## (9) olmar

Cód. 50121240

## Audio door entry system <br> 2 wires <br> without polarity

2PLUS NEXA
installation manual

First of all we would like to thank and congratulate you for the purchase of this product manufactured by G olmar.
The commitment to reach the satisfaction of our customers is stated through the ISO -9001 Certification and for the manufacturing of products like this one.

Its advanced technology and exacting quality control will do that customers and users enjoy with the legion of features this system offers. To obtain the maximum profit of these features and a properly wired installation, we kindly recommend you to expend a few minutes of your time to read this manual.

## INDEX

Introduction ..... 53
Index. ..... 53
Starting recommendations ..... 53
Safety precautions ..... 54
System characteristics ..... 54
System operation ..... 55
Door panel description ..... 56
Modulesdescription
57
Sound module EL620/2Plus
Push buttons module EL610D ..... 58
Doorpanel
59
Embedding boxpositioning
Embedding boxinstallation ..... 59-60
Assembly electronic modules ..... 60
Hold the frame ..... 61
Push buttons connection ..... 61-62
Push button coding ..... 62
Sound module configuration ..... 63
Self-testing Leds ..... 63
Final adjustments ..... 64
Close the frame ..... 64
Placing the nameplate labels.... ..... 64
Door panel assembly ..... 65
Close the door panel. ..... 65
Power supply installation ..... 66
Lock release installation ..... 66
Telephones T-7720, T-7722VD \& T-7822VD
67
Description
Function push button. ..... 67
JP3 jumper config. (onlyT-7822VD). ..... 68
Fixing the telephone ..... 68
Programming ..... 69
0 ptional connections
70
Door bell push button
External lock release activation ..... 70
Additional telephone or call repeater. ..... 70
Auxiliary devices activation ..... 71
G arage door release ..... 72
Wiring diagrams
73-74
With d.c lock release.
75-76
With a.c lock release / TF104
77
77
Troubleshooting hints
Troubleshooting hints
78
78
Notes
Notes ..... 79

## STARTING RECO MMENDATIO NS

[^0]$\llcorner\Rightarrow$ Install or modify the equipment without the power connected.
$\Leftrightarrow$ The installation and handling of these equipments must be performed by authorised personnel.
$\Leftrightarrow$ The entire installation mustbe atleast 40 cm . away from anyother installation.
$\Leftrightarrow$ With power supply:
e Do notuse excessive force when tightening the connector screws.
© Install the power supply in a dry and protected place withoutrisk of drip or water projections.
© Avoid to place itnear to heating sources, in dusty locations or smoky enviroments.
© Do notblock ventilation holes of the unitso that air can circulate freely.
« To avoid damage, the power supply has to be firmly fixed.
© To avoid an electrical shock, neither remove the protection cover nor handle the connected wire in the terminals.
$\Leftrightarrow$ With telephones, SAR-12/24 relayand S-45 call repeater:
e Do notuse excessive force when tightening the connector screws.
© Install the power supply in a dryand protected place withoutrisk of drip or water projections.
« Avoid to place itnear to heating sources, in dusty locations or smoky enviroments.
e Do notblock ventilation holes of the equipments so that air can circulate freely.
$\mathrm{L} \Rightarrow$ Do always follow the enclosed information.

## SYSTEM CHARACTERISTICS

```
\(\Rightarrow\) Audio door entry system with simplified installation (2-wire bus withouth polarity).
\(\Leftrightarrow\) Up to 3 access door pannels being notnecessary the use of switching units.
    (Up to 2 access door pannels if there is a digital converterCD-2PLUS in the building or backbone).
\(\Leftrightarrow\) Up to 120 telephonesper instalation withoutusing converters.
\(\Leftrightarrow\) Up to 120 apartments with door pannels with push buttons and 120 apartments with coded panel (being
    necessary the use of digital converterCD-2PLUS).
\(\leadsto\) Acoustic busy channel and call acknowledgementsignals.
\(c \Rightarrow\) M aximum distance between door panels: 50 m .
\(\Leftrightarrow\) M aximum distance between the remote door pannel and furthesttelephone: 100 m .
\(\Rightarrow\) M aximum length of all the bus wiring in the installation: 600 m .
\(c\) Timed door opening for 3 seconds.
\(c \Rightarrow\) a.c. or d.c. lock release operated by relay.
\(\Leftrightarrow \operatorname{In}\) T-7720 telephones:
    © Total private conversations.
    © Up to 1 additional telephone in every apartment.
    © Inputfor external door bell push button.
\(\Leftrightarrow\) In T7722VD and T7822VD telephones have, besides the previous features:
    © Auxiliary push button with 2 possible functions:
    * Relayactivation SAR-2PLUS.
    * Voltage-free contact(I máx: 40mA).
    © Up to 2 additional telephones in every apartment (only with T-7822VD).
    © Call volume regulation with three positions: maximum, medium and disconnection.
    « Different call tones which identify the call procedure (main or secondary door panel or a call from the
        landing).
    c C all repeater S-45 output.
\(\Leftrightarrow\) Itallows to install a porter' sexchange (being necessary the use of digital converter CD-2PLUS).
```

To make a call, the visitor should press the push button corresponding to the apartmenthe/ she wants to contact. Some acoustic tones will be heard confirming the call is in progress. At this moment the call is received in the dwelling. During the call the visitor can correct his/her call by pressing the push button corresponding to the desired apartment, cancelling the original call.
In systems with several access doors, the other(s) door panel(s) will be automatically disconnected: if a visitor tries to call from a different door pannel, an acoustic tone will be heard to warn him/her that the system is engaged.
$\Rightarrow$ The call sounds over 45 seconds. If it is notanswered in 45 seconds, then the channel will be disengaged.
Pick up the telephone handsetto establish communication.
$\Leftrightarrow$ The communication will last for one and a half minutes or until the handset is put down. O nce the communication has finished the system will be disengaged.
$\Leftrightarrow$ In order to open the door, press the door release push button either while the call or the communication is in progress: the lock release is activated for 3 seconds pressing once the push button.

Door panel description.

G eneral detail of parts, for assembly the door panel.
Embedding boxes


Frame modules


Door panel description.

Main module


Electronic modules


Aluminium modules


Push buttons module



Sound module
EL620/2Plus

Push buttons electronic module
EL610D, for 5 single push-buttons or 10 double push buttons.

Short connection cable, It is supplied with EL610D module ( 16 cm length).
For the connection of the push-buttons between the sound module and the push buttons module EL610D and between push-buttons modules EL610D.

Connection cable RAP-610D (27 cm length).
For the connection of the push-buttons between the sound module and the push buttons module EL610D and between push-buttons modules EL610D.
This cable is necessary when the distance between modules to connecting is greater due to the distribution of these modules in the door panel/s.
s ound module description.


Door panel audio adjustment
Telephone audio adjustment
Microphone.
Sound module push buttons (x2).


Installation terminals:
$+\quad$ : Positive.

- : Ground.

BUS : Digital communication bus.
CV1 : "C" contact free for lock release.
CV2 : "N.O" contact free for lock release.
+12 : Lockrelease powersupply (+12Vd.c.).

N ote: See installation diagrams for wiring.

Dush buttons electronic module EL610D description.


Embedding box positioning.


The upper part of the door panel should be placed at 1,65m. height roughly. The hole dimensions will depend on the type of door panel.

| $\begin{array}{c}\text { Door panel } \\ \text { Model }\end{array}$ | $\begin{array}{c}\text { 90CS } \\ \text { CEA90C }\end{array}$ | $\begin{array}{c}\text { CEV90C }\end{array}$ | 90 |
| :---: | ---: | :---: | ---: |
|  |  |  |  |
| CEV90 |  |  |  |$]$| An | 99 | 99 |
| :---: | ---: | ---: |
| Al | 143 | 250 |
| P | 40 | 528 mm. |
|  |  | 56 |

The door panel has been designed to be placed under most of the environmental conditions. However it's recommended to take additional cautions like rainproof covers.


Pass the wiring through the hole made in the bottom partof the embedding box. Level and flush the embedding box. O nce the embedding box is placed, remove the protective labels from the attaching door panel holes.

A ssembly the electronic modules.

Insert the sound module in the top part of the module frame.
Align the tabs on the sound module in their respective housings of the module frame and later exercise a light pressure until correct placement.

If there is push buttons module repeat the above process, locating under the sound module, as shown in the drawing.


Hold the frame on the embedding box.


Insert the hinge that it is supplied with the product in the embedding box, as shown in the drawing.

To hold the frame on the embedding box, insert the hinge in the housings arranged for this purpose in the frame, as shown in the drawing.


The frame can now be folded horizontally facilitating the connection and adjustments in the sound module and push buttons electronic module.


Plug the push buttons with the short connection cable.

Insert the short connection cable that it is supplied with the product EL610D, in the push buttons connector of the sound module and the other end of the connection cable in the connector placed in the top part of the push buttons EL610D module, as shown in the drawing.

Between push buttons modules EL610D of the same embedding box, insert the short connection cable of the low connector of the first push buttons module to the top connector of the second push buttons module, as shown in the drawing.


Between push buttons modules EL610D of differentembeddingt boxes, insert the short connection cable in the low connector of the last module EL610D of the first embedding box and the other end of the connection cable in the middle connector of the last push buttons module EL610D placed in the low part of the second embedding box, as shown in the drawing.

Plug the push buttons with the connection cable RAP-610D.

Use the connection cable RAP-610D, for the connection of the push buttons between the sound module and the push buttons module EL610D and between push buttons modules EL610D, when the distance between modules to connecting is greater due to the composition of the door panels.


Configuration of the push-buttons code.
The push buttons module EL610D must be configured, to assign a call code to the push buttons (use the tool thatis supplied with the sound module). Make this configuration with the dip switch placed in the back side of the module.
Depending on the setting selected, the push buttons are assigned to a specific call code.
In case to combine these door panels with coded door panels or porter's exchange, it will be necessary to known the call code of each push button, as shown in the table below.


Push buttons module EL-610D

(1)P1- P10: Push button 1 to push button 10.

N ote:Sound module, factory set the code "106" in P1 and "132" in P2.
Important: Select a different configuration option for each module EL610D.
(*) Factory default.

Description of the configuration dip switch of the sound module.

The SW 1 configuration dip-switch is located at the upper right side of the back of the module.
For dip switch settings, use the tool $\&$ that is supplied with the sound module.


Set the switch to 0 FF if it is the main door panel. Every system musthave only a main door panel; the restmust be slave door panels (0 N ). Set as the main door panel the most remote from the backbone. If in the system ithas installed a digital converterCD-2PLUS, the max. number of door panels will be of 2 and they mustbe configured as slave.


Set the switch to O N for telephones programming. 0 nce the programming is finished, return the switch to 0 FF position. The programming method is described in page 69.


Set the switch to $O N$ in case of call forwarding from the door panel to the porter's exchange (when it is activated). Set the switch to O FF if this function is not required (it needs a CD-2PLUS converter and that door panel capture is activated in the porter's exchange).


Set the switch to ON so that the tones emited by the door panel are HIG H or setitO FF if the volume should be LO W.
*Factory default
escription of the self-testing leds.


The self-testing leds are placed at the upper left side of the back of the module.

G reen led
Fixed: Correct operation.
Blinking: Programming in progress of the door panel (2nd configuration dip switch in ON ).

## Red led

Fixed: M ore than one door panel set as master.
Blinking: There is a short-circuit in the installation* between bus wires or there isn't any door panel configured as master.
*In case of short-circuit, if it is removed before 2 minutes (approx.), the door panel will automatically reset; in case of more than 2 minutes, it is necessary to switch it off and then switch it on again.

F inal adjustments.

If after starting the system it's considered that the audio volume isn't correct, proceed with the necessary adjustments as shown in the drawing.

IM PO RTANT: Before closing the door panel(s), do a test call and check all self-testing leds (page 63) don't show any error.

Close the frame.


0 nce finished the works of wiring, configuration and final adjustments, fix the frame in the embedding box with the supplied screws.

Place the nameplate labels.


Door panel assembly.


In assemblies of a single door panel, it is ready from factory to be mounted.


If the door panel to installing is of more than one module it will be necessary make some adjustments to join a door panel with other one.

## IMPO RTANT:

To make these adjustments of joining several door panels, see the document that is supplied with the door panel and follow the steps that are described in the section "Mechanical assembly for double door panel" and once finished the adjustments stick the adhesive gasket (that is supplied with the push buttons module) in the rod of joining modules.


C lose the door panel.

Fixthe door panel by using the supplied screws.
Finish the door panel assembly by placing the closing heads, putthe head on one side and then make a slight pressure on the other end, to its correctplacement.
nstalling the FA-PLUS/C ver. 938072 power supply.
Install or modify the equipment without the power connected.
The installation and handling of these equipments must be performed by authorised personnel.
Install the power supply in a dry and protected place withoutrisk of drip or water projections.
Avoid to place itnear to heating sources, in dusty locations or smoky enviroments.
Do notblock ventilation holes of the unit so that air can circulate freely.


To avoid damage, the power supply has to be firmly fixed. Remember the current regulation forces you to protect the power supply with a thermo-magnetic circuit breaker.

To install the power supply on the wall, drill two holes of $\varnothing 6 \mathrm{~mm}$ and insert the wall plugs. Hold the power supply by means of the specified screws.

The power supply can be installed on a DIN 46277 guide by simply pressing it. To disassemble the power supply, use a plain screwdriver to lever it, as it is shown on the picture.
The FA-PLUS/C power supply uses 6 units over DIN guide.


Place the protection cover once the input terminals are wired.

## LO CK RELEASE INSTALLATIO N

ock release installation.

If the lock release is installed in a metal door, use a $\emptyset 3,5 \mathrm{~mm}$ drill and tap the hole.
In case of wood door, use a $\varnothing 3 \mathrm{~mm}$ drill.


IMPO RTANT: the lock release must be of 12 V a.c. or d.c (see pages 73 to 76 ).


Terminal connection description.

T-7720: BUS $\operatorname{Hz|Hz} \quad$ BUS: Digital communication bus.
HZ: Connection to door bell.

T-7722VD:

S+, S-: Connection to call repeater S-45.
BUS: Digital communication bus.
HZ: Connection to door bell.
PA, PB: Free-voltage connectors (see page 71).
 BUS: Digital communication bus. HZ: Connection to door bell. PA, PB: $\quad$ Free-voltage connectors (see page 71). BUS: Digital communication bus. End of Line: No function.

## TELEPHO NE INSTALLATIO N

Fix the telephone to the wall.


Avoid placing the telephone near heating sources, dusty locations or smoky environments. The telephone can be fixed in a universal embedding box or directly on the wall. For direct fixation on the wall, drill two holes of $\varnothing 6 \mathrm{~mm}$ on the specified positions, using 6 mm wall plugs and $\emptyset 3,5 \mathrm{x}$ 25 mm screws.


Pass the wires through the arranged hole and connect them to the power supply connector according to the installation diagrams. Close the telephone as shown on the picture. Then, connect the handset by means of the telephone cord and putitdown on the hook.
rogramming the telephones.

Set to $O N$ the configuration dip switch number 2 (as shown in page 63). It is found at the rear of the sound module.

The door panel emits a sound announcing that it has come into the programming mode.
In systems with more than one door panel, proceed equally but only on the main door panel of each building.


Press the door release push button, and while pressing it, pick the handsetup.


To show that the system is ready for programming, the door panel and the handset will emit some tones. At this moment it is possible to establish audio communication. Release the door release push button.


Press the door panel push button that will call to this telephone. At this moment, the door panel and the handset will emita sound.


To programme the telephone as the main telephone, replace the handset
To programme it as slave telephone, press the door release push button and then replace the handset.
To program the T-7822VD as $1^{\text {st }}$ Slave press the lock release push button once. After the door panel and handset reproduce a short tone, replace the handset If a long tone is reproduced then an error has occurred; reconfigure the telephone.

$2^{\text {nd }}$ Slave (only T-7822VD)

To program the $\mathbf{T - 7 8 2 2 V D}$ as $2^{\text {nd }}$ Slave press the lock release push button twice. After the door panel and handset reproduce two short tones, replace the handset. If a long tone is reproduced then an error has occurred; reconfigure the telephone.

Every apartment must have one master unit only; in case of parallel units configure them as slave. With the T-7822VD is possible up to 2 additional telephones in every a partment.


Make a call to check the telephone has been successfully programmed. Proceed equally with the rest of telephones.
0 nce programming has been finished, set to 0 FF the programming switch. If you don't, the door panel will emit a sound to advise that the system is still into the programming mode.

## IMPO RTANT:

Installation with CD-2PLUS converter and coded panel or porter's exchange, the call code linked to telephones will be from 1 up to 250 .

Door bell push button connection.

## T-7720, T7722VD or T-7822VD

The T-7720, T-7722VD and T-7822VD telephones, incorporate as standards the call reception from the door bell push button. This feature spares the use of a bell, by placing a push button between the ' HZ ' telephone terminals.
The reproduced ringing tones vary depending on their provenance. This allows the user to distinguish the origin of the call. If during a conversation a call is made from the entrance door, some acoustic tones will be heard as a warning that someone else is calling.


External lock release push buttons.

To activate the lock release by means of an external push button, place this push button between 'CV1' and 'CV2' terminals of the door panel, regardless of the kind of lock release.
It is a very useful function, you needn't take a key when going out of the
 building.

A uxiliary devices connection.

REMEMBER: With the T-7720 and T-7722VD telephones, the number of total elements in every apartment(telephones or call repeaters) can't never surpass the two units.
With the T-7822VD telephone, the number of total elements in every apartment (telephones or call repeaters) can'tnever surpass the three units.

T-7720, T-7722VD or T-7822VD


S-45


Auxiliary push button of T-7722VD and T-7822VD telephone.

The auxiliary push button of the T-7722VD and T-7822VD telephones has two possible functions which are configurable by JP1 and JP2 jumpers:


Activate the SAR-2PLUS unit to switch on the ligths, etc. See document TSAR-2Plus for its connection and configuration.

Activates the PA and PB contact closure of the telephone, so it can be used for switching on the lights, opening an additional door, etc. The maximum authorised current is 40 mA ; for higher values, install a relay SAR-12/24 and a transformer TF-104 as shown in the diagram.


## O PTIO NALCO NNECTIO NS

0pening the garage door.

If the function of the auxiliary push button is shared by all the telephones, all the auxiliary push buttons must be connected in parallel, as shown in the following diagram:

> (M) $=$ Master.
> (S) $=$ Slave.

(*)IMPO RTANT: Do not insert the resistor with a 2Plus system.

(*)IMPO RTANT: Do not insert the resistor with a 2 Plus system.


The installation diagram shows the wiring of an audio door entry system with one or several door panels to enter into the building.
If the system has one door panel only, do nottake into accountthe connection towards others. If the system has more than one door panel, wire the second panel as shown on the diagram. In case of more than two door panels, wire them as the second panel.

## REMEMBER:

The maximum number of door panel in parallel withoutusing converters is three.
M aximum distance between door panels: 50 m .
M aximum distance between the remote door panel and furthest telephone: 100 m .
Maximum length of all the bus wiring in the installation: 600 m .
Sections chart

| SECTIO NS CHART | Panel - Telephone | Panel - Panel | F.A. - Panel - CV |
| :--- | :---: | :---: | :---: |
| Terminal | 100 m. | 50 m. | 50 m. |
| BUS | $1,00 \mathrm{~mm}^{2}$ | $1,50 \mathrm{~mm}^{2}$ |  |
| ,,+- CV1, CV2 |  |  | $1,50 \mathrm{~mm}^{2}$ |

For higher distances, consult our Technical Assistance Service.
(M) = Master.
(S) = Slave.

## 2Plus Nexa Door Panel



(*) IMPO RTANT: Do not insert the resistor with a 2 Plus system.

The installation diagram shows the wiring of an audio door entry system with one or several door panels to enter into the building.
If the system has one door panel only, do nottake into accountthe connection towards others. If the system has more than one door panel, wire the second panel as shown on the diagram. In case of more than two door panels, wire them as the second panel.

## REMEMBER:

The maximum number of door panel in parallel withoutusing converters is three.
Maximum distance between door panels: 50 m .
M aximum distance between the remote door panel and furthest telephone: 100 m .
Maximum length of all the bus wiring in the installation: 600 m .
Sections chart

| SECTIO NS CHART | Panel - Telephone | Panel - Panel | F.A. - Panel - CV |
| :--- | :---: | :---: | :---: |
| Terminal | 100 m. | 50 m. | 50 m. |
| BUS | $1,00 \mathrm{~mm}^{2}$ | $1,50 \mathrm{~mm}^{2}$ |  |
| ,,+- CV1, CV2, $\sim, \sim$ |  |  | $1,50 \mathrm{~mm}^{2}$ |

For higher distances, consult our Technical Assistance Service.
(M) = Master.
(S) = Slave.

## 2Plus Nexa Door Panel



An easy way to check that the system is working properly, is to disconnect the wiring and test a terminal (telephone) directly connected to the door panel installation.
Any short-circuit between differentterminals of the system will not damage the connected units.
$\leadsto N$ othing operates.
c Remember that once the power supply is plug in, the system remains inactive for 45 sec , likewise when connecting any other unitinto the installation.
e Check the output power supply voltage between '-' and ' + ' is among 17,5 to $18,5 \mathrm{Vd} . \mathrm{c}$. 0 therwise, disconnect the power supply from the installation and measure again. If its correct now, it means there is a short circuit in the installation. Disconnect the power supply from the mains and check the installation.
© If the previous tests are correct, check the self-testing leds (see page 63).
$\llcorner\approx$ Inappropriate audio level.
c Adjust the level volumes as shown on page 64. In case of audio feedback, reduce the volume until it disappears. If audio feedback disappears only with the adjustments at minimum positions there could be another problem.
$\leadsto$ Persistentaudio feedback.
c Check the BUS is not shortcircuited with another terminal or itself.
$\curvearrowleft$ The door opening function no operates.
© Remember this function is only active during the call and communication processes.
e Short-circuit 'C V1' and 'CV2' terminals of the EL620/2Plus sound module; then, there must be 12 V (a.c. or d.c. depending on the kind of installed lock release) among the lock release terminals. If so, check the lock release state.
$\leadsto$ The system can'tbe programmed.
© Check the switch number 2 of the configuration dip switch is set to O N (see page 63) and that the programming sequence is correct(see page 69).
e C heck on the EL620/2Plus sound module the self-testing leds (see page 63).
$\leadsto$ Some units do notreceive calls.
a Remember there must be only one master unit in each apartment. Check the terminal is programmed appropriately, and if necessary, repeat the programming steps.
$\leadsto$ Push buttons do notwork.
e When pressing the push button, check the door panel emits a confirmation tone; otherwise, check the push buttons wiring (page 61-62).
c If there is confirmation, check the telephones programming (page 69).

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## CONFO RMIDAD/CO MPLIANCE/CO NFO RMITÉ 79

Este producto es conforme con las disposiciones de las Directivas Europeas aplicables respecto a la Seguridad Eléctrica 2006/95/CEE y la Compatibilidad Electromagnética 2004/108/CEE, así como con la ampliación en la Directiva del Marcado CE 93/68/CEE.

This product meets the essentials requirements of applicable European Directives regarding Electrical Safety 2006/95/CEE, Electromagnetic Compatibility 2004/108/ECC, and as amended for C E M arking 93/68/ECC.

NOTA: El funcionamiento de este equipo está sujeto a las siguientes condiciones:
(1) Este dispositivo no puede provocar interferencias dañinas, y (2) debe aceptar cualquier interferencia recibida, incluyendo las que pueden provocar un funcionamiento no deseado.

NOTE: O peration is subject to the following conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any received interference, including the ones that may cause undesired operation.
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c

Golmar se reserva el derecho a cualquier modificación sin previo aviso. G olmar se réserve le droit de toute modification sans préavis.
G olmar reserves the right to make any modifications without prior notice.


[^0]:    $\leftrightarrows$ Install or modify the equipment without the power connected.
    $\Leftrightarrow$ The installation and handling of these equipments must be performed by authorised personnel.
    $c \Rightarrow$ The entire installation mustbe at least 40 cm . away from anyother installation.
    $\Leftrightarrow$ Do notuse excessive force when tightening the screws of the power supply connector.
    $\leftrightarrow$ Before connecting the equipment, check the connections among the door pannel, telephones and the power connection. Do always follow the enclosed information.
    $\Leftrightarrow$ When starting the equipment for the first time, or after a modification, the system will remain inactive for 45 seconds because of the starting time.

