

GXT 4000 - 16 GXT 4000 - 32 GXT 4000 - 48 GXT 4000 - 64

TOUCH SCREEN MICROPHONE CONSOLES

GENERAL INFORMATION

Code 596652eng-01/2024

1 DESCRIPTION

The GXT 4000 microphone console is a touch screen console. It has from 16 up to 64 programmable soft keys for making PA broadcasts into selected areas or zones. It is designed to operate over a bus architecture, meaning that several consoles can be used over the same network, while collectively occupying just one single audio channel. In fact, the consoles are self-regulating, with audio channel priority always being given to the first console that picks up the channel. The main part of the console may be flush fitted or mounted on its own swivel base for tabletop use.

The GXT 4000 console comes complete with:

- an electret microphone,
- a touch screen for setting and selecting zones,
- a memory card reader for broadcasting pre-recorded messages,
- a loudspeaker for monitoring announcements, etc.,
- a fail soft switch with protective hood.

It may be used to:

- view the degree of occupancy of the network's zones,
- broadcast an announcement into one or more zones.

2 TECHNICAL SPECIFICATIONS

Audio signal bus:

- Output: via transformer
- Nominal level: 0 dBu
- Microphone preamplifier: compressor fitted
- Transmission and commands
 - Serial link: RS485 bus

User interface

- Touch screen with up to 64 programmable soft keys and 5 function keys
- Zone occupancy indicator
- Audio bus occupancy indicator
- Indicator showing whether the serial link is connected to the host system
- a protected fail soft pushbutton switch (connector output with connection box)
- monitoring loudspeaker
- message memory card reader

Message memory card reader

- Memory medium: SD card using FAT32, files stored in root directory only (sub-directories are not supported)
- Message format: wav, 44100 Hz, 16 bit, mono
- The console has 2 memory card slots, one inside the console, the second accessible from the outside. The external reader has priority

Power

- Voltage: 24 V d.c. (min. 12 volts, max. 28 volts)
- Current: 110 mA (190 mA at 12 V, 100 mA at 28 V)

Housing Motor

- Material: metal
- Colour: grey console on black base
- Dimensions: 287 x 237 x 73 mm
- Microphone overall length: 36 cm
- Weight: 2.5 kg
- comes complete with 2 mounting brackets and 2 screws for flush mounting

The console may be powered directly using the RJ45 sockets (refer to § 4.1 concerning restrictions). In the case of remote consoles, however, the bus may be powered using the jack socket.

(2)

Pin N°	In / Out
1	Audio Out +
2	Audio Out -
3	Audio In +
4	Audio In -
5	0 V
6	+24 V
7	RS485 Data +
8	RS485 Data -

RJ45 pinout



3 PRESENTATION

View from above:

- (1) Electret microphone
- (2) Touch screen
- (3) Memory card slot
- (4) Protected fail soft pushbutton
- (5) Monitoring loudspeaker
- (6) Stylus holder



View from below:

- (7) Protected pushbutton connector cable grommet
- (8) Earth terminal
- (9) RJ45 In/Out sockets

<u>Side view:</u> (10) 24 V power socket

(11) Sub-D 9 pin (RS232) serial socket for uploading programs

4 INSTALLATION

Warning!

This appliance must not be immersed in water or otherwise subject to splashing



<u>Recess mounting</u> Recess dimensions: 240 x 150 mm

Separate the central unit from its base by extracting the 2 screws and brackets located underneath the unit. Use the brackets to fix the unit to a supporting surface that has a depth of between 1 and 35 mm. For greater depths, use spacers, wedges or longer bracket retaining screws.

Warning: when recessing, the power supply jack socket will only be accessible if the thickness of the mounting surface is 25 mm or less. Should the recess depth exceed this, the console should be powered using the RJ45 sockets.





4.1 General Data – Operational Limits

Number of consoles

The number of consoles that can be connected to the same bus depends on the type of installation used.

Power

A single power supply can be used to power several GXT 4000 consoles.

The table below gives an indication of power delivery limitations according to the number of consoles and distances between them.

Number of consoles	Distance between the power supply source and the farthest console	
3	100 m	
1	150 m max.	

Data calculated using the optional power supply NS110557 (24 V d.c., 500 mA) and a cable impedance of 0.085 ohm.m⁻¹. In order to work, the absolute minimum voltage arriving at the power input terminals of each console must be 12 V with maximum load applied.

Cabling

Consoles on the same bus are daisy-chained together at the RJ45 inputs/outputs using the cables supplied. Over long distances, an EL720 connector box may be necessary. For audio and RS485, twisted pairs are recommended. Electrical interference (audio parasites) may be minimised by screening the audio connectors. Following these guidelines, the total cable length can reach 1000 m all buses combined (the limit normally associated with RS485 networks where no repeaters are used).

EL720 connector box pinout

RJ45/8 pin terminal correspondence chart		
RJ45 pinout	8 pin terminal pinout	
1	8	
2	7	
3	6	
4	5	
5	4	
6	3	
7	2	
8	1	



Fail soft mode:

To wire up the fail soft, connect the connection box (PGM) to the 26 pin connector strip located inside the console. The connector strip may be accessed by removing the cover on the console's base. There is one configuration switch per protected pushbutton located on the main board inside the console; use these switches to set the contacts to NO (normally open) or NC (normally closed) as required. For each of the four optional pushbuttons, the indicator lamp is driven by zeroing the associated control point.

26 pin connector/terminal correspondence chart			
26 pin connector pinout	Terminal pinout	26 pin connector pinout	Terminal pinout
1	Audio In + (monitoring)	14	Contact 2 optional pushbutton 1 (NO)
2	Audio In - (monitoring)	15	Contact 2 optional pushbutton 1 (ground)
3	Audio Out + (audio fail soft mode)	16	Indicator control optional pushbutton 1 (-)
4	Audio Out - (audio fail soft mode)	17	Contact 1 optional pushbutton 4 (NO or NC)
5	Fail soft contact (NO or NC)	18	Contact 1 optional pushbutton 4 (ground)
6	Fail soft contact (ground)	19	Contact 2 optional pushbutton 4 (NO)
7	Contact 1 optional pushbutton 2 (NO or NC)	20	Contact 2 optional pushbutton 4 (ground)
8	Contact 1 optional pushbutton 2 (ground)	21	Indicator control optional pushbutton 4 (-)
9	Contact 2 optional pushbutton 2 (NO)	22	Contact 1 optional pushbutton 3 (NO or NC)
10	Contact 2 optional pushbutton 2 (ground)	23	Contact 1 optional pushbutton 3 (ground)
11	Indicator control optional pushbutton 2 (-)	24	Contact 2 optional pushbutton 3 (NO)
12	Contact 1 optional pushbutton 1 (NO or NC)	25	Contact 2 optional pushbutton 3 (ground)
13	Contact 1 optional pushbutton 1 (ground)	26	Indicator control optional pushbutton 3 (-)

PGM connector box pinout



5 APPLICATION

5.1 Use with a CS 2500 Central Monitoring Unit as a public safety announcement system

When connected to a CS 2500 central monitoring unit, the GXT 4000 can be used to broadcast safety announcements within selected zones; its in-built touch screen does away with any need for separate switch matrices, thus keeping costs and cabling to a minimum. Other PA sources such as piped music, etc., may be connected either to the CS 2500's AUX input or to the 0 dB inputs of CS 2003 audio matrices.

IMPORTANT: Ensure that the CS 2500's software version is version V4.50 or greater.



Installation: Refer to the GXT 4000 Operator Manual

The CS 2500 has 3 separate audio buses:

- audio bus GX1 (GX 2500 Control/Audio 1 RJ45 socket) to which can be connected either a GX 2500 or one or more GXT 4000 or GX 3016 units (address 1);
- audio bus GX2 (GX 2500 Control/Audio 2 RJ45 socket) to which can be connected either a GX 2500 or one or more GXT 4000 or GX 3016 units (address 2);
- audio bus AUX (AUX XLR socket) to which can be connected either a 0 dB source or one or more GXT 4000 or GX 3016 units (address 3).

The maximum number of GXT 4000 units that are capable of being connected to a network may be calculated as follows:

No. of GXT 4000 ≤ 50 - No. of CS 2500 – No. of CS 2003 – No. of GX 2500 – No. of GX 3016



5.2 Use with a CC 3816

The CC 3816 matrix has two special inputs for connecting two GXT 4000 or GX 3016 console buses together.

Installation: Refer to the GXT 4000 Operator Manual

The CC 3816 has 2 separate audio buses:

- audio bus 1 (Console 1 RJ45 socket) to which can be connected one or more GXT 4000 or GX 3016 units (address 1);
- audio bus 2 (Console 2 RJ45 socket) to which can be connected one or more GXT 4000 or GX 3016 units (address 2).

Refer to the CC 3816 Manual for additional information.

5.3 Use with the DN 3816 (multi-DN application)

Contact Bouyer for further information.



6 OPERATION

6.1 Description of the touch screens

6.1.1 Start screen

GXT 4000	When first switching on the console, a Welcome screen is displayed while the console boots up.
Bouyer www.bouyer.com	

6.1.2 The zone selection screens

The zone selection screens are then displayed. The GXT 4000 can be set to display its screens in either of two ways.

HENU 18:28 19:28 01 62 02 06 10 14 14 00 15 00 11 12 12 16 10 14 02 06 11 15 12 16 13 C 14 00 15 00 16 00 17 00 18 00 19 00 10 14 10 00 11 15 15 00 16 00 17 00 14 00 15 00 16 00 17 00 18 00 19 00 10 10 10 10 14 00 14 00 15 00	 Display mode 1: (Standby) This mode displays: the date and time, which zones are occupied, the host system connection (in this case the RS485 connection has not been established as shown by the icon), the first 16 programmable soft keys, with any remaining groups of soft keys (up to 64 according to the version) being accessible using the bottom right hand slider bar, 5 function keys (Cancel), General Announcement), Play message), Microphone announcement), and a MENU key to access the console's configuration menu.
30/01/2008 21 Entrée Nord 10:59 21 Entrée Nord 17 Étrée Parking Étrée 10 22 26 30 19 23 20 24 28 32 HENU	 Display mode 1: (ON) This mode displays: the date and time, which zones are occupied (in this case the "North Entrance" zone which has been set to soft key n°21), the host system connection (in this case the RS485 connection has been established as shown by the icon); programmable soft key numbers 17 to 32, here showing that zone 21 is occupied, and the function keys (in this example the Microphone announcement key shows that an announcement is currently being made over the system using the microphone).
30/01/2008 01 10156 02 04 05 06 07 07 09 M 09 M 10	 Display mode 2 : (Standby) This mode displays: the host system connection (in this case the RS485 connection has not been established as shown by the icon), the date and time, which zones are occupied, the first 10 programmable soft keys, with any remaining groups of soft keys (up to 64 according to the version) being accessible using the right hand slider bar, 5 function keys (Cancel), General Announcement), Play message), Microphone announcement), and a MENU key to access the console's configuration menu.





6.1.3 The Configuration menu

	In both display modes 1 and 2, pressing the MENU key opens a window containing seven configuration sub-menus:
	- Volume: for adjusting the microphone, chime and monitoring loudspeaker volumes,
DATE PUPITRE MESSAGE	- Keys: for programming the touch screen's soft keys 1 to 64 as well as the General Announcement key,
	- Date: for adjusting the date and time,
	- Console: for changing the console's configuration (contrast, time out, password, ID lock, chime, announcement mode, display, language and audible
	- D Message: for listing and listening to messages stored on the memory
	- System: for setting system connection parameters (host system, serial
	link address),
	the console including the current software version number. The console will return back to the zone selection screen after 20 seconds of
	inactivity or by pressing the screen next to one of the menu icons.

6.1.4 The VOLUME Menu







6.1.5 The KEY Menu

PROGRAMMENTION ZONE THATTLE Not de passe ()	Access to the programming menu is password-protected; the 4 character password must be entered using the keyboard. The password is left empty by default (input either 4 spaces or leave blank). Press the key to confirm the password and access the Console menu. Should an error occur, the screen defaults back to the zone selection screen.
	The console will in any case automatically return back to the zone selection screen screen after 20 seconds of inactivity.
Stocksonworkson Stocksonworkson ZORE TRCTILE 01 Touche Namero Namero 01 Libellé Boceuil Bat R Hezsase Rucuri Solution	 The soft key programming screen shows: the soft key that is being configured (in this case SOFT KEY Number 01). The keys at the bottom of the screen may be used to scroll through the soft keys. The same keys can be used to scroll through the programs for soft keys 1 through 64 (according to the console model) and the General Announcement soft key. Key: shows the function associated with the soft key. There are three possible options: None: the soft key has either not been programmed or is not intended for switching a zone or group of zones, Number: a key number is assigned to the soft key. Depending on how it has been configured, the host system will make the link between the key number and the zone or group of zones to switch, General Announcement: assigns the general announcement function to the soft key. If the Number function is selected, a new selection zone is displayed to choose the key number; Label: provides the descriptive text - up a 16 characters – that will appear on the soft key in the zone selection screen; Message: links the broadcasting of a particular message located on the memory card to a soft key:



Using the selection dial: Values may be changed by "flicking" the relevant box to scroll through the various possible options. The dial will automatically disappear, saving the selection, if the touch screen is then left alone.

Press the key to save any changes you have made in the *KEY* menu and exit. Press the key to exit the menu without saving any changes you may have made. The console will in any case automatically return back to the zone selection screen after 20 seconds of inactivity. 6.1.6 The DATE Menu

Warning:

- If the console is left switched off for more than 15 days, the programmed date and time will be erased from memory.
- The console's date and time settings are independent of and not synchronised to the host system.

















Image: Lange Lange Lange BIP CLAUER Image: Lange BIP CLAUER CONTRASTE TIME OUT NOT DE PRSSE Image: Lange BIP CLAUER Hode d'arrel Image: Continue Continue Bip Clauer Continue Continue Continue Bip Clauer Image: Continue Bip Clauer Hode d'arrel Image: Continue Bip Clauer Fublies Perametree Perametree Perametree Image: Continue Contence			
Using the selection dial: Values may be changed by flicking the relevant box to scroll through the various possible options. The dial will automatically disappear, saving the selection, if the touch screen is then left alone.			
Press the key to save any changes you have made in the <i>CONSOLE</i> menu and exit. Press the key to exit the menu without saving any changes you may have made. Warning: After 20 seconds of inactivity the console will return back to the zone selection screen and any changes you may have made will be discarded.			

6.1.8 The MESSAGE Menu







Pressing the Play key D opens the Broadcast message window so that the message can be listened to locally on the monitoring loudspeaker. Use this screen to view playback progress of the message selected; press Stop D to stop playback. The progress bar shows how far through the announcement the playback is.

Using the selection dial: Values may be changed by flicking the relevant box to scroll through the various possible options. The dial will automatically disappear, saving the selection, if the touch screen is then left alone.

 ${f J}$ key to save any changes you have made in the menu and exit.

Press the key to exit the menu without saving any changes you may have made.

Warning: After 20 seconds of inactivity the console will return back to the zone selection screen and any changes you may have made will be discarded.

6.1.9 The SYSTEM Menu

Press the



CONCIONNATION SYSTEME RORESSE SYSTEME Tune de sustème CC / DH Par anétres par défaut	 The SYSTEM Tab The second tab is used to select the type of system the console is to be used with. There are two possible platforms: the CC/DN 3816 matrix and the CS 2500 safety sound system. Pressing the Default Setting key par defaut sets the system automatically to CC/DN 3816. 	
CONFIGURATION SYSTEME RDRESSE GVOTEME Tupe de s CC / EN CS 2500 Par anó tries par défaut	Pressing on the System Type box displays a selection dial showing the different options.	
Using the selection dial: Values may be changed by flicking the relevant box to scroll through the various possible options. The dial will automatically disappear, saving the selection, if the touch screen is then left alone.		
Press the 🗲 key to exit the menu without saving any changes you may have made. Warning: After 20 seconds of inactivity the console will return back to the zone selection screen and any changes you may have made will be discarded.		

6.1.10 The VERSION Menu



6.1.11 Standby Screen





6.2 Normal operation

Keys 1 to 64 (according to the actual configuration) and the General Announcement key are keys that can be programmed for:

- selecting zones (depending on how the CC 3816, DN 3816 or CS 2500 is programmed),
- selecting groups of zones (depending on how the CC 3816, DN 3816 or CS 2500 is programmed),
- broadcasting messages.

The Cancel key may be used to cancel the current selection.

Indicator status:

Indicator	Permanently off	Flashing	Permanently on
Keys 1 to 64 + General Announcement	Zone free or zone group free or the function is not activated	Zone or group of zones occupied by another source	Zone or group of zones occupied by this console or the function is active

A zone or zones may be picked up by pressing one or several programmed keys. The request is then sent to the host system which switches the zones and then sends the state of the respective keys back to the console.

Where:

- the zone is free or occupied by a lower priority source, the zone will be assigned to the console;
- a console on the same bus has picked up the zones, the other consoles on that bus are unable to switch zones and the message **Audio bus unavailable** is displayed if this attempts to issue a request.

Once one or more zones have been assigned to the console, then:

- a simple microphone announcement may be broadcast:
- in non-latching mode by holding down indicator comes on permanently) to activate the microphone and broadcast a spoken announcement within the selected zones. Releasing the key stops the broadcast and the indicator goes out,
- in latching mode by pressing key once (causing the indicator to come on) to activate the microphone and broadcast a spoken announcement within the selected zones, until the same key is pressed a second time to switch off the microphone and extinguish the indicator;
- a chime followed by a microphone announcement may be broadcast:
- in non-latching mode by holding down (the indicator comes on permanently) to activate the preset chime. When the chime finishes the chime indicator goes out and the microphone indicator lights to show a spoken announcement can now be made in the selected zones up until the key is released (and the indicator extinguishes),
- in latching mode by pressing key end once (indicator lights) to activate the preset chime. When the chime finishes the chime indicator goes out and the microphone indicator lights to show a spoken announcement can now be made in the selected zones up until either of the two keys is pressed once more to switch off the microphone (and extinguish the indicator);

In all the above cases, releasing the key or pressing it a second time will interrupt the sequence.

- a message stored on the memory card may be broadcast:
 - pressing pressing opens the Broadcast message window and causes the indicator to come on permanently. This screen is used to select one of the messages on the memory card, broadcast it by

pressing Play [], stop it by pressing Stop [] and exit by pressing

The progress bar shows how far through the announcement the playback is.

Where a key's program combines the selection of one or more zones and the broadcasting of a message, the console first cancels the assignment of any zones it has assigned, issues a request to switch the zones programmed into the soft key and, if the request is accepted, broadcasts the configured message.

7 RECOMMENDATION



At the end of your product's life and where it is located within France's territorial limits, please contact BOUYER to arrange for its destruction in accordance with the DEEE directive pertaining to the disposal of waste electrical and electronic equipment.

Where the equipment is located in another country, please follow your country's legislation regarding the safe, environmentally-friendly disposal of this equipment.