

# B3S EN System User Manual



# **B3S EN User Manual**

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# **EVOLUTIONS**

Edition	Date	Redaction	Remarks
1	16/01/2013	P. ROSSI	



# 1. OBJECT

This document describes all steps to install public address B3S EN systems. This system complies with EN54-16 standard.



### 2. INTRODUCTION

This system conforms with EN54-16 voice alarm system requirements that will guarantee, in case of voice alarm condition, the broadcasting of a pre-recorded evacuation message or a voice call message so people will be directed to safety in case of emergency.

Once powered on, the system is characterized by 3 conditions :

- the quiescent condition : this is the default condition of the system

- the voice alarm condition : the VACIE enters this condition when the required signal is received from the CIE or from manual control.

- the fault warning condition : the VACIE enters this condition when a signal, interpreted as a fault, is received by the system.

# **3. RELATED DOCUMENTS**

- B3S EN Installation Manual



### 4. OPERATION OF CS2600

### 4.1. Introduction

Operation of CS2600 is achieved through the friendly user interface that is built on the LCD display, the 4 navigation keys, the buttons and the leds ; all these elements are placed on the front of the CS2600.

All available actions depend on the status of the system and the access level rules required by the EN54-16 standard ; they are 3 access levels defined as :

Access level 1 : by member of the general public or persons having a general responsibility for safety supervision who might be expected to investigate and initially respond to a fire alarm or a fault warning.

Access level 2 : by persons having a specific responsibility for safety and who are trained and authorized to operate the VACIE in the quiescent condition, in the voice alarm output condition and fault warning condition.

Access level 3 : by persons who are trained and authorized :

- to re-configure the site specific data held within the VACIE or controlled by it (e.g. labeling, zoning, alarm organization)

- to storage and change of emergency tones and messages

- to maintain the VACIE in accordance with the manufacturer's published instructions and data

The following table shows all available uses :

	Access	
Designation	Status	Access
		level
Configuration modification	QUIESCENT	3
	FAULT WARNING	3
Configuration consulting	QUIESCENT	2
	FAULT WARNING	2
Fault log consulting	QUIESCENT	3
	FAULT WARNING	3
Activate/De-activate fire alarm devices output	QUIESCENT	2
Indicator test	QUIESCENT	1
	FAULT WARNING	1
	VOICE ALARM	1
Buzzer stop	FAULT WARNING	1
	VOICE ALARM	1
Reset of fault indications	FAULT WARNING	2
Emergency microphone call	QUIESCENT	2
	FAULT WARNING	2
	VOICE ALARM	2
Voice Alarm Manual Control	QUIESCENT	2
	FAUL WARNING	2



# 4.2. Keyboard/LCD display

Keyboard/LCD displays allows access to all desired functions :

Keyboard has 4 keys :  $\blacktriangle$ ,  $\triangledown$ , C and OK

The  $\blacktriangle$  key is used to go up (from 1 line or 1 value).

The  $\mathbf{\nabla}$  key is used to go down (from 1 line or 1 value).

The C key is the Cancel key.

The OK key is used to validate the current action.



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### 4.4. Access mode to access level

#### 4.4.1. Access level 1

No need for specific operation.

#### 4.4.2. Access level 2 et 3

When pushing the 'Access menu' button, the user is prompted to enter a password (4 digits) that is built with A, B, C, D and E letters

To enter each letter of the code, the user must select the letter by using the  $\blacktriangle$  and  $\triangledown$  keys and validate the selected key with **OK**; this process has to be repeated for each letter of the code.

Difference between access level 2 and access level 3 is made by the use of a different access code.



# 4.5. Access level 1 control

#### 4.5.1. Indicator Test

When pushing the 'Indicator Test' button, all leds will be ON during 1s.

#### 4.5.2. Buzzer Stop

When pushing the 'Buzzer Stop' button, the audible indication is silenced immediately.



## 4.6. Access level 2 control

Depending on the function to achieve, 2 operating modes are possible for access level 2 control ; entering the level 2 access code is required when :

- after pushing the 'Enter Menu' button

- after pushing **'Emergency Microphone'** (Voice Alarm Emergency Microphone) and **'Fault Reset'** (Reset of fault indications) button

In case of 'Enter Menu', CS2600 prompts a page with several menus :

- Voice Alarm Cntrl
- Matrix status
- Events log

- Config CS-2600 : Data and time, AUX input, Fire alarm devices, Microphone, CIE link, RS232 serial link

- Config B3S : Number of C2003, Zones program, GX mic. console, CS-2600 ID, Area ID, IP peripheral

- System : Network, About

- Customization : Language, LCD display

#### **4.6.1.** Level 2 : Enter menu -> Voice alarm manual control (option with requirements)

Set the cursor on the 'Voice alarm cntrl' and validate with OK.

"Voice alarm manual activation. Press OK" is displayed .; then confirm the function with OK.

To stop the evacuation message broadcasting, press the '**Fault Reset**' button and enter the level 2 access code.

#### 4.6.2. Level 2 : Enter menu -> Matrix status

This menu displays current zone occupation on the system.

#### 4.6.3. Level 2 : Enter menu -> Events Log -> Consultation

Set the cursor on the menu 'Events log' and validate with OK. Then select 'Consultation' and validate with OK.

The fault list is displayed ; it is sorted in inverse chronological order (the first displayed is the last occurred).

Each fault is timestamped and displayed as following :

DD/MM/YY hh:mm Label

The label detail is shown in the following table :



Fault warnng designation	Label	Parameters
Amplifier fault	AMPLI x CSyy DEF	x : amplifier number (1 to 3)
•		yy : CS2003 number
Amplifier fault but backed up	AMPLI x CSyy SEC	x : amplifier number (1 to 3)
		yy : CS2003 number
Amplifier fault	AMPLI S CSxx DEF	xx : CS2003 number
Loudspeaker line short-circuited	LS LINE x CSyy CC	x : loudspeaker line number (1 to 3)
		yy : CS2003 number
Loudspeaker line open	LS LINE x CSyy OUV	x : loudspeaker line number (1 to 3)
		yy : CS2003 number
Fire alarm device line open	FIRE ALARMX OPEN	x : fire alarm device line number (1 or 2)
Fire alarm device line short-circuit	FIRE ALARMx SHORT	x : fire alarm device line number (1 or 2)
Fire alarm device line + grounded	FIRE ALARMx + GND	x : fire alarm device line number (1 or 2)
Fire alarm device line - grounded	FIRE ALARMx - GND	x : fire alarm device line number (1 or 2)
Emergency microphone short-circuit	MICRO SHORTCIRCUIT	
Emergency microphone open	MICRO OPEN CIRCUIT	
CS2003 communication fault	LINK CSyy FAULT	yy : CS2003 number
Audio fault bus GX n°1	AUDIO GX1 CSxx DEF	xx : CS2003 number that notifies the
		fault
Audio fault bus GX n°2	AUDIO GX2 CSxx DEF	xx : CS2003 number that notifies the
		fault
Audio message CS2600/CS2003 fault	AUDIO MSG CSxx DEF	xx : CS2003 number that notifies the
		fault
Reset µP	CPU RESET	
Configuration error	CONFIG MEMORY FAULT	
Evac message CKS error	ALARM MESSAGE FAULT	
Gong CKS error	CHIME MEMORY FAULT	
Program memory error	PROGRM MEMORY	
	FAULT	
Display memory error	LCD DISPLAY FAULT	
Internal hardware error	HARDWARE FAULT	
Audio message CS2600/CS2003 fault	AUDIO MSG CSxx DEF	xx : CS2003 number that notifies the
		fault
Mains fault : detected by the PSU	MAINS FAULT	
Battery fault : detected by the PSU	BATTERY FAULT	
PSU fuse fault : detected by the PSU	FUSE SUPPLY FAULT	
Link fault between CIE and VACIE	CIE LINK FAULT	



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#### 4.6.4. Level 2 : Enter menu -> Config CS-2600

Set the cursor on the 'Config CS-2600' and valid with OK.

LCD display shows all the configuration elements that can be consulted at access level 2. These elements are :

- Date and time
- AUX input
- Fire alarm devices
- Microphone

- CIE link

- RS232 serial link

#### 4.6.4.1. Level 2 : Enter menu -> Config CS-2600 -> Date and time

Displays current date and time : DD/MM/YY hh:mm

#### 4.6.4.2. Level 2 : Enter menu -> Config CS-2600 -> AUX input

Displays current settings for Aux input trigger mode : Inactive or Persistent Music or GPI input.

#### 4.6.4.3. Level 2 : Enter menu -> Config CS-2600 -> Fire alarm devices

Displays current settings for each Fire Alarm Device Output 1 and 2 : Active/Inactive

#### 4.6.4.4. Level 2 : Enter menu -> Config CS-2600 -> Microphone

This menu displays current status of use for the emergency microphone : Active/Inactive.

#### 4.6.4.5. Level 2 : Enter menu -> Config CS-2600 -> CIE link

This menu displays current settings for the CIE link : monitoring status (Active/Inactive), activation polarity (Direct/Inverse).

Remark : Direct means that the monitoring voltage emitted by the CIE has the same polarity that the triggering voltage.

#### 4.6.4.6. Level 2 : Enter menu -> Config CS-2600 -> RS232 serial link

This menu displays current settings for the RS232 link. Baud rate : 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 14400, 19200, 38400, 57600, 115200, 128000 Word length : 8, 9 Stop bits : 0,5, 1, 1,5, 2 Parity : None, Even, Odd



#### 4.6.5. Level 2 : Enter menu -> Config B3S

Set the cursor on the 'Config B3S' and valid with OK.

LCD display shows all the configuration elements that can be consulted at access level 2. These elements are :

- Number of CS-2003
- Zones program
- GX mic. console
- CS-2600 ID
- Area ID
- IP peripheral

#### 4.6.5.1. Level 2 : Enter menu -> Config B3S -> Number of CS2003

Displays the number of declared CS2003 on the system.

#### 4.6.5.2. Level 2 : Enter menu -> Config B3S -> Zones program

This menu displays for each zone all parameters ; each zone is build with one or several loudspeaker lines. Parameters associated to a zone are : Zone label : a text (18 characters maximum) Zone status : Active/Inactive Zone LS line : the list of all loudspeaker lines with the possibility for each one to be inserted in the current zone.

#### 4.6.5.3. Level 2 : Enter menu -> Config B3S -> GX mic. console

Displays current key settings for bus consoles 1 and 2.

Select the bus : Bus 1 or Bus 2 Select the key of the console : Key 1 to Key 64 Select : Active/Inactive, Line (from 1 to 120) or Zone (from 1 to 64) or General call.

#### 4.6.5.4. Level 2 : Enter menu -> Config B3S -> CS-2600 ID

Displays current settings for CS2600 ID ; it is a 20 characters length alphanumerical string.

#### 4.6.5.5. Level 2 : Enter menu -> Config B3S -> Area ID

Displays current settings for CS2600 area ID ; it is a 20 characters length alphanumerical string.

#### 4.6.5.6. Level 2 : Enter menu -> Config B3S -> IP peripheral

Displays current settings for IP peripheral. The menu displays for each peripheral (from IP Peripheral 1 to IP Peripheral 32) all parameters : Peripheral ID : alphanumerical string Peripheral status : Active/Inactive IP address : xxx.xxx.xxx TCP/IP port : value from 1 to 65535



Peripheral type : Console, Audio Player , Amplifier, Other Audio bus : 1, 2, Aux



#### 4.6.6. Level 2 : Enter menu -> System

This menu displays 2 elements :

- Network
- About

#### 4.6.6.1. Level 2 : Enter menu -> System -> Network

This menu displays current settings for Network parameters : IP address, mask, gateway, MAC address.

@xxx.xxx.xxx : IP address of the CS2600 Network status : DHCP status, Network mask, Network gateway, MAC address Network config : DHCP config, Config @ static (IP address, Network mask, Network gateway)

#### 4.6.6.2. Level 2 : Enter menu -> System -> About

This menu displays several software information :

ID : product identifier Version : software revision Fonct. Ver : functional revision Driver Ver : drivers revision CRC Prog : software checksum CRC Conf : settings checksum CRC Alar : evacuation message checksum

#### 4.6.7. Level 2 : Enter menu -> Customization

This menu displays 2 elements :

- Language

- LCD display

#### 4.6.7.1. Level 2 : Enter menu -> Customization -> Language

This menu displays current language (English/French).

#### 4.6.7.2. Level 2 : Enter menu -> Customization -> LCD display

This menu displays current standby parameters for the LCD display : LCD sleep delay1 : value in seconds from 0 to 300s LCD sleep delay2 : value in seconds from 0 to 300s



#### 4.6.8. Level 2 : Fault Reset

Push the 'Fault Reset' button in front of the CS2600.

- if the system is in FAULT WARNING condition, the user is prompted to enter the level 2 access code.

Enter the code and validate with OK.

Then the CS2600 returns in QUIESCENT condition.

# **4.6.9.** Level 2 : Manual silencing of the voice alarm condition (option with requirements)

When the system is in VOICE ALARM condition, it is possible to manual silence it by pushing the 'Fault Reset' button in front of the CS2600 and entering the level 2 access code.

#### 4.6.10. Level 2 : Voice alarm emergency microphone

When the system is in VOICE ALARM condition, pushing the 'Emergency microphone' causes the system to enter in VOICE ALARM EMERGENCY MICROPHONE mode after entering the access level 2 password. Once the password is entered, the user pushes on the 'Micro Call' button and keeps it pushed. The blue led start blinking to indicate that the gong is broadcasting ; when the gong ends, the blue led stays ON and the user can broadcast its vocal message.



### 4.7. Acces level 3 control

After entering the access level 3 password, in case of **'Enter Menu'**, CS2600 prompts a page with several menus :

- Events log

- Config CS-2600 : Data and time, AUX input, Fire alarm devices, Microphone, CIE link, RS232 serial link, Access code

- Config B3S : Number of CS-2003, Zones program, GX mic. Console, CS-2600 ID, Area ID, IP peripheral

- System : Network, About, Flash update

- Customization : Language, LCD display

#### 4.7.1. Level 3 : Enter Menu -> Events log

#### 4.7.1.1. Level 3 : Enter Menu -> Events log -> Consultation

This menu displays log information in the same form as in level 2 access.

#### 4.7.1.2. Level 3 : Enter Menu -> Events log -> Events log reset

Select this menu to make a reset of the events log.

#### 4.7.2. Level 3 : Enter Menu -> Config CS-2600

Set the cursor on the 'Config CS-2600' menu and validate with OK.

A new menu proposes several menus :

- Date and time
- AUX input
- Fire alarm devices
- Emergency mic
- CIE link
- RS232 serial link
- Access code

Set the cursor on the desired menu and validate with OK.

#### 4.7.2.1. Level 3 : Enter Menu -> Config CS-2600 -> Date and time

Proceed with the time settings (hour and date) and validate with OK.

#### 4.7.2.2. Level 3 : Enter Menu -> Config CS-2600 -> AUX input

This menu defines the functionality mode of the Aux input : Inactive or Persistent Music..

#### 4.7.2.3. Level 3 : Enter Menu -> Config CS-2600 -> Fire alarm devices

Select Active or Inactive for each Fire Alarm Device output (1 or 2).



#### 4.7.2.4. Level 3 : Enter Menu -> Config CS-2600 -> Microphone

Enter the settings for the emergency microphone use (Active/Inactive).

#### 4.7.2.5. Level 3 : Enter Menu -> Config CS-2600 -> CIE link

Enter the settings for the CIE link : link monitoring status (Active/Inactive), monitoring voltage polarity (Direct/Inverse).

Remark : Direct means that the monitoring voltage emitted by the CIE has the same polarity that the triggering voltage.

#### 4.7.2.6. Level 3 : Enter Menu -> Config CS-2600 -> RS232 serial link

This menu displays current settings for the RS232 link. Baud rate : 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 14400, 19200, 38400, 57600, 115200, 128000 Word length : 8, 9 Stop bits : 0,5 , 1 , 1,5 , 2 Parity : None, Even , Odd

#### 4.7.2.7. Level 3 : Enter Menu -> Config CS-2600 -> Access code

This menu is used to modify level 2 and level 3 access code : 2 menus are proposed : Change level 2 and Change level 3



#### 4.7.3. Level 3 : Enter menu -> Config B3S

Set the cursor on the 'Config B3S' and valid with OK.

LCD displays all the configuration elements that can be modified at access level 2. These elements are :

- Number of CS2003
- Zones program
- GX mic. Console
- CS-2600 ID
- Area ID
- IP peripheral

#### 4.7.3.1. Level 3 : Enter menu -> Config B3S -> Number of CS2003

Enter the number of CS2003 matching with the configuration of the system and validate with **OK**.

#### 4.7.3.2. Level 3 : Enter menu -> Config B3S -> Zones program

This menu displays for each zone all parameters ; each zone is build with one or several loudspeaker lines. Parameters associated to a zone are : Zone label : a text (18 characters maximum) Zone status : Active/Inactive Zone LS line : the list of all loudspeaker lines with the possibility for each one to be inserted in the current zone ; select the loudspeaker line with OK and insert it with  $\blacktriangle$  key. To devalidate the loudspeaker line, use  $\blacktriangledown$  key.

#### 4.7.3.3. Level 3 : Enter menu -> Config B3S -> GX mic. Console

Enter key settings for bus consoles 1 and 2.

Select the bus : Bus 1 or Bus 2 Select the key of the console : Key 1 to Key 64 Select : Active/Inactive, Line (from 1 to 120) or Zone (from 1 to 64) or General call.

#### 4.7.3.4. Level 3 : Enter menu -> Config B3S -> CS-2600 ID

Enter the settings for CS2600 ID ; it is a 20 characters length alphanumerical string.

#### 4.7.3.5. Level 3 : Enter menu -> Config B3S -> Area ID

Enter the settings for CS2600 area ID; it is a 20 characters length alphanumerical string.

#### 4.7.3.6. Level 3 : Enter menu -> Config B3S -> IP peripheral

Enter the settings for each IP peripheral (from IP Peripheral 1 to IP Peripheral 32) :

- Peripheral ID : alphanumerical string
- Peripheral status : Active/Inactive
- IP address : xxx.xxx.xxx.xxx
- TCP/IP port : value from 1 to 65535



- Peripheral type : Console, Audio Player , Amplifier, Other

- Audio bus : 1, 2, Aux



#### 4.7.4. Level 3 : Enter Menu -> System

This menu is used to modify access level 2 and access level 3 password.

This menu displays 2 elements :

- Network
- About
- Flash update

#### 4.7.4.1. Level 3 : Enter menu -> System -> Network

This menu must be used to set Network parameters :

@xxx.xxx.xxx : IP address of the CS2600 Network status : DHCP status, Network mask, Network gateway, MAC address Network config : DHCP config, Config @ static (IP address, Network mask, Network gateway)

#### 4.7.4.2. Level 3 : Enter menu -> System -> About

This menu displays several software information :

ID : product identifier Version : software revision Fonct. Ver : functional revision Driver Ver : drivers revision CRC Prog : software checksum CRC Conf : settings checksum CRC Alar : evacuation message checksum

#### 4.7.5. Level 3 : Enter Menu -> Customization

This menu proposes 2 elements :

- Language

- LCD display

#### 4.7.5.1. Level 3 : Enter Menu -> Customization -> Language

Select the current language (French/English)

#### 4.7.5.2. Level 3 : Enter Menu -> Customization -> LCD display

Select the parameters for the LCD display standby time. LCD sleep delay1 : value in seconds from 0 to 300s LCD sleep delay2 : value in seconds from 0 to 300s



# 5. SERVICING

### **5.1.** Preventive servicing

#### 5.1.1. System test

At least once a year, proceed with a complete functional system test.

#### 5.1.2. Battery change

The battery duration of life must be at least 4 years in normal use condition ; check regularly the charge of the batteries.

#### 5.1.3. CS2600 firmware update

The CS2600 firmware update is possible in level 3 access. The way to be used is **Enter menu -** > **System -> Flash update** 

Follow instructions on the LCD display.