INSTALLATION / USE
AND PROGRAMMING

UNIVERSAL TYPE "UNI3G"

INTERCOM CARD - WK119U3G

LE LAS Group
COMMUNICATION UNDER HIGH PROTECTION

Contents

EQUIPMENT FOR INDUSTRIAL SITES

HANDS-FREE INTERCOM CARD" WK119U3G
FOR SEALED AND EXPLOSION-PROOF STATIONS

ATTENTION

BEFORE PROCEEDING WITH COMMISSIONING, READ CAREFULLY
THE MANUAL PROVIDED TO ENSURE THAT THE CONFIGURATION
FACTORY CORRESPONDS TO THE **DESIRED** USE.

REMARKS

THESE PRODUCTS MEET DIFFERENT PROTECTION STANDARDS
SEALING AND EXPLOSION-PROOF

ATTENTION
EACH COMPONENT IS AN INTEGRAL PART OF THE MODE
PROTECTION AND CANNOT BE **MODIFIED** UNDER ANY CIRCUMSTANCES,
INCLUDING CABLE ENTRIES.

THE WARRANTY IS APPLIES ONLY IN THE INSTALLATION CONDITIONS
AND OPERATION STRICTLY DEFINED IN THIS MANUAL.

NO GUARANTEE CAN BE IMPLEMENTED
IF DETERIORATION RESULTS FROM A FOREIGN CAUSE
TO THE DEVICE OR NON-COMPLIANCE WITH THE INSTRUCTIONS FOR USE.

FOR THE SAKE OF IMPROVEMENT, THE INFORMATION CONTAINED IN
THIS DOCUMENT AND THE CHARACTERISTICS OF THE MATERIALS MAY
SUBJECT TO CHANGE WITHOUT NOTICE.

EUROPEAN STANDARDS

UNITS MARKED "CE" COMPLY WITH THE **EMC DIRECTIVE (2014/30/EU)**,
HAS THE DIRECTIVE RELATING TO LOW VOLTAGES **(2014/35/EU)**
FORMULATED BY THE EUROPEAN COMMUNITY.

EXPLOSION-PROOF INTERCOMS INSTALLED IN RISK ZONES

THE FIRST LAYOUTSERVICE MUST BE PERFORMED BY A COMPETENT
COMPANY IN INSTALLATION IN A RISK AREA.

IMPORTANT

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BY YOU IS NOT AUTHORIZED WITHOUT THE AGREEMENT OF THE
MANUFACTURER.

1. GENERAL PRESENTATION OF THE UNIVERSAL TYPE NETWORK

1.1 GENERALITY

The UNIVERSAL network is made up of a maximum of 10 or 100 stations which operate without a central switching cabinet and which are only connected together in parallel by a 1 or 2 pair telephone type cable via a central connection box (option), reference BDV 376 E1P12CF.
Each station must be supplied with 24 Volts DC (possibly 48 VDC, with a converter card Ref: WK028U3G).

Logical and analog circuits are integrated into each station to ensure the connections:

- The analog part includes high impedance interfaces so as not to alter the quality of the line (600 ohms) even in the event of a large number of stations on the network and an amplifier for max. power loudspeakers. 20W.

- The microprocessor logic part for managing connections and displays.

The stations are equipped with:

- A waterproof speaker

- A waterproof and vandal-proof "Electret" type microphone (or "gooseneck" for the office version)

- A 2-line, 16-character LCD display or a line connection LED, depending on the model

- A dial pad with function keys for keypad versions, or a call button for secondary extensions

- An electronic card

- A connection terminal block (6 screw terminals or RJ socket)

1.2 NETWORK POSSIBILITIES

This network offers the following functions:

- Individual connection between two stations.

- Priority general call from a keypad station to all other stations.

- Group call for all program types

- Broadcast of general call messages.

- Conference between several stations (without automatic piloting).

- Call storage with display in case of busy (on stations with PG3 display).

- Head positions in parallel or with dismissal and transfer.

- Programming or modification of the following settings either locally using the keyboard, or remotely using a network station equipped with a keyboard:

  - ➢ Position number
  - ➢ Program type
  - ➢ Ring volume
  - ➢ Automatic answer after a number of rings
  - ➢ Speaker volume.
  - ➢ … (see Programming Manual)

1.3 DIFFERENT TYPES OF USE

In order to meet all expectations, the Universal network includes 3 types of operation:

- <u>PG1 intercom network</u>: possible connections between all stations in the network (keyboard stations). No control in this mode, each station manages itself using the Talk/Listen key.

- <u>PG2 controlled intercom network</u>: possible connections between all stations in the network with control of the station called by the caller, then optionally by the called party or the caller.

- <u>Star network + PG3 mesh network</u>**:** one or more main stations (up to 8) and a maximum of 99 secondary stations.
  Possibility of two manager positions in parallel with or without postponement and transfer.
  Possible connections between all stations in the network with control by the head station. In the case of communication between 2 leaders, there is no more control, each leader must press the Talk/Listen button to speak and release it to listen.
  Mesh network comprising one or more keypad stations (total intercom) and secondary stations assigned by programming to one or more master stations.

Warning: The operation of the network must be defined by the user (see § 3.5)

1.3.1 <u>Intercom network functionalities (PG1 and PG2 type)</u>

- It is made up of a maximum of 9 or 99 keyboard stations, connected by bus or star, necessarily by 2 wires (see CONNECTION).

- To establish a connection, dial the number of the extension to be called on the keyboard, a reassurance tone plays until the called party responds. On the called party's side, the call ringtone rings until the line is automatically seized, or manually by pressing the TALK button (depending on programming).

- The called extension therefore has the possibility of instantaneous automatic response or after a programmable number of rings.

- During a conversation between two stations, the network is busy (indication on displays). However, it is possible for other extensions to make a General Call.

- Possibility of making a group call if the extension is in 100 directions

- Ability to broadcast up to 9 messages.

- Each station has a display which makes communications very user-friendly and direct function keys which simplify use of the system. Thus, General Call with pre-announcement tone, Conference between 2 or more extensions, Talk-Listen, Cancel and Programming are unique keys which prevent confusion (see Description of the keyboard 5.1).

- The difference between PG1 and PG2 lies in the Speech function/Listen:
  In the PG1 type network there is no control, each user must press their Talk key to speak. In the PG2 type network, the calling station controls the called station, allowing the latter to remain completely hands-free, then control as desired by the called party or the caller.

1.3.2 <u>Star network features (PG3 type)</u>

<u>Use in STAR mode:</u>

- It is made up of one or more master stations in parallel (9 or 99 directions) with keyboard and display and a maximum of 9 or 99 secondary stations with one button, connected by bus or star, by 2 or 4 wires (see CONNECTION).

- To establish a main - secondary connection, you dial the number of the extension to be called on the keyboard, a reassurance tone plays until the called party responds. On the called party's side, the call ringtone sounds until the line is automatically seized, or manually by pressing the button (depending on the programming).
  Possibility of instant automatic answer or after a programmable number of rings.

- To establish a secondary connection - boss, you press the call button, a light flashes in time with the reassurance tone and you wait for the boss's response.

- During a conversation between two stations, the network is busy, but the secondary stations can call the head station; these calls will be indicated by displaying the number of the calling station which will be memorized. When the network is released, the number of the first station that called will appear on the display and the head station can receive it directly using its TALK key or dial another number for a priority call.
- If the network is busy, a calling secondary hears rapid beeps signalling the busy. Its light flashes at the same rate.

- If several master stations bearing the same number (F1) are installed on the network, they ring simultaneously on a call from a secondary, the response is as diligent as possible.

- There is also the option to assign GROUP CALLS. To do this, simply type the group number (1 to 8) on the keypad before pressing and holding the General Call key.

- The GROUP CALL function is linked to memory M9, which gives access or not to a group.

- Possibility of broadcasting up to 9 messages in general call. To do this, type the message number you want to broadcast (1 to 9) then press the Talk/Listen key. To end the broadcast, press the Cancel button.

- **TRANSFER REPORT:** On the other hand, with two head stations with numbers F1 and F2 installed on the network (and programmed accordingly using parameter 24, see Programming Manual), calls from the main head station F1 can be transferred to a station associate head F2. When head F1 is active its display indicates: - - -, while inactive head F2 indicates: 0 - 0.
  Secondary calls can be transferred to F2 by simply sending F1 the code 0 or 00 (depending on 10 or 100 directions). Head F1 is then inactive and its display indicates: [-] while active head F2 indicates: - - -.
  On a call from a secondary only the head station indicating: - - -, rings.
  At any time, call recovery by F1 is done in the same way as transfer.
  In addition to the functions described above, automatic transfer from F1 to F2 can be achieved if line taken after "n" rings programming is implemented. In this case, after these "n" rings, if F1 has still not answered, the call will be automatically transferred to F2.

Use in MESH mode:

- It is made up of a maximum of 8 main stations with keyboard and display that can call 7+99 directions and a maximum of 99 secondary stations.

- All keyboard stations can call each other, in this case there is no control. The secondary stations can only call the associated chef (programmed in M1) and are always controlled by him.

- During a conversation, the other keypad stations can make a GENERAL CALL, while the secondary one-button stations send calls to their leader who is notified immediately but must wait until the network is free to respond.

- We set the call numbers of the head stations from F1 to F8 to be able to identify a head station by its number and we assign from 01 to 99 the addresses for the secondary stations.

- To call the associated leader from the secondaries, you must program the number of this leader in memory M1 (assigned to button 1, unique for one-button secondaries).

- To call from a keypad station, you dial the two digits of the station to be called, except to call another manager where you first press the General Call key (to dial the letter F) followed by the number 1 at 8.
  NOTE: To make a GENERAL CALL, in this type of program, you must press the General Call key twice.

- There is also the option to assign GROUP CALLS. To do this, simply type the group number (1 to 8) on the keyboard before pressing the General Call key.
  Please note, the group call and general call functions are linked to the M9 memory. This allows you to individually authorize, or not, the possibility of sending to, or receiving, each group of calls, but also to give authorization to send a general call or not. However, a general call will be received by a station, regardless of its configuration.
  Example: If you program 1234 in M9, this will mean that this extension will be able to make or receive group calls 1, 2, 3, and 4, but will not be able to make general calls.
  For your extension to be authorized to make a general call, you must put an A in memory 5009 (using #13#, see programming instructions). However, even without this A, your extension will receive all general calls made on the network.
  In addition, you can also put the number 9 in M9, this will imply that the extension will be able to make any group call (eg: 129 in M9, implies that this extension will only receive group calls 1 and 2, however, it will be able to transmit to any group (from 1 to 8).
  Please note, a secondary station only receives, by default, group 1 call. You must then program in M9 the other calls to which it must answer (eg: 12 to answer groups 1 and 2).

- Possibility of broadcasting up to 9 messages in general call. To do this, type the message number you want to broadcast (1 to 9) then press the Talk/Listen key. To end the broadcast, press the Cancel button.

- For the rest, the operation is identical to program 1 when it concerns a connection between 2 keyboard stations, and to program 3 for a keyboard station - secondary station connection.

1.3.3 <u>Broadcast messages (OPTIONAL)</u>

1/ Remove the Micro-SD card from the reader on the UNI3G card.

2/ Use a card reader connected to a computer.

3/ Add your .mp3 files to the card and rename them as follows: 0001.mp3 for the message you want to broadcast by pressing key 1, 0002.mp3 for the message you want to broadcast by pressing key 2, And so on…

Be careful, the syntax for the names of mp3 files is very important so that they are read correctly! In addition, it is very important to leave the 0010.mp3 file already present in the SD card!
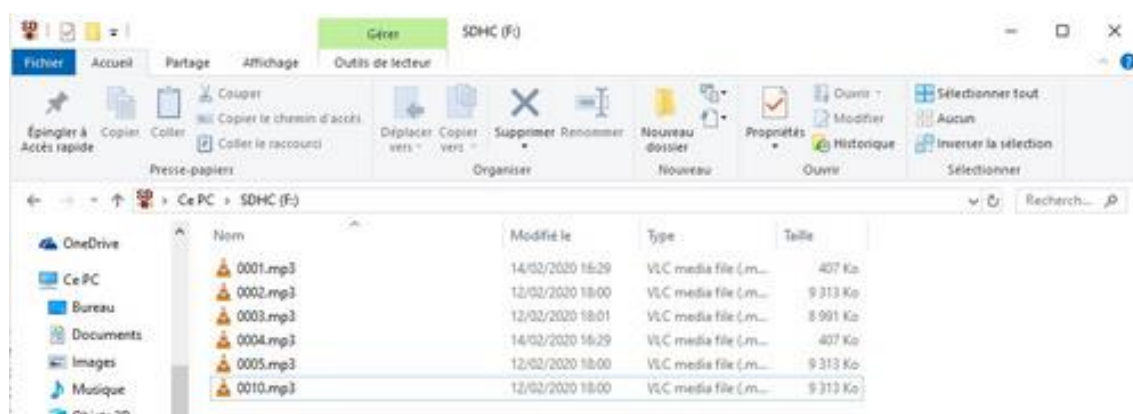
4/ Put the SD card back in the reader on the UNI3G card.

1.4 CONNECTION AND COMMISSIONING OF STATIONS

ATTENTION

These products, equipped with a microprocessor, carry out a self-test when powered up, punctuated by the emission of an audible signal.

They have many programmable functions and are factory configured for everyday use.

Before proceeding with commissioning, read the supplied manual carefully to ensure that the factory configuration corresponds to the desired use.

The stations are connected according to the type of program desired and the physical locations of the stations, by bus or star, in two or four wires.

4-wire cabling is only useful if the stations are connected via multiplexers with radio interface, optical fiber, etc. and cannot be used in PG1 or PG2 type networks.

In other cases, the stations are connected with 2 wires.
The stations have a high impedance which requires loading the network to 600 ohms This loading is carried out in the BDV376E1P12CF connection box sold with the system.

Attention in 4-wire networks, each pair must be loaded: transmission from the main station, but also the transmission from the secondary stations. It is also necessary to connect L1 to L3 and L2 to L4 by 2700 ohms (supplied with each master station).

NOTE: If the connection box has not been ordered, 2 680-ohm resistors, supplied with each head station, can be used to charge the speech pair(s).

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1.5 PPRESENTATION OF THE CENTRAL CONNECTION BOX BDV 376 E1 P12CF

This box fulfils two functions:

- Equipped with 600-ohm resistors, it allows you to load the network and therefore maintain its impedance.
  This function is performed by jumpers ST1 for one-pair wired networks, or ST1-ST2 for two-pair wired networks.
  If your network is equipped with several boxes to facilitate connections, only one of them will need to be loaded.
  Conversely, if it is a very small network which is not equipped with this box, do not forget to put the 600 ohms on one of the network cards. To do this, put jumper JP2 in position 2.

  2-WIRE NETWORK:

  - ➢ Connect a 600-ohm resistor between L1 and L2.

  4-WIRE NETWORK:

  - ➢ Connect a 600-ohm resistor between L1 and L2
  - ➢ Connect a 600-ohm resistor between L3 and L4
  - ➢ Connect a 2.7K ohm resistor between L1 and L3
  - ➢ Connect a 2.7K ohm resistor between L2 and L4

- Equipped with 2 removable connectors for head station, one for 1 pair network (or 2 wires), the other for 2 pair network (or 4 wires) and 10 removable connectors for secondary stations or head station, it allows you to easily connect up to 'to 11 star stations or X stations via 1 to 10 bus or star circuits, with centralized power supply or not (see § 1)

NOTE: See also the user manual ref: NFC376E*BDVUNI supplied with the connection box.

2. <u>NETWORK INSTALLATION</u>

2.1 GENERAL WIRING PRINCIPLE

The cable to use is the 6 or 9/10th multi-pair telephone type with screen. One or two pairs are used for speech, one or more pairs are used for power.

2.2 VOICE

The voice line (2 or 4 wires) wired as a bus or star can reach, on a shielded 6/10 copper pair, 10 km or more depending on the configuration.
The system works with levels of approximately 0 dBm online, and a bandwidth of minimum 300 -3000 Hz, so any support ensuring these characteristics may be suitable.

2.3 FOOD

The entire system is powered by regulated 24 VDC (factory test). In the case of a 48V power supply, the system comes with a 48V-24V converter.

> Consumption of a station at rest:0.05A
> In 5-Watt station operation: 0.20 A
> 15-Watt station: 0.50 A
> HP in parallel on 1 additional 0.5A station

<u>NOTE</u>: TCH202P type office stations can be powered locally using a 230VAC-24VDC – 500 mA power supply connected to the RJ45 wall socket.
Ref: CE624V16/PR.

It is therefore possible to power each station locally using a 230VAC / 48VDC 1A power supply box:
> - Waterproof type BAT376E1A48
> - Type ADF BAT226A1A48

Or from a centralized power supply.
UA mix of the two possibilities is also possible, with several power supplies distributed over the lines.

In the case of a centralized power supply, the maximum lengths of the power lines are as follows:

> ➢ Star wiring, one pair from the central power supply to each station:
>> • Copper pair 6/10:
>>> - 5W station 400m

- 15 W station 200m

- Copper pair 9/10
  - 5W station 800m
  - 15 W station 400m

➢ Bus cabling (one cable for several stations): divide the maximum distance by the number of stations.

2.4 BUS WIRING PRINCIPLE
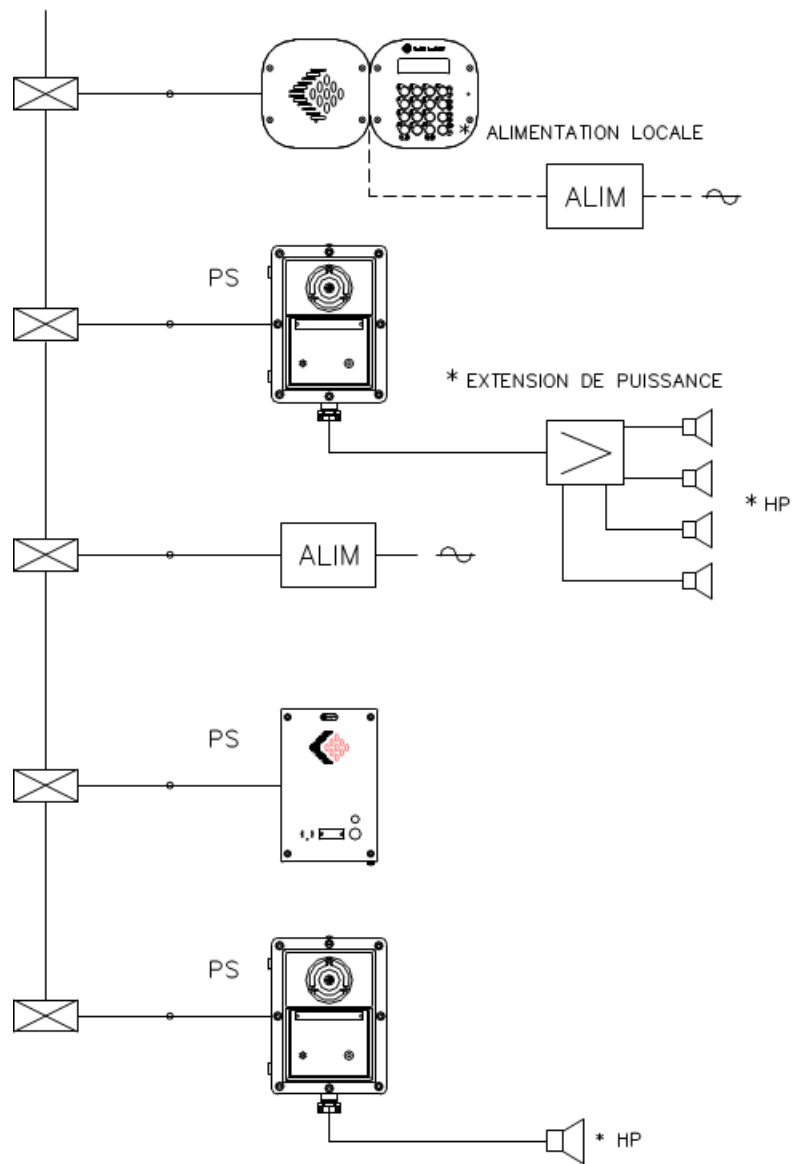
* : Option

PC: Head Station

PS: Secondary Position

——o—— Telephone type cable 1 or 2 pairs 9/10th with screen
                             1 pair if local power supply
                             2 pairs if centralized power supply

2.5 STAR WIRING PRINCIPLE
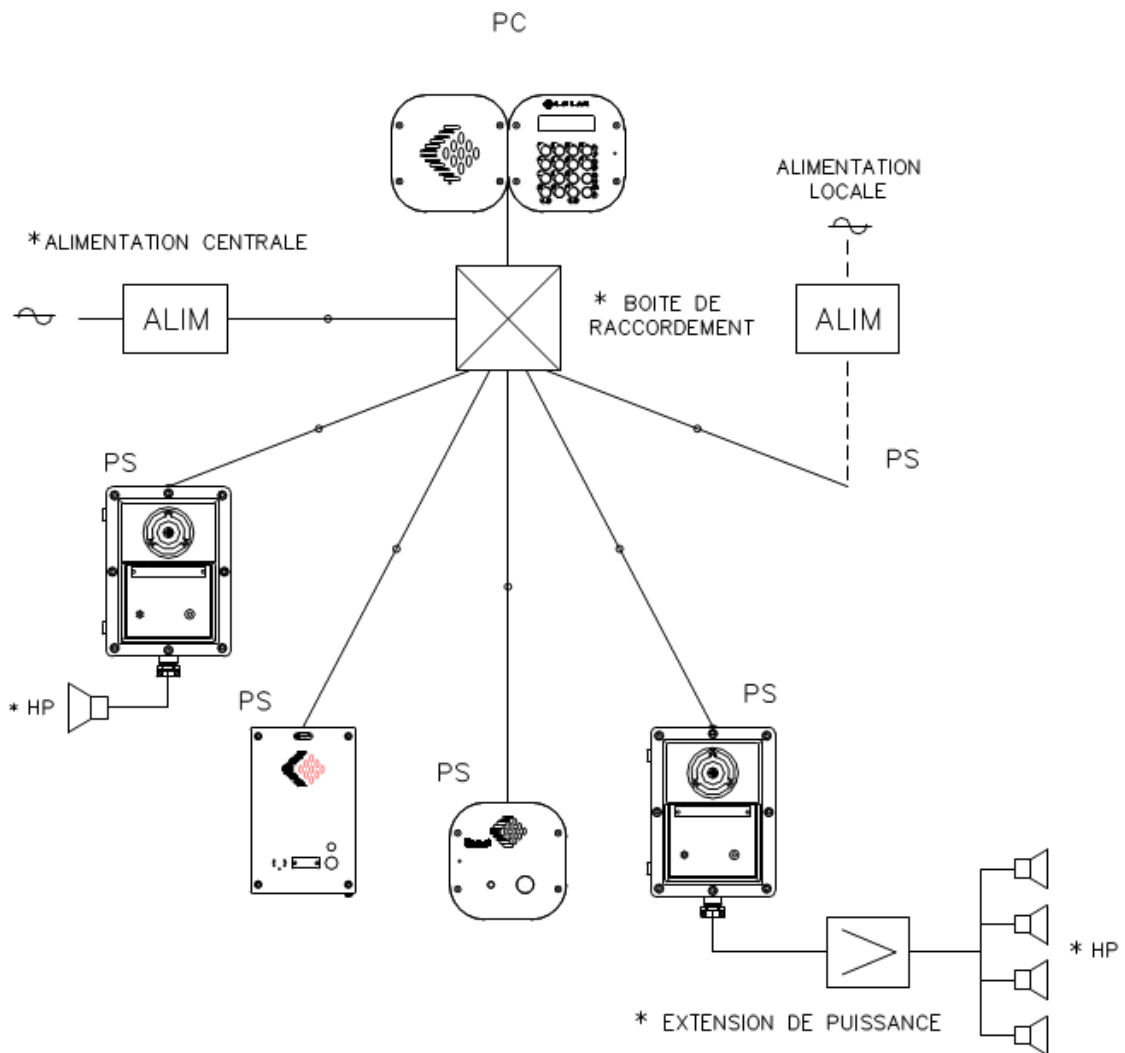
* : Option

PC: Head Station

PS: Secondary Position

——o——Telephone type cable 1 or 2 pairs 9/10th with screen
        1 pair if local power supply
        2 pairs if centralized power supply

2.6 CONNECTION AND CONFIGURATION OF STATIONS

2.6.1 <u>Connection to main or secondary station</u>

Customer connection is made directly on the motherboard Ref: WK119U3G
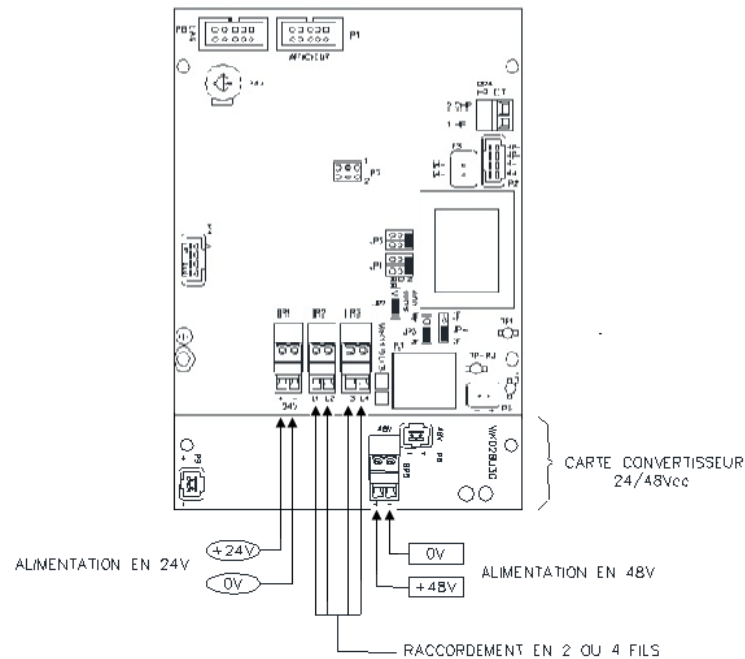
- The choice of 2 wires / 4 wires to separate or not the transmission pair from the reception pair, by jumpers JP3 and JP4 (the stations are delivered in 2 wire position2 F).

- Choice of supply voltage: 24v or 48v via removable connector.

If 24V power supply:

Connect the power supply to the "BR1" connector on the motherboard.

If 48V power supply (optional):

Connect the power supply to the "BR5" connector of the 24/48 converter card

2.6.2 <u>Configuring jumpers on the motherboard</u>

The only hardware configurations on the motherboard are:
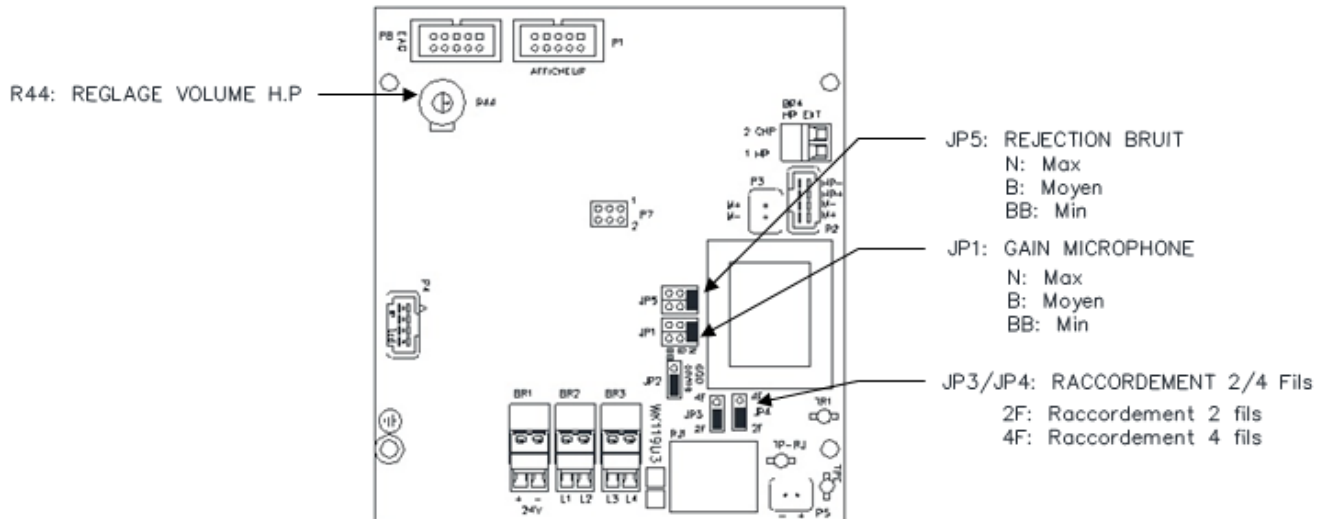
R44: HP volume adjustment using potentiometer R44.

JP5: Noise rejection:
- N: Max = no rejection
- B: Medium = medium rejection (for noisy premises)
- BB: Min = strong rejection (for very noisy premises)

CAUTION: Rejection requires speaking above the noise cutoff level

JP1: Microphone sensitivity:
- N: Max = for non-noisy premises (sensitivity 1 - 2m)
- B: Medium = for noisy premises (sensitivity 0.5m)
- BB: Min = for very noisy premises (sensitivity 0.2m)

JP3 / JP4: choice of 2 wires / 4 wires to separate or not the transmitting pair from the receiving pair. Please note, the stations are delivered in 2 wires (position2 F).

JP2: Addition of a 600ohms in parallel between L1 and L2 on the network:
- 1: 600ohms not active
- 2: 600ohms active

2.6.3 Connection to TCH201/202P type office station

These stations are equipped with a motherboard ref: WK119U3G, customer connection is made to the wall socket provided, connected to the station by a 3m cord, with removable "RJ45" type connectors.

BE CAREFUL WHEN CONNECTING DEPENDING ON THE SUPPLY VOLTAGE USED: 24V or 48V.
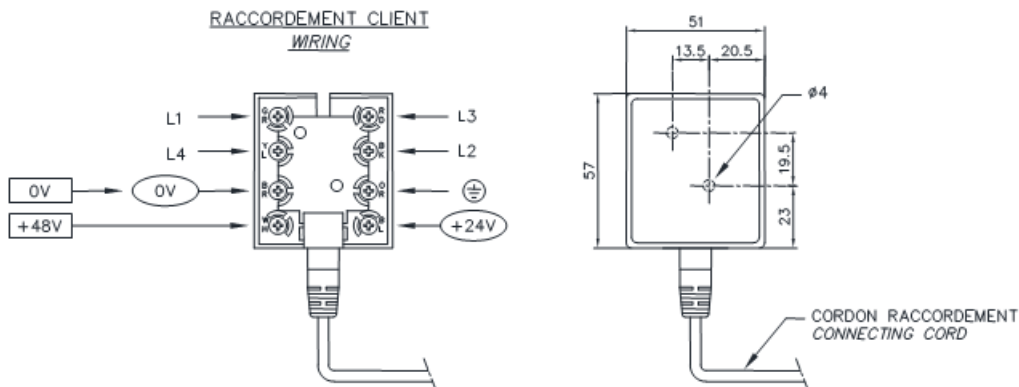
2.7 WK028CRG STRIKE CARD – OPTION

This optional card is integrated into a station and is associated by a ribbon cable with the motherboard. This allows, from the keyboard of a remote station, to remote control its relays via the telephone line.
Its relays can control, for example:

- An electric strike lock
- Lighting
- An amplifier with HP for message broadcasting

The remote control of the first relay is activated by pressing the F2 (conference) key on the keyboard of a remote station, while the second is activated by pressing key 2.
In factory configuration, the remote-control duration is timed at two seconds.
The remote-control duration as well as the operation can be modified in programming (see Programming manual).

NOTE: If the duration has the value 00 the timer is not activated.
In all cases the remote control is cancelled by the end of communication.
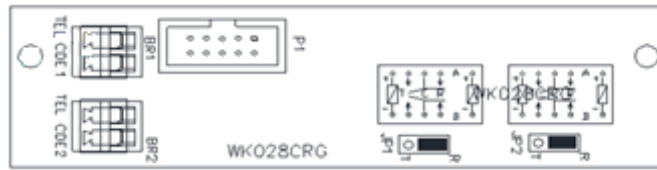
Breaking capacity of relay contact: 60 Volts, 1 Ampere.

JP1, JP2, selection jumper Relay1, Relay 2:

- T contact closed by remote control.
- R contact opened by the remote control.

2.8 CONNECTION OF STATIONS IN A 2-WIRE NETWORK
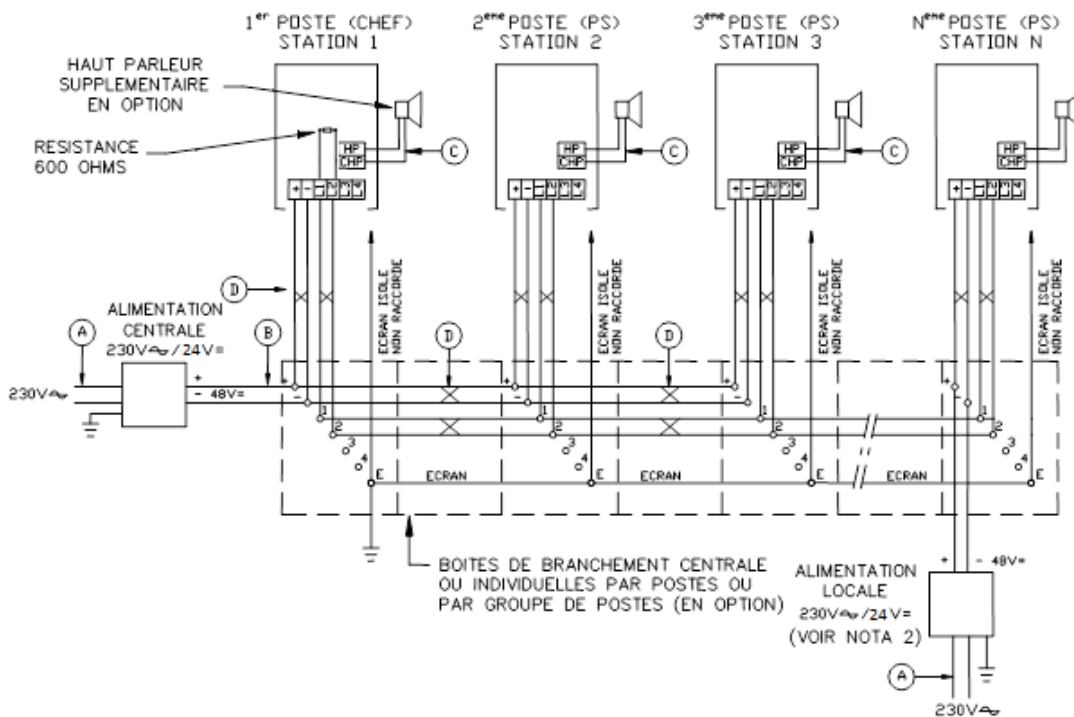
2.9 CONNECTION OF STATIONS IN A 4-WIRE NETWORK
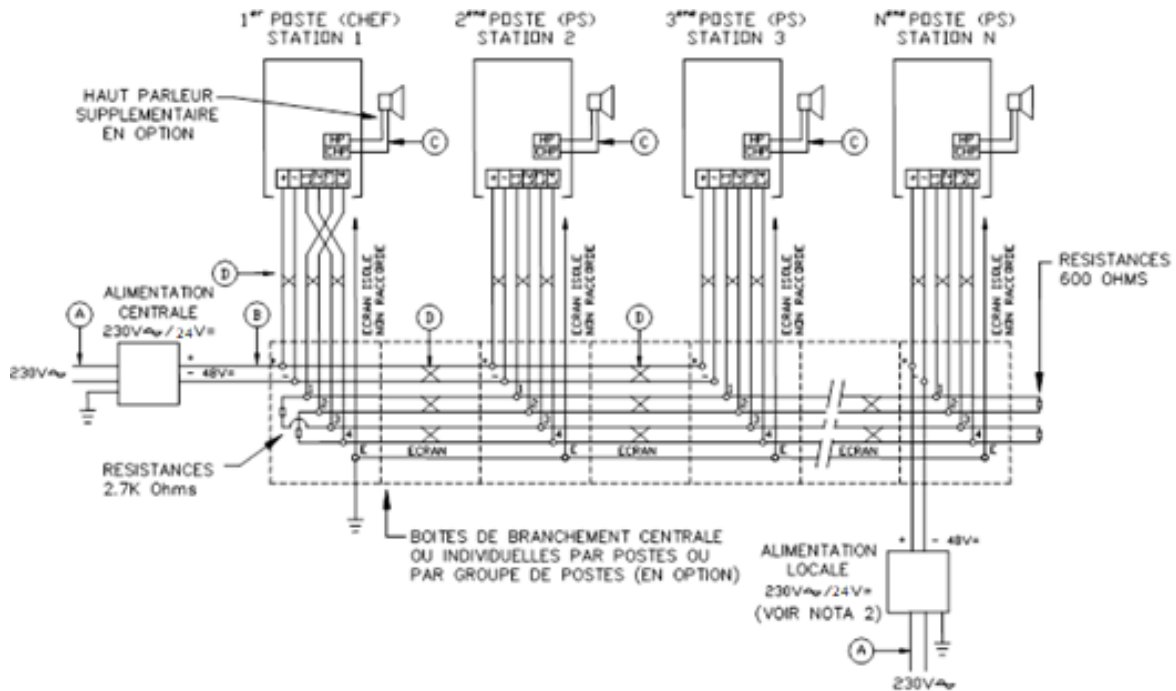
2.10 CABLE CHARACTERISTICS

HAS: 3-conductor cable 2.5mm²

VS: 2-conductor cable 1.5mm²

B: 2-conductor cable 2.5mm²

D: Telephone cable with screen
min. 2 pairs

NOTE 1: The telephone cable screen is only connected to the central connection box and not to the telephones.

NOTE 2: With intermediate connection boxes, the continuity of the screens must be ensured with earthing only at a central point.

NOTE 3: With a local power supply, the stations are only joined together on the pair L1/L2 in a 2-wire network, on L1/L2 and L3/L4 pairs on a 4-wire network.

NOTE 4: In a 4-wire network it is imperative to cross the L1/L2 and L3/L4 pairs at the head level, in relation to the secondary stations.

Example of connecting the power wires:

CABLAGE BUS   CABLAGE ETOILE

n= 4 POSTES
ELOIGNES DE 100m DE L'ALIMENTATION   1 POSTE   1 POSTE

400m
$d = \dfrac{400m}{n = 4} = 100m$

ALIMENTATION — BT DE BRANCHEMENT — BOITES DE BRANCHEMENT CENTRALE OU INDIVIDUELLES — BOITE DE BRANCHEMENT — BOITE DE BRANCHEMENT

d= 400m MAXI
d= 400m MAXI
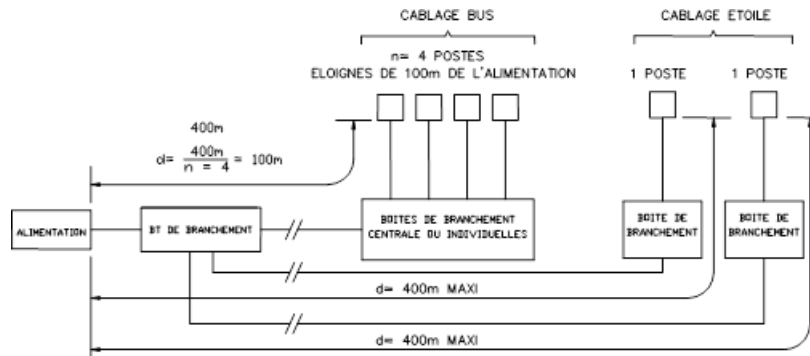
The number of pairs or the section of the 2 wires (in the example above 1 6/10th pair) supply + and - is a function of:

-   The distance between the power supply and the post
-   The number of stations connected to the same pair in parallel
-   The consumption of each station (0.2 to 0.5A)

NOTE: For large distances it is preferable to put several power supplies distributed along the bus cable or one power supply at each station.

2.11 POWER ON

After careful checking of the connection of the stations:

1° Power on the head station, which upon initialization displays the name and version of the program, then 2 seconds later, the serial number of the station, then stabilizes in the rest position with the call number of the position and the type of program.

2° Connect the rest of the stations, ensuring that they are correctly powered. Then move on to the programming stage, to be able to establish connections and adjust the sound levels of each station. The impedance of a station is greater than 50K Ohms but has an ohmic resistance of 1.5K Ohms in 2 wires and 3K Ohms in 4 wires.

3. <u>FUNCTIONING</u>

3.1 DESCRIPTION OF THE KEYBOARD AND DISPLAY
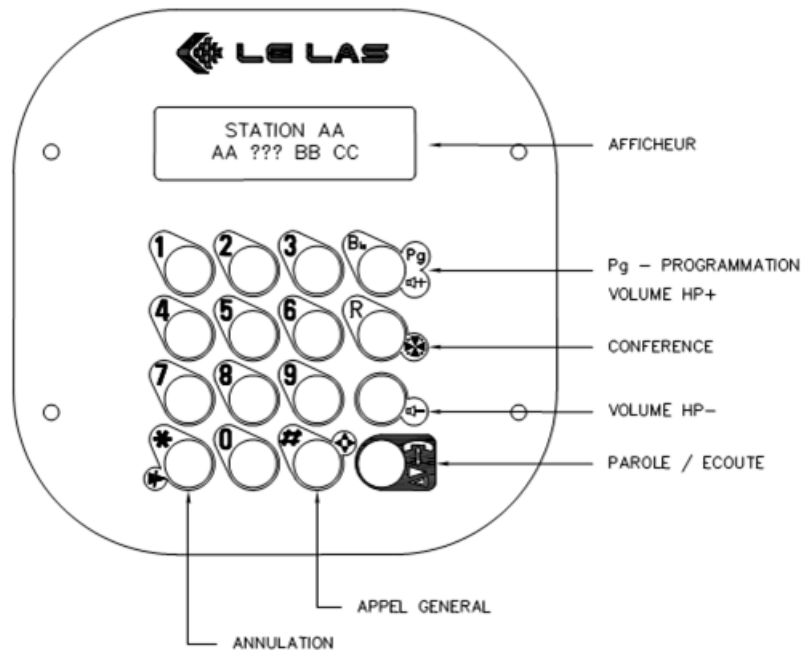
PLEASE NOTE: the keyboard screen printing may vary in certain workstation versions.

Meaning of the inscriptions on the display:

AA: the local extension number
BB: the number of the remote station (called)
CC: number of stations in the queue (idle, program type)
???:   – – –   Free network
             XXX   Network busy
             [–]   Post dismissed
             0 – 0   Post invalidated
             <<<   Incoming call
             >>>   Outgoing call
             >>–   General outgoing call
             –<<   General incoming call
             >– –   Conference (initiator) in speech
             – –<   Conference (initiator) listening
             –   Network in conference (station not connected)
             >–Post in word
             –<   Listening station
             –**X**–   Undoing the last action
             X –   Cancel last station in queue

TLH402E VERSION

NFC119*U3G

\\\RR_PC\Doc LELAS\NFC
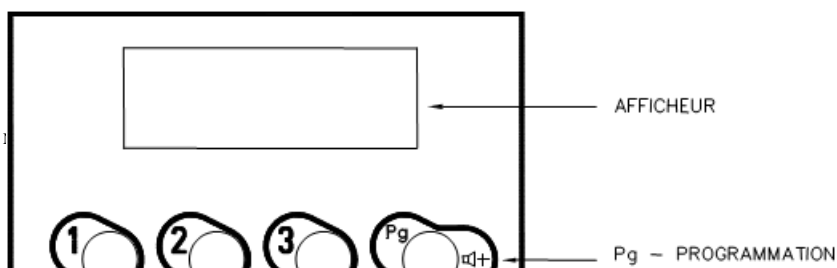
TCH250SS VERSION WITHOUT DISPLAY
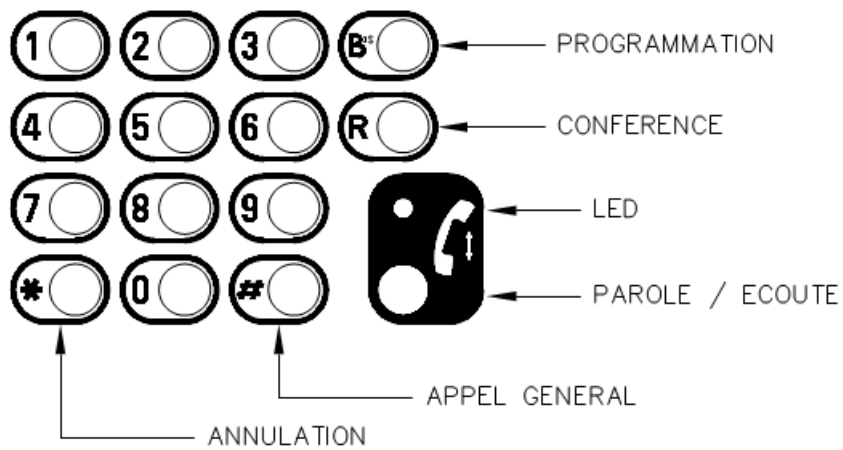
PLEASE NOTE: The PROGRAMMING key is the "REDIAL" key.

3.2 MANAGER STATION (KEYBOARD STATION)

Note: the arrangement of the keys is different in the TLH214 type explosion-proof
        model but their notation and meaning remain the same.

3.2.1 General Call✦

Priority call on group call or individual link.
Press the general call key✦to initiate the call and hold it down for the duration of
your monologue. When the button is released, the general call will end.
Please note, if your extension is configured in 100 directions, precede a long press on
the general call key with a short press on the same key.

3.2.2 Calling an extension group

Briefly press the number corresponding to the group call you want to make (keys 1
to 8), then press and hold the general call key✦throughout your monologue. When
the latter is released, your group call will end.

3.2.3 Broadcast messages - OPTION

Enter the number corresponding to the message you want to broadcast (keys 1 to 9),
then briefly press the Talk/Listen key◁. Your message will then be broadcast in a
loop to all stations. "Broadcasting" + the number of the chosen message will be
displayed on your screen. To end the broadcast, press the Cancel button⊩.

3.2.4 Conference✳

This function is started by pressing the conference key, which opens the network to
all stations and therefore blocks the network. Only a general call can be made and
take control of a conference.
Once the conference has started, each participant can enter it by pressing the speak
button. Once in it, each user must press the talk key to speak and release to listen. If
a participant wishes to leave the conference, all they have to do is press the CANCEL
key.⊩.
Please note, only the station which initiated the conference can put a definitive end
to it, by using its cancellation key, and thus free the network.
NOTE: the CONFERENCE key also has the function, during a connection with a
        secondary station equipped with the strike card option, of activating relay 1
        of the strike card for the pre-programmed duration.

3.2.5 Calling an extension

Simply enter the number of the extension you wish to call, one number for networks of 9 extensions, two for networks of more than ten extensions.
On the display, the numbers of the calling station and the called station connected by three arrows pointing in the direction of the call are indicated.
The caller can abandon the call by pressing the cancel key ▌►.

3.2.6 **Establishing communication after calling to an extension**

This connection can be achieved in three different ways:

- The called extension is programmed for "n" rings (reminder: parameter 11, see programming instructions), the extension will ring "n" times before connecting automatically. However, by pressing its call key, or talk/listen key ◁ for a keypad station, or by picking up the handset, he will immediately pick up the line.

- The called extension is programmed to ring at zero, in this case the extension immediately connects, without ringing and without any manipulation.

- The called extension is programmed for 99 rings, in this case, the extension rings until the correspondent responds manually or is abandoned by the caller.

When the connection is established, the display shows the numbers of the calling station and the called station linked by an arrow.

3.2.7 **Establishing communication after calling an extension**

During the call ringing, the head station can:

- Answer the call by pressing the talk/listen key ◁, or by picking up the handset.

- If several calls are in progress (storing several calls recorded in chronological order) the operator can answer any extension in the queue (or call any extension on the network) by entering its number on the keypad.

3.2.8 **Conversation**

The arrow connecting the two extension numbers on the display indicates whether you are talking or listening. In the PG3 program, the calling keypad station directs the conversation (control).

To speak, he presses the TALK/LISTEN key◁, the interlocutor therefore automatically finds himself listening. Conversely, to listen, he releases the button and the called friend then speaks.

Please note, in the event of a call between two keypad stations in the PG2 program, the called station can resume control during its TALK phase.

Press to speak, release to listen.

Please note, in the PG1 program, the notion of piloting is removed.
Each position must use the TALK button to talk.
Press to speak, release to listen.

In the PG3 program, the head station is equipped with a queue which stores the numbers of incoming calls from secondary stations.

Each incoming call is signalled by a short tone.

Pressing the CONFERENCE key during a connection with a secondary station equipped with the striker card option, activates the first relay on the card for the pre-programmed duration. Likewise, pressing key 2 activates the second relay.

3.2.9 SPECIAL FUNCTIONS

In a "PG 3" type network, with two head stations connected in parallel, you can transfer calls from a main head station F1 to an associated head station F2 by dialing the code 0 or 00 (depending on 10 or 100 directions).

The F1 head is then inactive, its display indicates: [─] and that of leader F2 indicates: ---.

At all times, call recovery by F1 is done in the same way as transfer.

When head F1 is active its display indicates: --- and head F2 indicates: 0─0.

In addition to the functions described above, automatic transfer from F1 to F2 is carried out if the line taken after "n" rings programming is implemented.

3.3 SECONDARY STATION (STATION HAS ONE BUTTON)

3.3.1 To call the head station

Press the call button

The light flashes slowly while the call is being made with a reassurance tone, or quickly if the line is busy.

If there is no answer, the call is automatically repeated after ten seconds.

After a new cycle of 10 seconds without response, the call is abandoned but remains stored on the master station. The light goes out.

3.3.2 <u>To answer a call</u>

While ringing, press the call key, or pick up the handset. Communication is established.

The line can be picked up automatically after "n" rings (programmed as needed).

3.3.3 <u>Conversation</u>

For this type of position, control is entirely provided by the head station => hands-free conversation.

3.3.4 <u>Conference</u>

The conference cannot be implemented by a secondary station. When a head station has initiated the conference (in principle preceded by a general call to notify the participants), the secondary station light is on steady.

To "enter the conference" briefly press the call key. Then, press that same key to speak, and release to listen.

3.4 SOUND POWER ADJUSTMENT

The loudspeaker power is adjusted:

- By volume potentiometer R44 on the motherboard for the other positions.

- By parameter 14 for the general volume, then by parameter 16 for the ringer volume, and by parameter 18 for the volume when receiving general calls and group calls (see Programming Manual).

For stations equipped with a keyboard, it is possible to temporarily modify its volume during a connection with another station:

- Each press of the HP+ button increases the sound level by 6 dB to the maximum.

- Each press of the HP- button decreases the sound level by 6 dB to the minimum.

Please note, this setting is only valid for the current communication. Once this is completed, the station will automatically return to its pre-programmed value in parameter 14 (see Programming Manual).

4. <u>BASIC PROGRAMMING</u>

Unless specially ordered, secondary stations are delivered in a PG3 type program and call number 01.

It is therefore mandatory to program at least the call number of each extension and the type of program (if different from 3). This way your network becomes operational in standard mode.

For changes to factory-defined operation or special functions, read the following chapters carefully.

4.1 OPENING A PROGRAMMING POSITION

To enter programming you must, in order, carry out the following steps:

- Briefly press the Pg key.

- Enter the access code (parameters 30 and 31, see Programming Manual), which from the factory is: 1234.
  Attention: you will only have 5 seconds to enter the code. Additionally, once you officially enter programming, it will block your entire network until you terminate it.

- Then enter the number of the extension to program. There are two possible solutions for this:

  - Using the last four digits of the serial number on the station nameplate.

  - Either by using 00 followed by the telephone number of the extension. Please note, use only in the case of a network already installed, that is to say when you are sure that none of the extensions have the same call number. Example, to enter programming in the extension with the call number 36, type 0036. Please note, an exception exists in the type 3 network, where the head extension is called F1, in this case type: 00, # (for the character F), then 1.

  With the button ▮▶(Cancel) you can go back to correct the entry.

Attention: The absence of response from the station to be programmed causes programming to be aborted and the display to return to its rest state. In this case, check the number of the station you want to program and possibly its connection. After the access code, the number of the extension to be programmed must be entered within 15 seconds maximum to avoid abandonment

---

- While programming a station, to make the entry clearer, you can briefly press the Pg key to erase the contents of the display.

- On a station open for programming, several successive parameter modifications can be made.

- To exit programming a station, hold down the Pg key for 3 seconds.

4.2 PROGRAMMING THE CALL NUMBER OF AN EXTENSION (M0)

After opening the station in programming, type the following combination:

*	5	0	0	0	*	<N>	<N>	*

<N> <N> extension number from 01 to 98

In programming a type 3 network, the leader's number has a different programming because it must be called F1, so in this case type the following combination:

*	5	0	0	0	*	#	1	5	#	1	*

Where #1 5 # represents the character F

4.3 PROGRAMMINGTHE D KEYCALLING SECONDARY STATIONS (M1)

All secondary stations are delivered from the factory with call memory M1 (chief number = F1) already programmed.
However, if this programming must be modified (case of a mesh network, for example) after opening the station in programming, enter the following combination:

*	5	0	0	<M>	*	#	1	5	#	<C>	*

< M > memory number assigned to call buttons
Where #1 5 # represents the character F, and <C> the leader number from 1 to 8

< M1 > memory number assigned to button 1, < M5 > to button 2…

4.4 PROGRAMMING THE PROGRAM TYPE

After opening the station in programming, type the following combination:

*	1	0	0	<T>	*

Where <T> is program type 1,2,3.
The factory default program is 3 (unless special request)

4.5 PROGRAMMING THE NUMBER OF RINGS BEFORE AUTOMATIC ANSWER

At the factory, the extension is programmed to answer automatically after 3 rings. After opening the station in programming, to change this number, type:

*	1	1	<N>	<N>	*

<NN> = 00 to 99
< NN > = 03 in Factory (automatic answer after 3 rings or by pressing the button)
If < NN > = 00 automatic response without ringing.
If < NN > = 99 without automatic response (response only by pressing the button), recommended value for head stations.

NOTE: this parameter is also used to indicate the number of rings before transfer if this function is validated by parameter 24.

4.6 ADJUSTING THE RINGER VOLUME

After opening the station in programming, type the following combination:

*	1	6	< Vs >	<Vs>	*

< Vs > Volume from 00 to 10 (factory setting = 00 max) we attenuate by 4dB with every step

NOTE: To change the ringtone volume as the ringtone sounds, you can activate the evolving ringtone setting (parameter 28). The volume will therefore start at minimum and increase every 3 rings until reaching its final level defined in parameter 16.

4.7 SPEAKER VOLUME ADJUSTMENT

Here, the value to be programmed corresponds to the attenuation expressed as a multiple of 6db (from 00 to 10). After opening the station in programming, type the following combination:

*	1	4	<Vh>	<Vh>	*

<Vh><Vh> = 00 to 10

< Vh><Vh > = 00 at factory: maximum volume

< Vh><Vh > =10: the volume is muted

<u>Example</u>: for an attenuation of -60dB

*	1	4	<1>	<0>	*

4.8 PROGRAMMING THE MAXIMUM DURATION. CONVERSATION

To avoid blocking one or more stations following an accidental code disturbance (phony and logic command codes circulate together), it is useful to introduce a limitation on the duration of the station online, which in the in the event of such an accident helps the system return to rest.

At the factory, the max. conversation time is scheduled for 10 minutes.

After opening the station in programming, to change this value, type:

*	1	2	<D>	<D>	*

< DD > = 00 to 99 minutes

< DD > = 00, the duration is indefinite, and the extension has no conversation limit

4.9 PROGRAMMING EXAMPLES

1°/ You receive a secondary intercom station and want to install it in an existing network including an F1 head station and five secondary stations numbered 01 to 05.

This extension has the serial number 9871457, it will be numbered 09 and must answer automatically without ringing.

On the head station, type in order:

Pg	Opening the sequence (short press)
1234	Access code
1457	Last 4 digits of serial number
5000	Memory opening M0

09*	Position number and closure of M0
1100	Auto answer without ringing
Pg	Closing the sequence (press for 3 seconds)

2°/ In this existing network, you want to reduce the ringing volume of the master station. On the head station, type in order:

Pg	Opening the sequence (short press)
1234	Access code
00#1	Position number (F1)
1609	Minimum ring volume
Pg	Closing the sequence (press for 3 seconds)

3°/ To program the stations of a new network, we look for the last 4 digits of the serial numbers of each of them and we type each time Pg, 1234, Serial number, followed by the programming of the memory M0 and possibly other parameters useful for network operation.

During programming, various codes (other than those you enter) appear on the display. These are codes exchanged by the connected devices which are used to secure communications.

4.10 ADJUSTING THE VOLUME GENERAL & GROUP CALL

After opening the station in programming, type the following combination:

*	1	8	< Vs >	<Vs>	*

< Vs > Volume from 00 to 10 (factory setting = 0 max) we attenuate by 6dB at each step.

4.11 NETWORK TYPE AND CARRY/FORWARD

To implement these special functions: after opening the station in programming (see § 3.2), type the following combination:

*	2	4	0	<F>	*

< F > = 0 Configuration for compatibility with old UNIVERSAL network.
< F > = 2 Standard configuration (factory) UNIVERSAL "UNI3G" type.
< F > = 3 Report/transfer configuration
< F > = 6 Configuration for any network using a 5-channel RACK.

NOTE: the transfer function is associated with parameter 11 (number of rings before answering).

4.12 STRIKE RELAY

To program the closing time of the remote-control relay, after opening the station in programming, enter the following combination:

*	2	5	<T>	<T>	*

Where < T >< T> from 00 to 93 = relay closing time, in seconds. = 02 by default.

< T >< T > = 93	93 seconds closed.
< T >< T > = 94	Strike relay closed on buzzer.
<T><T> = 95	Relay closed on ringing and during reception of an AG
< T >< T > = 96	Relay closed during the issuance of an AG
< T >< T > = 97	Relay closed while receiving a GA

$< T ><T > = 98$ Relay closed during the issuance and reception of an AG

$<T><T> = 99$ Relay closed during the entire communication (except during the transmission of an AG outside of a communication)

NOTE: If the station has a 028CR2G card, use parameter *25xx* to program the first relay and parameter *23xx* for the second. *23xx* behaves and is programmed in exactly the same way as *25xx*.

4.13 CHANGING THE ACCESS CODE

After opening the station in programming, type the following combinations:

*	3	0	<M>	<C>	*

*	3	1	<D>	<U>	*

Where <M><C><D><U> represent the 4 mandatory digits of the new access code, <M> being non-zero.

WARNING: Losing the access code makes entry into programming impossible.

4.14 1- OR 2-DIGIT DIALING

After opening the station in programming, type the following combinations:

For 1 Digit numbering

*	7	0	0	0	*

For 2 Digit dialing

*	7	0	0	1	*

4.15 RESET

If you have any doubts when programming a station, you can trigger a reset sequence, which will initialize the station with the factory settings. To do this, after opening the station in programming (see § 3.2), type the following combination:

*	9	8	0	0	*

WARNING: this initialization will destroy all the modifications you have already programmed.

If, however, you want to reboot the entire network:

On a chef station at rest and not programmed, press the Cancel button for 5 seconds ⊪►.

If you have a station blocked because you have done incorrect programming, or for any other reason:

It is possible to start a station by returning to factory configuration. To do this, disconnect the station concerned, then reconnect it, while keeping a button on the station pressed. You can hold any button, and this is possible on a master station, as well as on a secondary station.

When the station starts:

- On a secondary station: Hold the button until the front LED starts flashing. At this point, release the button for 1 second then press it again. The station will then start with its factory configurations.

- On a chef station: Hold the button until the screen displays "Press a key to factory reset". At this point, release the button you were holding for a second and press it again. The station will then start with its factory configurations.

5. PROGRAMMING MANUAL

The intercom can be configured, locally or remotely, according to the user's needs using programming codes. In addition, remote control codes allow specific actions to be initiated. Generally speaking, all these codes are 4 digits framed by 2 stars (*), with the exception of call number memories.

These functions are accessible by a prior "access code" which can be personalized by the user.

To all valid codes received, the intercom responds with an acknowledgment of receipt corresponding to the code sent (see description later).

ATTENTION:

All programming codes are understood by the intercom, but some can only be used if it is equipped with the corresponding hardware or software options. For example: self-test, strike remote control, day/night buzzer, multi-dial, etc...

All remote-control codes are understood by the station; however, some are only of interest if they are used by a remote maintenance station, others are for use by the manufacturer.

Upon delivery, the INTERPHONE is equipped with a "factory" configuration.

List of programming codes

When programming the codes must always be followed by 2 digits representing the size and always framed by 2 stars (*).

Ex: program 3 rings before answering, *1103*

•Programming code Status:

l0xx	Hardware configuration

Factory programming xx = 03		Half-duplex & mesh star network (PG3)
	xx = 01	Total intercom (PG1)
	xx = 02	Half-duplex intercom (PG2)

Acknowledgment of receipt of the position: *

•Ringtone programming code:

llxx	Number of ringtones before answering

Factory programming	xx = 03	3 Rings before answering
Of	xx = 00	No ringing before answering
Until	xx = 98	98 Rings before answering
	xx = 99	The extension does not pick up on ringtones

Acknowledgment of receipt of the position: *

• TOnLine programming code:

| *l2xx* | Talk time before auto hang up |

Factory programming xx = 10	10 minutes before auto hang up
From xx = 00	The extension does not hang up automatically
Up to xx = 99	99 minutes before auto hang up

Acknowledgment of receipt of the position: *

Note: each press of a key, or reception of a DTMF code resets the timer to the pre-programmed value. 10 seconds before exhaustion, audible beeps notify the operator of the end of the connection.

• Vol HP programming code:

| *l4xx* | Attenuation (in dB) of the signal in the HP in steps of 1 attenuation 6dB |

| Factory programming xx = 00 | Maximum Volume |
| Up to xx = 10 | Minimum Volume |

Acknowledgment of receipt of the position: *

• Mod Son programming code (from revision 572):

| *15xx* | Choosing a ringtone type |

Factory programming xx = 01
| From xx = 01 | First ring type |
| Until xx = 03 | Third type of ringtone |
Acknowledgment of receipt of the position: *

• Vol Son programming code:

	l6xx	Ring volume attenuation in 4dB steps

From xx = 00   Volume Maximum
Up to factory xx = 10   Volume Minimum

Acknowledgment of receipt of the position: *

• Vol AG programming code:

	l8xx	General and group call volume in attenuation in steps of 6dB

From xx = 00   Maximum Volume
Up to xx = 10   Volume Minimum

Acknowledgment of receipt of the position: *

• Status programming code: Boolean notation

	24xx	Special configurations

Factory programming xx = 02   NewUni

xx = 00   OldUni
xx = 01   Postponement/Transfer
xx = 04   elongated AG rack

Acknowledgment of receipt of the position: *

• Striker programming code: REMOTE CONTROL OPTION SPOILS

	25xx	Relay 1 closing time remote control after receiving the code (on a secondary having a 028CRG or a 028CR2G).

	23xx	Relay closing time **2** of remote control after receiving the code (on a secondary having a 028CR2G).

Factory programming xx = 02   2 seconds of closing

From xx = 00	No closure
At xx = 93	93s closing
xx = 94	Follow the ringtone
xx = 95	Follows the ringtone + the AG Rec
xx = 96	Relay closed on AG Emitted
xx = 97	Relay closed on AG Received
xx = 98	Relay closed on AG Transmitted and Received
xx = 99	Relay closed on line (except AG Emi)

Acknowledgment of receipt of the position: *

Note: the relay card is automatically recognized by the station, in the absence of it this code has no effect. In all cases, returning the intercom to rest places the relay at rest.

•Cson programming code:

	26xx	REMOTE CONTROL OPTION
Output		3V3

Factory programming	xx = 00	Output always at 0V
	xx = 01	Oscillates during ringing
	xx = 02	Oscillates during reception of an AG
	xx = 04	Oscillates during ringing and reception of an AG
	xx = 08	Fixed at 3V3 during a call

•S24V programming code:

	27xx	REMOTE CONTROL OPTION
Output		24V

Factory programming	xx = 00	Output always at 0V
	xx = 01	Oscillates during ringing
	xx = 02	Oscillates during reception of an AG
	xx = 04	Oscillates during ringing and reception of an AG
	xx = 08	Fixed at 24V during communication

•EvolSonn programming code:

28xx	Enabling scalable ringtone

Factory programming   xx = 00   Scalable ringtone disabled
                                   xx = 01   Scalable ringtone enabled

•MCAcces programming code:

30xx	Thousand and hundred of **access code** user

Factory programming xx = 12   12
From xx = 10   Minimum value
Up to xx = 99   Maximum value

Acknowledgment of receipt of the position: *

Note: thousands must never have the value 0 (zero).

•DUAcces programming code:

31xx	Ten and unit of **access code** user

Factory programming xx = 34   34
From xx = 00   Minimum value
Up to xx = 99   Maximum value

Acknowledgment of receipt of the position: *

Note: the user access code must have 4 digits, it can take
        for value from 1000 to 9999. It is therefore programmed in 2 times (30xx and 3lxx).

ATTENTION:
The user access code must never start with 0 (zero) and must not be lost, otherwise access to programming becomes impossible*

•Programming code Number of directions:

70 xx

Factory programming xx = 00   10 directions

xx = 00   10 directions
xx = 01   100 directions

Acknowledgment of receipt of the position: *xx*

Manufacturer Status:

72xx   Byte constructor

Factory programming xx = ??   according to serial number

From xx = 01   thousands and hundreds
Up to xx = 99   of the serial number

73xx   Byte constructor

Factory programming xx = ??   according to serial number

From xx = 00   Tens and units
Up to xx = 99   of the serial number

9074   Revision number, accessible
read only

Programming of call number memories.

The intercom has 10 16-digit memories, they are numbered from MO to M9. In a station with button(s), from 1 to 8, only memories M1 to M8 are accessible.
The MO memory is reserved for the intercom identifier. Memory M9 is assigned to group numbers.

•Memory programming code:

$$*50xx*yy*$$

xx = 00 to 08	Depending on the memory chosen
xx = 10 to 73	For keyboard memories extension.

yy = number of the intercom to call

Acknowledgment of receipt of the position: *yy*   Number registered by the post

Factory programming: M0 = 01, M1 = F1, M2 = F2, M3 = F3, M4 = F4, M5 = F5, M6 = F6, M7 = F7, M8 = F8, M9 = 1A000000 (i.e. group 1), to set the A, in M9, synonymous with AG issue authorization type #13#.

Note: To properly program your group calls see page 8.
Note: the character F is entered as #15#, and for the character A, #13#.
Note: For WK119CL8 expansion cards, put jumper JP1 on C1 for the first card, you can then assign the 8 memory buttons with codes ranging from 5010 to 5017. For the second card, put JP1 on C2, you can then program the eight buttons with codes ranging from 5018 to 5025. And so on with the following expansion cards (up to eight cards).

Physical position memory button Manufacturer:

Warning: enter programming with the manufacturer code!

- Memory code:
                 5099

- Factory configuration:
                 *5099*123456789*0#ABDC

- The *, #, A, B, C and D keys are entered using the codes:

  * = #11# (Key: Cancel)
  # = #12# (Key: General call)
  A = #13# (Key: programming entry / Volume +)
  B = #14# (Key: Conference)
  C = #15# (Key: Speak/Listen)
  D = #10# (Key: Volume -)

- Validate the programming with a *.

- Example:

To reverse the # buttons, either AG and button 1, type:

5099#12#23456789#11#01#13##14##10##15#*

PARAMETERS AND MEMORIES READING CODES

The majority of these codes, to be used, require the presence of a monitoring station or equipment capable of materializing, on a display, the DTMF codes circulating on the telephone line.

Several families of codes identified by different prefixes exist:

- Reading numbers from memory   prefix 60
- Reading station configurations   prefix 90
- Erase remote controls   prefix 98
- Special remote controls   prefix 99

•Memories reading code:

60xx	Reading memory xx
xx = 00	Position number itself
xx = 01 to 09	Memory for the 9 buttons of the main keyboard
xx = 10 to 73	For keyboard memories extension.
xx = 99	Memory containing position keyboard button physics main

Acknowledgment of receipt of the position: *yy*   If the memory has previously been

completed. With yy representing the number in memory

**   If the memory is empty

• Reading code Configuration:

                  90xx   Reading one of the station parameters

        xx = number of the parameter whose value we wish to know

Acknowledgment of receipt of the position: *xx*   Value contained in the parameter

• Remote control code Clearing:

98xx	
xx=00	Total surrender of the position in factory configuration
xx=02	Erasing memories from M0 to M9
xx=04	Clearing parameters except:

- Steering type
- Serial number

<u>Reminder</u>

- All access to programming or remote controls is subject to the 4-digit user access code. When the item is delivered this code is: 1234.

- The call number of an extension is contained in memory M0.

- During programming, if in doubt when entering a code, press the Pg key and resume your last programming.

- In memory programming, only the numeric keys 0 to 9 can be recorded directly, entering the character F is carried out by #15#.

6. <u>INTERVIEW</u>

Intercoms do not need a lot of maintenance to stay in excellent working condition. Perform maintenance below if necessary.

OUTSIDE

- Clean with a soft cloth dampened with water, excluding all solvents.

- For waterproof stations, if you use a high-pressure cleaner (preferably 50 bars), maintain a distance of approximately 1.50m between the station and the lance.

- Make sure that the fixing screws and cable glands are tight.

<u>For explosion-proof stations:</u>

- For better sealing, ensure that the joint surfaces are well greased (with an oxidation-resistant grease).

INSIDE

- The interior of the station does not need maintenance. Do not pour liquid into the post.

- Check the condition of the seals and that they are properly installed.

<u>NOTES</u>

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