ANEP S-BOX

EMERGENCY TELEPHONE FOR ELEVATORS

RECOMMANDATIONS

This documentation is aimed at professionals who are trained and experienced in the lift industry.

Consequently, when working on an elevator to install **ANEP** equipment, safety rules specific to the profession must be respected.

- Use of «**P**ersonal **P**rotective **E**quipment».
- **Switch off** the system before making any electrical connections.
- **Make yourself safe before working in a shaft.**

Before handling **ANEP** equipment, make sure it is **de-energized**.

On all «ANEPBOX» equipment (S-BOX, TA,TX,TX+,...), it is essential to connect all peripherals **BEFORE** connecting the telephone line.

 Les équipements électriques doivent être obligatoirement recyclés suivant la Directive n°2012/19/UE du 04/07/12 relative aux déchets d'équipements électriques et électroniques (DEEE).

SUMMARY

1 - <u>TECHNICAL CHARACTERISTICS</u>

1.1 - <u>Technical characteristics</u>

- Conforms to standards EN 81-28 and ASME 17.1
- Powered by analogue phone line.
- DTMF dialling.
- Automatic answer.
- Automatic or manual calibration of volume of gains.
- Installation identification.
- Installation identification sent to ANEPCenter® or website anepanywhere.com
- Programmable by keypad.
- Possibility to trigger alarm with dry or voltage contacts technician presence
- Acknowlegement on alarm.
- Can store up to six phone numbers.
- Automatically calls a 2nd number if the first number called is busy or doesn't answer.
- All parameters are stored in non volatile memory (no battery required)..
- Periodic call (1,2, or 3 days).
- Programmable remotely via ANEPCenter®

1.2 - <u>Factory settings</u>

• Access code :	* **123**
• Call timeout:	**3 minutes**
• Hang up :	**Automatic**
• Periodic calls :	**3 days**

* Specification EN81-28 Emergency alarm for new lifts since october 2003.
Specification EN 81-70 security rules for the constructions and installation of lifts
Part 70 ; accessibility to lifts for all people including the handicapped

ANEP S-BOX module connection

(BOX-DISCRI)

Call Filtering

Alarm Filtering

Alarm Button

Tel. line

TELEPHONE LINE

PB CABIN ALARM (NO or NC)

(BOX SC)

Optional Output

S-BOX inside the cabin :

- BOX-SC on car roof
- BOX-SC under the car

OR

S-BOX on car roof :

- BOX BA-MINI GHP
- BOX BA MAX
- Remote microphone

OR

OR

Micro Deporté

BOX BA-MINI GHP

BOX BA-MAX

6
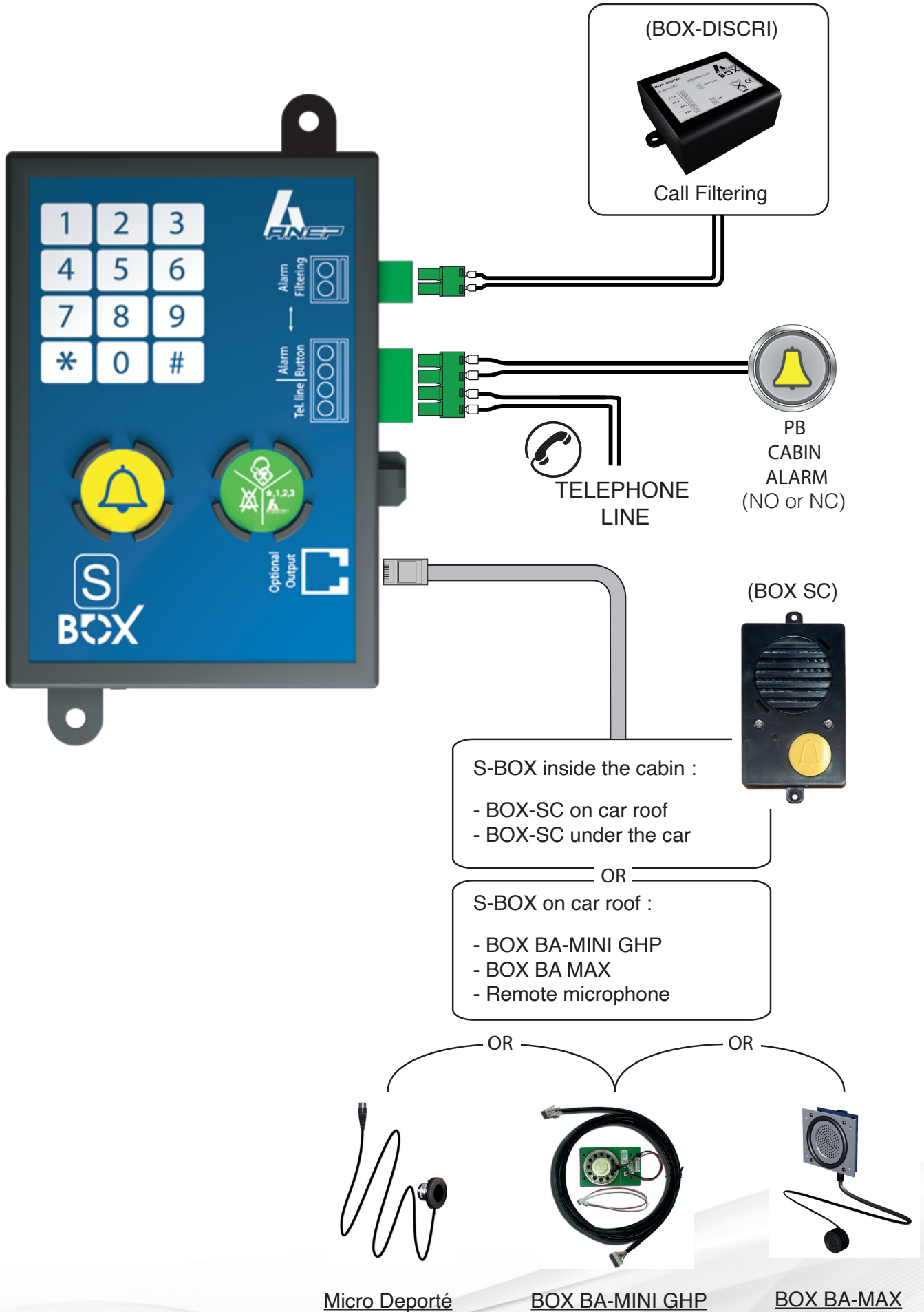
2 - <u>RECOMMANDATIONS</u>

⚠️ **before handling any ANEP products, ensure the equipement has been disconnected from all power supplies.**

2.1 - <u>Installation / Powering up</u>

The performance of telephone line equipement depends largely upon the characteristics of the telephone line.

Particular care must be taken when cabling the phone line to avoid damaging the standard line characteristics.

Check cabling (especially if they link several motor rooms).

• Type of cable,
• cable passage (Hight / Low voltage),
• Parasites (Ventilators, generators),
• Etc ...

it is essential to connect all peripheral units **BEFORE** connecting the phone line :

- Emergency elevator telephone call button.
- emergency elevator telephone panel.
- Under car audio unit

2.2 - <u>Traveling cables</u>

We advise the use of a shielded traveling cable to ensure excellent audio quality and thus avoid disturbances with may lead to undesired effects.

♻️ **Electrical equipment must be recycled according to Directive No. 2012/19 / EU of 04/07/12 on waste electrical and electronic equipment (WEEE).**

3 - EMERGENCY ELEVATOR TELEPHONE CALL FILTERING

The alarm can be triggered either by a dry contact connected to the «Alarm button» input, or by a powered contact connected to the «Alarm filtering» input.

Alarm discrimination is used to prevent untimely and unfounded cabin alarms from being transmitted as a result of misuse or malicious intent.

A maximum voltage of 5Vdc to 230Vac applied to the **ANEP S-BOX** «alarm filtering» input disables the start of all cabin alarms.

	Alarm triggering	**Alarm discrimination**
Mode 1	Alarm button	Alarm filtering
Mode 2	Alarm filtering	Alarm button
Mode 3	Alarm button & Alarm filtering	No

Mode 1 : Default mode.

- Automatic detection of the resting state of the button connected to the «alarm button» input for alarm triggering.
- Discrimination on presence of voltage (5Vdc - 230Vac) on «Alarm filtering» input

Mode 2 :

- Automatic detection of the idle state of the powered button connected to the «alarm filtering» input to trigger the alarm.
- Automatic detection of the state of the contact connected to the «Alarm button» input, which conditions the start of the alarm (non-discriminated state).

Mode 3 :

- Automatic detection of the resting state of the button connected to the «alarm button» input for alarm triggering.
- Automatic detection of the idle state of the powered button connected to the «Alarm filtering» input for alarm triggering.
- No discrimination possible.

|	**Programming a mode**
Mode 1	#305#
Mode 2	#306#
Mode 3	#307#

The delay time is the same for all inputs.

• Call filtering is used to avoid false alarms cause by misuse or by accidental use.

• A voltage between 5 V & 230 V ac applied to the alarm filtering input inhibits calls.

3.1 - Full alarm filtering EN81-28.

When using either **BOX DISCRI** module the alarm filtering is compliant with the specification EN81-28.
The output of **BOX DISCRI** module simply needs to be connected to the input alarm filtering.
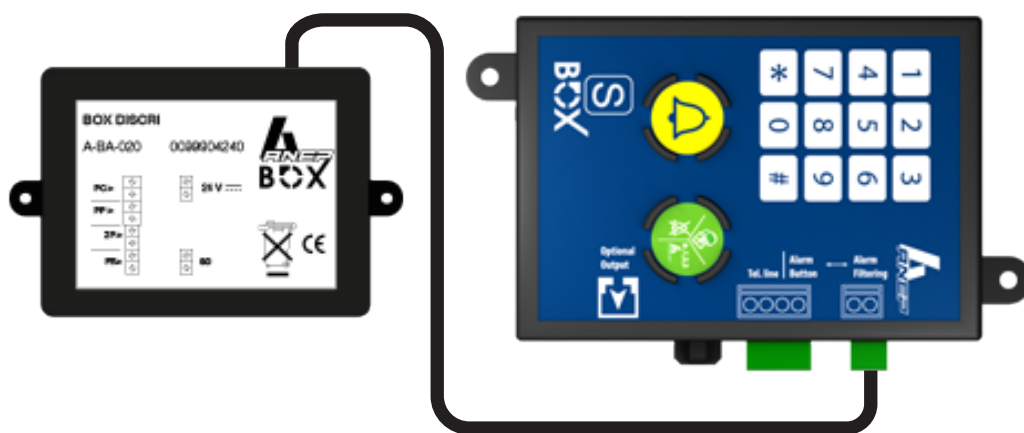
(see BOX DISCRI manual)

3.2 - Simple filtering

A simplified filtering system may be created by using interdependent information for the car door open.

Note : Ensure that the car door cannot be opened between floors alarms will befiltered if the car is blocked between floors.

POWER SUPPLY

DOOR OPENED
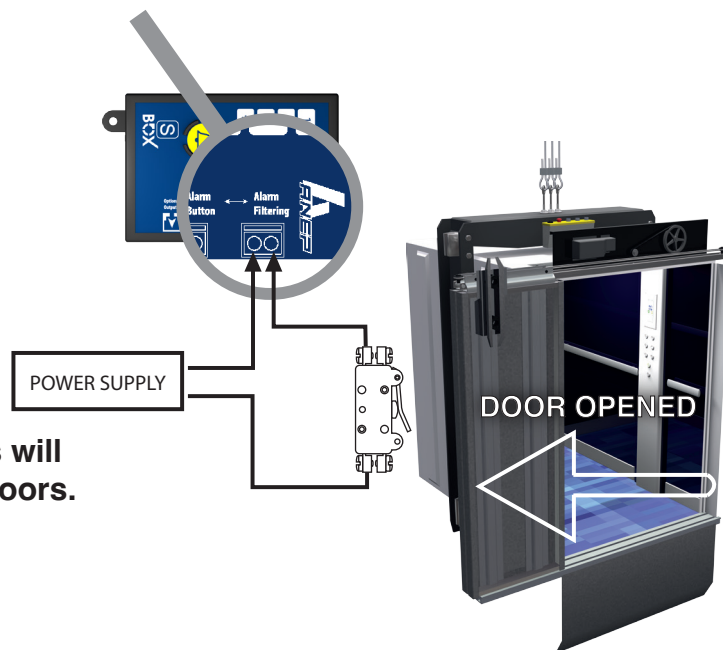
3.3 - Forced call

If call filtering is enabled,
an alarm may still be forced by pressing
the alarm button four times in a 15 minute period.

To force alarm, there must be at least three seconds between each press.
The button must also be held for an amount of time that is longer than the programmed "time-out."

4 - <u>ADDRESSING</u>

Several **S-BOX** / F modules may be installed on the same telephone line (max 8).
The address of EVERY module must be configured.

After entering the acces code to enter programming mode, enter the following sequences :

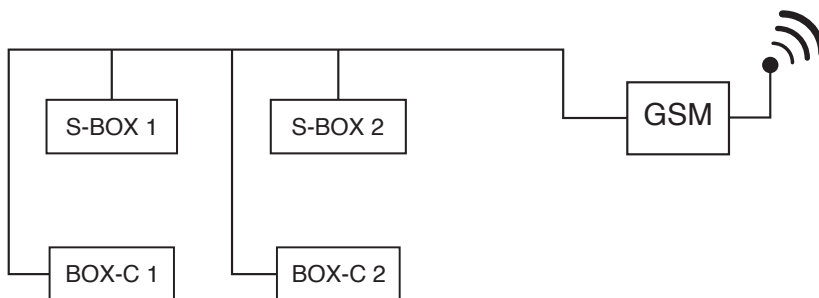**# 303** then **1 #** if module 1 (lift 1)   or   **# 303** then **2 #** if module 2 (lift 2) or ...

 # 303 then **8 #** if module 8 (lift 8)   or

Note :   Module = ANEP S-BOX   or   ANEP BOX F

Configuration - S-BOX (8 maximum)

Telephone Line (PSTN)   Addressing to configure on the 8 **S-BOX**

S-BOX 1	S-BOX 2	S-BOX 3	S-BOX 4	S-BOX 5	S-BOX 6	S-BOX 7	S-BOX 8
Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8

Telephone Line (PSTN)

S-BOX 1	S-BOX 2	S-BOX 3	S-BOX 4
BOX-C 1	BOX-C 2	BOX-C 3	BOX-C 4

GSM

S-BOX 1	S-BOX 2	S-BOX 3	S-BOX 4

GSM

S-BOX 1	S-BOX 2
BOX-C 1	BOX-C 2
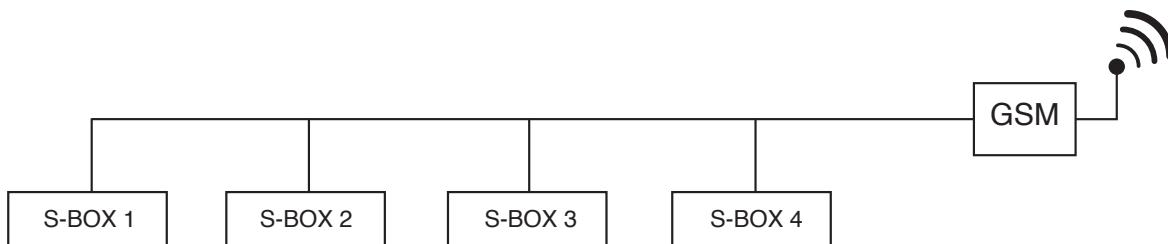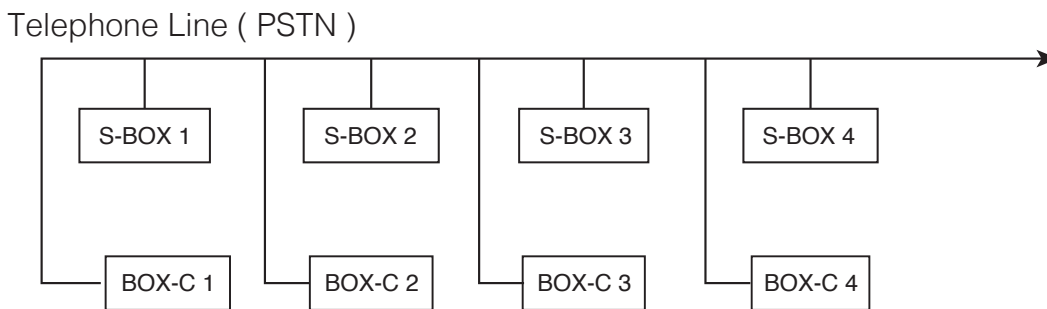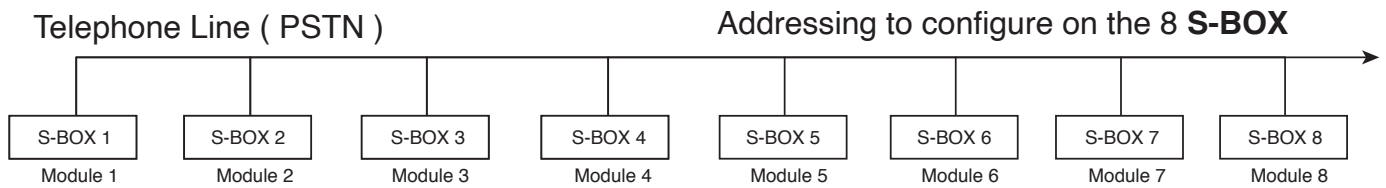
4.1 - Programming of the transmitter number (or identifier or PROM number depending on the name)

The TA module is identified in data mode (DTMF) by sending an identification code called "Transmitter number" This number corresponds to the manufacturing serial number of the TA module (8 digits on the label)

In order to adapt the reception centres to their different databases, it is possible to modify this identification number.

Note: The transmitter number is numeric and has 8 digits. Ex: 43 21 15 69

CAUTION: Changing the Transmitter ID does not require pre-programmatic access	
* #22220 xx xx xx xx # *	xx xx xx xx = N° de transmetteur 8 chiffres

5 - PROGRAMMING MODE

⚠️ **Important :**

1	2	3
4	5	6
7	8	9
*	0	#

- Access to the programming mode is only possible if the phone line is hung up. (Beware if several modules share the same line)

- The **S-BOX** keypad is used to program all the parameters.

- To avoid unwanted modifications, the programming mode is protected by an access code : * **123**

- This code may be modified by the technician (1 to 7 digits) (see page 15)

5.1 - Enter programming mode

Enter « * » followed by the access code to enter programming mode

Example : using the factory default code

☞ * **123**

The unit plays a melody 🎵

... Then 2 beeps are made every 20 seconds 🎵

5.1.1 - Exit programming mode

when the unit has been programmed

☞ Press the key « * »

Finish programming, the unit plays a melody 🎵

Note : If no key is pressed for over 3 minutes, the unit will automatically exit the programming mode.

The unit play's a melody 🎵

5.1.2 - Simplified programming

1	2	3
4	5	6
7	8	9
*	0	#

⚠️ **S-BOX automatically detects wheter the call button is NO or NC. It is therefore necessary to connect the call button BEFORE connecting inputs and the telephone line.**
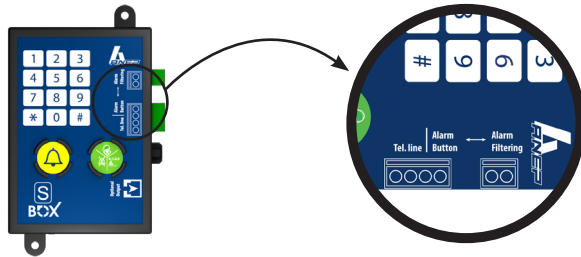
Table for programming in one call

MEM.		Type of information
✳123		**Programming access code**
#001#	RESET	Resetting the «Deleting memories» settings
#101	Phone Number + #	First Call
#102	Phone Number+ #	Second Call
#103	Phone Number+ #	Third Call
#104	Phone Number + #	Arrival / Departure Technician Battery status
#105	Phone Number + #	Cyclic call
#106	Phone Number + #	Call to ANEPanywhere®
#303	Module number	Module number from 1 to 8
✳		**Exit programming mode**

FACTORY SETTINGS

- Access code to programming mode :   * 123
- Call timeout :   3 minutes
- Hang up :   Automatic
- Periodic test call :   3 days
- Cabin alarm triggering: Dry contact input (Alarm button)

5.2 - GSM mode

The GSM mode should be activated when **S-BOX** is connected to a GSM gateway.
To activate this mode:

In programming mode:

☞ Enter **#405#**   To come back to normal mode (PSTN)

In programming mode:

☞ Enter **#406#**

5.2.1 - Managing Battery default on GSM gateway

GSM gateway constantly supervises its battery. In case of default, GSM gateway sends the info to the **S-BOX** module. Accordingly, when GSM mode is activated, the master **S-BOX** module controls the battery default of the gateway. After detection of this default, ANEP BOX generates a data call "GSM battery default start. After recharging or replacement of the battery, the Gateway sends information to **S-BOX** module, that generates a call "GSM Battery default end".

5.3 - Programming numbers

Note : 101 = Principal emergency call number

102 = Secondary emergency call number

103 = Third emergency call number

5.3.1 - Programmaming memories 101/102/103

After entering the programming mode access code : (example for the principle call number)

☞ Enter the sequence « **#101** »   🎵

☞ Enter the telephone number followed by the key « **#** »

5.3.2 - Programming a pause   🎵

When installed behind a PABX, a prefix and a pause may be necessary before getting a external line

To program a PAUSE (**2** seconds), press the key « **∗** »

Example : **Pause** after a prefix **0** (for memory 102)

☞ **# 102 0 ∗ 0145692800**

☞ press the « **#** » key to validate the number

🎵

5.3.3 - Erase a number

☞ Enter the sequence : « **#** » then, the memory number, then « **#** »

Example : Erase the number and memory **101**

☞ **# 101 #**

Note : If no key is pressed for over 20 seconds, the unit plays a BEEP and returns to the start of the memory selection part of the programming mode.

5.4 - Memory attribution

5.4.1 - Transfer method

The S-BOX may be programmed to interface with the call center, utilizing the available software and specifications.

To communicate with call centers, ANEP unit can transfer its ID information and establish a two-way voice communication either :

• In a single calls or two seperate call.

The recommanded method (with respect to European specifications), is to make a single call (the delay time is optimized.

5.4.2 The table below shows the programming possibilities for a single call.

Telephone N°	Type of data	Type of communication	Call center
Memory # 101	Passenger and tech alarm	Data & audio	Main call center
Memory # 102	Passenger and tech alarm	Data & audio	Backup call center
Memory # 103	Passenger and tech alarm	Data & audio	Backup call center
Memory # 104	Remote end of alarm	Data	Main call center
Memory # 105	Periodic call	Data	Call center for periodics calls
Memory # 106	Alarm data	Data	ANEPanywhere or client call center

5.5 - Enabling and adjustment of parameters

5.5.1 - Emergency elevator telephone button validation time (default = 0,5 second)

In programming mode :

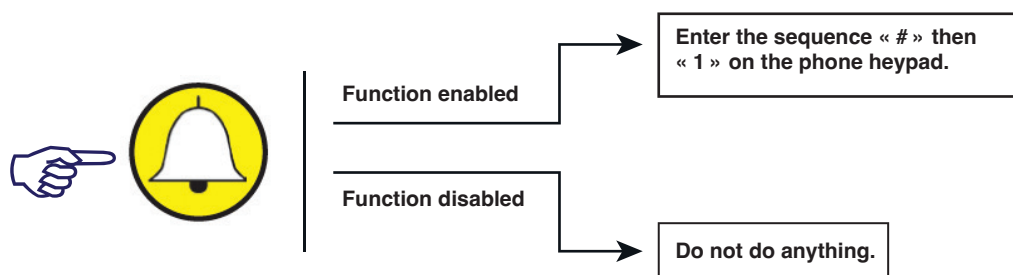☞ Enter sequence **# 302** and the time **10ths of a** second.
☞ Followed by key « **#** »
Example : 4.5 second timeout
☞ Enter the sequence **# 302 45 #**

5.5.2 - Acknowledgement of a trapped passenger (EN81-28)

When this function is enabled, a call dialed by **S-BOX** must be acknowledged by the operator by entering the sequence " **#1** " on his telephone keypad during the conversation.

Function enabled → Enter the sequence « # » then « 1 » on the phone heypad.

Function disabled → Do not do anything.

If the acknowledgement is not made, then **S-BOX** will call back the center up to 6 times.

To enable this function,

In programming mode

☞ Enter the sequence **# 202 #**

The acknowledge function is enabled (default value = disable)

To disable the call acknowledgement

☞ Enter the sequence **# 203 #**

The acknowledge function is disabled.

5.5.3 - Conversation timeout

Conversation timeout from **1** to **99** minutes   (factory default= **3** minutes)

In programming mode :

☞ Enter the sequence : **# 201 #**

Then enter conversation timeout (from **1** to **99**) followed by " **#** "

5.5.4 - Adjusting speaker volume in car

Method 1 : During a call

The following adjustments may be made in order to adapt to local conditions , and to improve audio quality in the lift car.

After programming the necessary telephone numbers, make a call by pressing the emergency elevator telephone button in the cabin " 🔔 "

☞ Key " **6** " = + Key " **9** " = − Speaker volume

☞ Key " **5** " = + Key " **8** " = − Microphone Gain

Pressing « **0** » forces the unit to hang up.

Pressing « **1** » will program the default volume and gain.

⚠ **Modifications made manually, replace those previously made automatically**
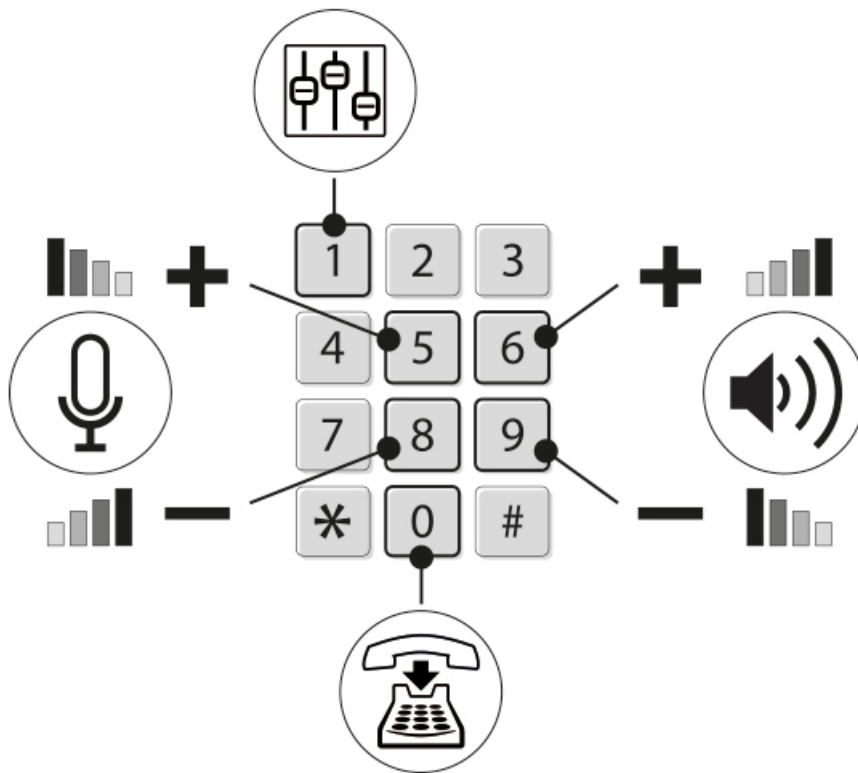
Method 2 : Not during call

In programming mode :

☞ Enter the sequence **# 410 xx #** to adjust loudspeaker volume (between 0 and 15)

☞ Enter the sequence **# 411 xx #** to adjust microfone gain (between 0 and 15)

5.5.5 - Enabling a periodic call

In programming mode :

☞ Enter the sequence **# 105** 🎵

☞ Enter the phone number of the call center that is to receive the data, the call center must be equiped with a modem type **FT1000** and the software **ANEPcenter®,** or any compatible service.

☞ Press the key « **#** » 🎵

A site file should have been created previously in the **ANEPcenter®**
(refer to **ANEPcenter®** instructions for details.)

NOTE : During a periodic call, the real time clock in **S-BOX** is updated.

5.5.6 - Test call period

In programming mode:

☞ Enter the sequence **# 301** 🎵

☞ Enter the number of days corresponding to the test call period **1, 2 or 3**.

default value : 3 days   example : 2 days = **# 301 2 #** 🎵

NOTE: A periodic call will be made immediately upon exiting programming mode, once the periodic call number has been programmed.

The speaker is activated during the call, so the technician is aware of the communication.

5.5.7 - Transmission of call identification code during a call

During dialing and call identification, it is possible to listen to the tone sequences sent by **S-BOX** in order to inform the technician present that **S-BOX** is transmitting information.

Note : Programming is disabled during a call.

5.5.8 - Modification of access code

In programming mode :

☞ Enter the sequence **# 002** 🎵

☞ Enter the new access code (from 1 to 7 digits) then « **#** » 🎵

☞ Confirm the new access code (from 1 to 7 digits) then « **#** » 🎵

⚠️ It is very important to remember the new code.
If lost, the unit **must be returned to the manufacturer**.

5.5.9 - Configuration of the dual call mode

The dual call mode allows a call to a caretaker post (voice only), before making a call to the call center(data and voice). In addition, if the function " Acknowledgement of a trapped passenger call " is enabled, the caretaker will have to acknowledge the call by entering the sequence " **#1** " on his phone keypad. Without this acknowledgment, **S-BOX** will call back to the call center up to 6 times.

Configuration of the dual call mode :

To configure the dual call mode, enter in programming mode and dial the sequence **#206#**

The " telephone " memories should be programmed as follows :

memory 101 : phone number of the caretaker
memory 102 : phone number of the call center

Sequence of an alarm call :

When the emergency elevator telephone button is pushed, **S-BOX** calls the number in memory 101 (caretaker).
Then it calls the number in memory 102 (call center).
If the number called by memory 101 (caretaker) or 102 (call center) is (are) busy,
the corresponding numbers are called back up to 6 times.

Disabling dual call mode :

To disable the dual call mode, enter in programming mode and dial the sequence **#207#**

5.6 - Selection of communication protocol

5.6.1 - ANEP Protocol

Default protocol, or set by the following key sequence :
After entering the access code programming, press **# 200** then **0**, then **#**.

5.6.2 - P100 Protocol

P100 protocol is set by the following key sequence :
After entering the access programming, press **# 200** then **1**, then **#**.

5.7 - Adjustingthe level of emissions of DTMF codes

Ability to adjust the transmission power DTMF codes to avoid echo phenomena when the S-BOX is connected to a GSM gateway.
By default power is set to -8 dBm.

After entering the access code programming
Press **# 409** then **a value of N 0-12** then **#**

Powser (dBm).

6 - OPERATION

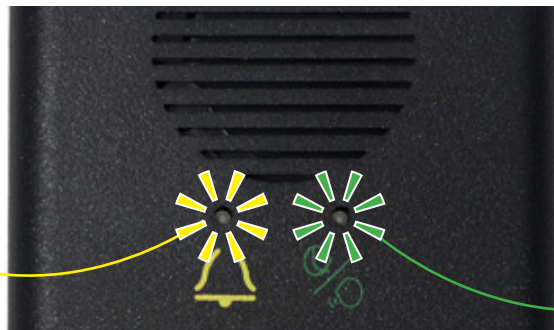### 6.1 - Emergency elevator telephone call

☞ press the emergency elevator telephone button in the car, **S-BOX** call the call center. If call filtering is not enabled the network tones and dialling are audible.

Beeps are plays every **6** seconds during silence to indicate that the unit is still on-line 🎵

⚠️ | **ATTENTION !   If the filtering import is used (See page 7)**

Yellow Light

Green Light

6.2 - Automatic hanging up (audio mode)

Hang up occurs **automatically** when the busy signal is detected or if the call timeout is reached.

S-BOX plays a melody **10 seconds** before the end of the timeout period (see page 13).

6.3 - Call sequence

If the called number is busy or doesn't answer after 10 rings, **S-BOX** calls the secondary phone number. Each phone number is called alternately a maximum of six times.

Direct call to an ordinary phone :

The microphone is enabled 6 seconds after the telephone answers.
To disable this function insert a pause (✱) in the programmed telephone number.

6.4 Car speaker and microphone test:

For testing purposes, the functionality of the speaker and microphone in the lift may be tested remotely, via a request by the operator. This allows testing of both the speaker and microphone together.

During the test, a tone (frequency of 1 khz), is emitted by the speaker for four seconds. The microphone will detect the sound, and transmit it back to the operator for confirmation.

The test sequence is:

- When only one **S-BOX** is connected to the telephone line

- Dial the number of the line where the **S-BOX** is connected

- Wait for the box to answer

- Wait 3 seconds until a beep is heard

☞ Press the "**6**" key on the telephone keypad, the 1khz frequency should be audible. (note: the operator's telephone must be capable of sending DTMF tones)

- When several **S-BOX** are connected to one telephone line

- Dial the number

- Wait for the master BOX to answer

- Wait an additional 3 seconds until a beep is heard

- If the test is for the master BOX, press the "**6**" key. The 1khz frequency should be heard by the operator.

- If the test is for a secondary BOX, enter a 2 digit sequence to select the desired BOX after the beep. The first digit will be the BOX Module number (2 to 8), and the second digit will always be "**1**" for this test. (Example: 21, 31, 41, etc.)

- After about 5 seconds, another beep should be heard.

☞ Press the "**6**" key and the 1khz frequency should be heard.

6.5 - "alarm in progress" Reset

The cabin alarm must be reinitiated by an end of alarm which can be triggered either locally or remotely.

Until the cabin alarm is not reset (closed), the filtering function is shorted.

6.5.1 - Locally

- A) By pressing the green button

- B) Passage of a magnet close to the S-BOX

NT_ANEP_S-BOX_EN_29-01-24

6.6 Remote call end

S-BOX integrates the possibility to end a call remotely (EN81-28).

This function is requested by an operator in the call center using ANEPCENTER when passenger call is not followed by an "end of call" provoked by a technician on site.

The call center calls the BOX with an order to end the call. The BOX calls back the call center to confirm the end of call.

This function is not possible if the telephone line of the BOX is outgoing only.

After receiving the order to end the call, **S-BOX** generates a new call, the event label is "call end requested remotely".

The call is sent to the call center module (memory 104).

Recap of the alarm cycles:

- Emergency elevator telephone call   >   start : call renewed
- End of call by action on BOX keypad   >   end : call
- End of call requested remotely   >   start : end of call requested remotely.

7 - __KEYPAD PROGRAMMING__

7.1 - __Recap of programming sequences__

Enter & exit programming mode

* * + <Access code > Enter programming mode
* * Exit programming mode

#0... Programming of parameters

#001# Erasing parameters and phone numbers
#002...# New acces code

#1... Telephone numbers.

#101...# Main telephone number for Emergency elevator telephone calls
#102...# Secondary telephone number for Emergency elevator telephone calls
#103...# Third telephone number for Emergency elevator telephone calls
#104...# Call center telephone number to transfer data after voice
#105...# Telephone number for periodic calls
#106...# Telephone number for internet server

#2... Communication

#200...# Selection of communication protocol
#201...# Voice call timeout (1 to 99 minutes)
#202# Call acknowledge by operator function enabled
#203# Call acknowledge by operator function disabled
#204# Enabling full duplex mode in car
#205# Enabling full duplex with voice control
#206# Dual calling mode (call to a caretaker) enabled
#207# Dual calling mode (call to a caretaker) disabled

#3... Configuration

#301...# Test call period (1,2 or 3 days)
#302...# Alarm button recognition time (10 to 64 in 1/10 s)
#303...# Module address (1 to 8)
#305...# Discrimination mode 1 (see page 8)
#306...# Discrimination mode 2 (see page 8)
#307...# Discrimination mode 3 (see page 8)

#4... Configuration

#403...# Line voltage low (> = 20V)
#404...# Line voltage normal (> = 28V)
#405...# GSM enabled
#405...# GSM disabled
#409...# Adjusting the level of emissions of DTMF codes
#410...# Loudspeaker volume adjustement
#411...# Microphone volume adjustment

WARRANTY

NOTES

ANEP operates a continuous development process, and therefore ANEP reserves the right to make changes and improvements to any of the products described in this document without prior notice.

ANEP cannot be held responsible for any loss of data, as well as any special or incidental damages, resulting from improper implementation or use of the product.

The contents of this document are provided «as is». No warranty of any kind, expressed or implied, is made with respect to the accuracy, reliability or content of the document.
ANEP reserves the right to revise or withdraw this document at any time without notice.

WARRANTY

This product is guaranteed for **3 years** from the date of invoice,
except for batteries which are guaranteed for **6 month**.

However, this warranty does not apply in case of:

- Use not in accordance with the instructions in this manual.
- Deterioration resulting from an external cause to the product (act of vandalism, fire, flood, storm, vandalism, fire, flood, storm, power surge...).
- Installation by an unqualified installer not approved by ANEP.
- Modifications or repairs performed by entities not authorized by ANEP.
- Opening of the product by a person not authorized by ANEP.

⚠️ IMPORTANT

Particular care and attention must be paid to the wiring and connection, in order to obtain the best sound results and optimal reliability of the product.
The equipment must be connected, installed and programmed according to the rules of the profession.

LE SERVICE APRÈS VENTE EST ASSURÉ PAR

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ANEP

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