdown menu is available only if authorised in programming.

To switch off :
- Enter *Menu* with **Menu** key
- Go to *Shut down* with **Arrow** keys
- Push **Enter** key
- Choose *Yes* with **Arrow** keys
- Validate with **Enter** key

EPOC-S is switched off immediately.