

First of all we would like to thank and congratulate you for the purchase of this product manufactured by Golmar.

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.

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STARTING RECOMMENDATIONS

- Install or modify the equipment without the power connected.
- Let The installation and handling of these equipments must be performed by authorised personnel.
- The entire installation must be at least 40 cm. away from any other installation.
- Do not use excessive force when tightening the screws of the power supply connector.
- Before connecting the equipment, check the connections among the door pannel, telephones and the power connection. Do always follow the enclosed information.
- 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.

SAFETY PRECAUTIONS

- □ Install or modify the equipment without the power connected.
- The installation and handling of these equipments must be performed by authorised personnel.
- □→ The entire installation must be at least 40 cm. away from any other installation.
- ⇒ With power supply:
 - © Do not use excessive force when tightening the connector screws.
 - Install the power supply in a dry and protected place without risk of drip or water projections.
 - Avoid to place it near to heating sources, in dusty locations or smoky environments.
 - © Do not block ventilation holes of the unit so 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.
- ₩ With telephones, SAR-12/24 relay and S-45 call repeater:
 - Do not use excessive force when tightening the connector screws.
 - Install the power supply in a dry and protected place without risk of drip or water projections.
 - Avoid to place it near to heating sources, in dusty locations or smoky environments.
 - © Do not block ventilation holes of the equipments so that air can circulate freely.
- □ Do always follow the enclosed information.

SYSTEM CHARACTERISTICS

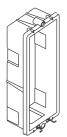
- Audio door entry system with simplified installation (2-wire bus withouth polarity).
- Up to 3 access door pannels being not necessary the use of switching units. (Up to 2 access door pannels if there is a digital converter CD-2PLUS in the building or backbone).
- □ Up to 120 telephones per instalation without using converters.
- Up to 120 apartments with door pannels with push buttons and 120 apartments with coded panel (being necessary the use of digital converter CD-2PLUS).
- Acoustic busy channel and call acknowledgement signals.
- Maximum distance between door panels: 50m.
- D⇒ Maximum distance between the remote door pannel and furthest telephone: 100m.
- Maximum length of all the bus wiring in the installation: 600m.
- ⇒ Timed door opening for 3 seconds.
- a.c. or d.c. lock release operated by relay.
- □ In T-7720 telephones:
 - Total private conversations.
 - Up to 1 additional telephone in every apartment.
 - Input for external door bell push button.
- □ In T7722VD and T7822VD telephones have, besides the previous features:
 - Auxiliary push button with 2 possible functions:
 - Relay activation 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).
 - Call repeater S-45 output.
- It allows to install a porter 's exchange (being necessary the use of digital converter CD-2PLUS).

- To make a call, the visitor should press the push button corresponding to the apartment he/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.
- De The call sounds over 45 seconds. If it is not answered in 45 seconds, then the channel will be disengaged.
- Pick up the telephone handset to establish communication.
- The communication will last for one and a half minutes or until the handset is put down. Once the communication has finished the system will be disengaged.
- 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.

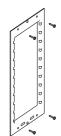
oor panel description.

General detail of parts, for assembly the door panel.

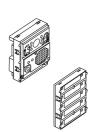
Embedding boxes



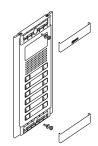




Electronic modules

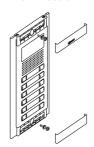


Aluminium modules

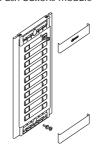


Door panel description.





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.

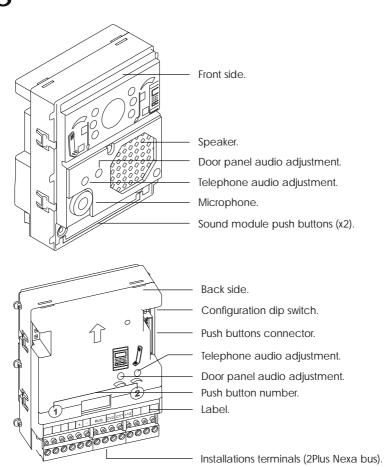


Connection cable RAP-610D (27 cm length).

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.

C ound module description.



Installation terminals:

+ : Positive.
- : Ground.

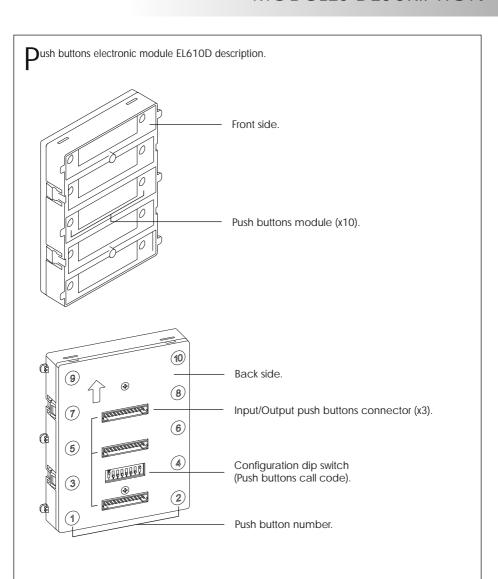
BUS : Digital communication bus.

CV1 : "C" contact free for lock release.

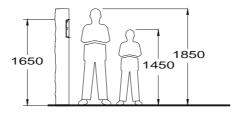
CV2 : "N.O" contact free for lock release.

+12 : Lock release power supply (+12Vd.c.).

Note: See installation diagrams for wiring.



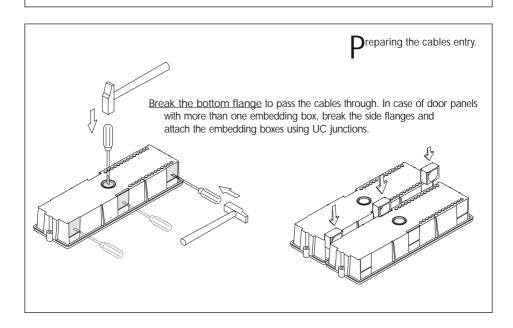
mbedding box positioning.



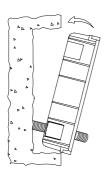
The upper part of the door panel should be placed at 1,65m. height roughly. The hole dimensions will depend on the type of door panel.

Door panel	90CS	90C	90
Model	CEA90C	CEV90C	CEV90
An	99	99	99 mm.
Al	143	250	328 mm.
Р	40	56	56 mm.

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.



Dlace the embedding box.



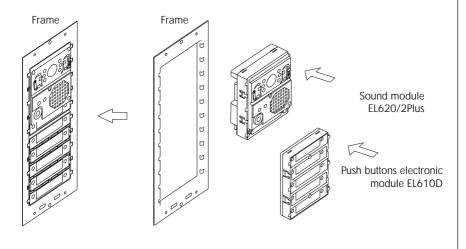
Pass the wiring through the hole made in the bottom part of the embedding box. Level and flush the embedding box. Once the embedding box is placed, remove the protective labels from the attaching door panel holes.

 Δ 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.



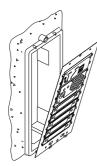
old the frame on the embedding box.



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 different embeddingt 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.



onfiguration 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 definition that is 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

		Dip switch							Push buttons code											
		Dip1	Dip2	Dip3	Dip4	Dip5	Dip6	Dip7	Dip8	P1	P2	Р3	P4	P5	P6	P7	P8	P9	P10	(1)
	1	On	Off	Off	Off	Off	Off	Off	On	1	2	3	4	5	6	7	8	9	10	(*)
	2	Off	On	Off	Off	Off	Off	Off	On	11	12	13	14	15	16	17	18	19	20	
	3	Off	Off	On	Off	Off	Off	Off	On	21	22	23	24	25	26	27	28	29	30	
option	4	Off	Off	Off	On	Off	Off	Off	On	31	32	33	34	35	36	37	38	39	40	
ldo r	5	Off	Off	Off	Off	On	Off	Off	On	41	42	43	44	45	46	47	48	49	50	
atior	6	Off	Off	Off	Off	Off	On	Off	On	51	52	53	54	55	56	57	58	59	60	
configuration	7	Off	Off	Off	Off	Off	Off	On	On	61	62	63	64	65	66	67	68	69	70	
conf	8	On	Off	71	72	73	74	75	76	77	78	79	80							
Module	9	Off	On	Off	Off	Off	Off	Off	Off	81	82	83	84	85	86	87	88	89	90	
Moc	10	Off	Off	On	Off	Off	Off	Off	Off	91	92	93	94	95	96	97	98	99	100	
	11	Off	Off	Off	On	Off	Off	Off	Off	101	102	103	104	105	107	108	109	110	111	
	12	Off	Off	Off	Off	On	Off	Off	Off	112	113	114	115	116	117	118	119	120	121	
	13	Off	Off	Off	Off	Off	On	Off	Off	122	123	124	125	126	127	128	129	130	131	

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

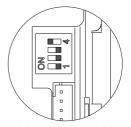
Note: Sound module, factory set the code "106" in P1 and "132" in P2. Important: Select a different configuration option for each module EL610D.

(*) Factory default.

Description of the configuration dip switch of the sound module.

The SW1 configuration dip-switch is located at the upper right side of the back of the module.

For dip switch settings, use the tool \oint that is supplied with the sound module







Set the switch to OFF if it is the main door panel. Every system must have only a main door panel; the rest must be slave door panels (ON). Set as the main door panel the most remote from the backbone. If in the system it has installed a digital converter CD-2PLUS, the max. number of door panels will be of 2 and they must be configured as slave.





Set the switch to ON for telephones programming.

Once the programming is finished, return the switch to OFF position. The programming method is described in page 69.





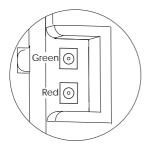
Set the switch to ON in case of call forwarding from the door panel to the porter's exchange (when it is activated). Set the switch to OFF if this function is not required (it needs a CD-2PLUS converter and that door panel capture is activated in the porter's exchange).





Set the switch to ON so that the tones emited by the door panel are HIGH or set it OFF if the volume should be LOW.

*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.

Green led

Fixed: Correct operation.

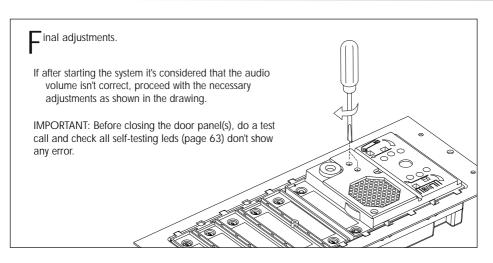
<u>Blinking:</u> Programming in progress of the door panel (2nd configuration dip switch in ON).

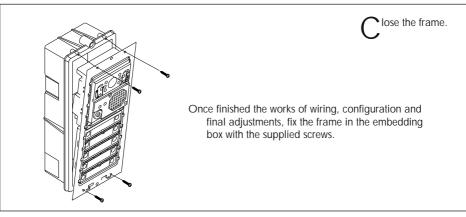
Red led

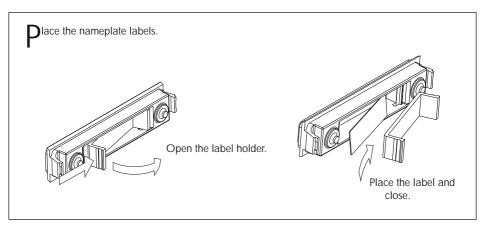
Fixed: More than one door panel set as master.

<u>Blinking:</u> There is a short-circuit in the installation* between bus wires or there isn't any door panel configured as master.

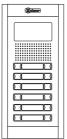
* In case of short-circuit, if it is removed before 2 minutes (approx.), the door panel will automatically reset; in case of more than 2 minutes, it is necessary to switch it off and then switch it on again.



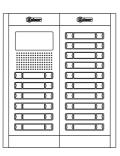




oor panel assembly.



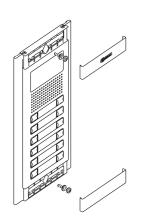
In assemblies of a single door panel, it is ready from factory to be mounted.



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.

IMPORTANT:

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.



lose the door panel.

Fix the door panel by using the supplied screws.

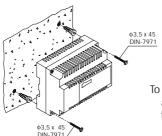
Finish the door panel assembly by placing the closing heads, put the head on one side and then make a slight pressure on the other end, to its correct placement.

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 <u>authorised personnel</u>. Install the power supply in a dry and protected place without risk of drip or water projections. Avoid to place it near to heating sources, in dusty locations or smoky environments.

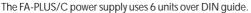
Do not block ventilation holes of the unit so that air can circulate freely.

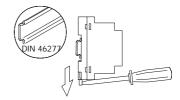


To avoid damage, the power supply has to be firmly fixed. Remember the current regulation forces you to protect the power supply with a thermo-magnetic circuit breaker.

To install the power supply on the wall, drill two holes of \varnothing 6mm 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.





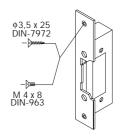
Place the protection cover once the input terminals are wired.

LOCK RELEASE INSTALLATION

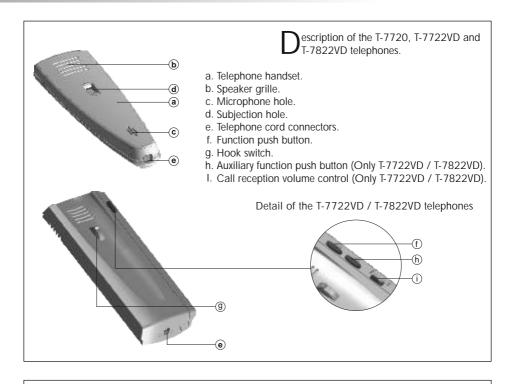
ock release installation.

If the lock release is installed in a metal door, use a \emptyset 3,5mm drill and tap the hole.

In case of wood door, use a Ø 3mm drill.



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





unction push buttons.

With the handset off the hook, it allows to make an intercom call to the main porter's exchange. During the call reception or communication, it allows the lock release activation.

Only T-7722VD and T-7822VD: Regardless of the handset position with the JP1 jumper inserted, it operates as an additional free-voltage push button (PA and PB contact, see page 71), or activates the SAR-2PLUS digital relay unit if the jumper inserted is JP2 (see page 71).

erminal connection description.

T-7720: BUS |HZ|HZ BUS: Digital communication bus.

HZ: Connection to door bell.

T-7722VD: S S+ BUS HZ HZ PA PB 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).

Continue

Coming from previous page

erminal connection description and JP3 configuration jumper.

Free-voltage connectors (see page 71).

T-7822VD: S- S+ BUS | HZ | HZ | PA | PB | BUS | Eof.Line | S+, S-:

Connection to call repeater S-45. BUS: Digital communication bus.

JP3 configuration jumper:

HZ: Connection to door bell. PA, PB:

Digital communication bus. BUS:

V2Plus system (video)

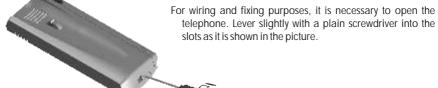
2Plus system (Audio)

End of Line: No function.

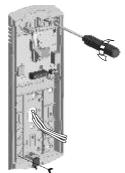
*Factory default

TELEPHONE INSTALLATION

ix 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 Ø6mm on the specified positions, using 6mm wall plugs and Ø3,5 x 25mm screws.





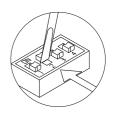
Pass the wires through the arranged hole and connect them to the power supply connector according to the installation diagrams. Close the telephone as shown on the picture. Then, connect the handset by means of the telephone cord and put it down on the hook.

Drogramming the telephones.

Set to ON 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.

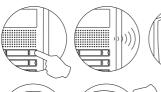
In systems with more than one door panel, proceed equally but only on the main door panel of each building.





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

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 emit a sound.



doble

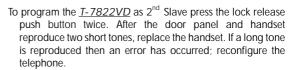
click

2nd Slave (only T-7822VD)

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 <u>T-7822VD</u> as 1st 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.



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



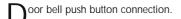
Н

Make a call to check the telephone has been successfully programmed. Proceed equally with the rest of telephones.

Once programming has been finished, set to OFF 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.

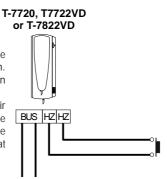
IMPORTANT:

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.



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.

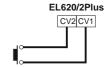
The reproduced ringing tones vary depending on their provenance. This allows the user to distinguish the origin of the call. If during a conversation a call is made from the entrance door, some acoustic tones will be heard as a warning that someone else is calling.



xternal 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.

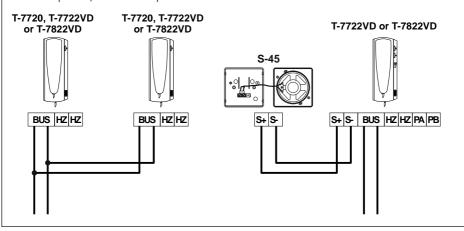
It is a very useful function, you needn't take a key when going out of the building.



↑ uxiliary devices connection.

<u>REMEMBER:</u> 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't never surpass the three units.



A uxiliary 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:



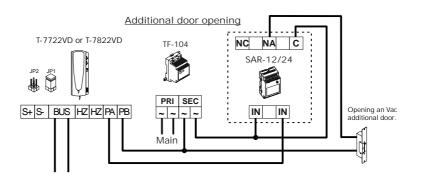


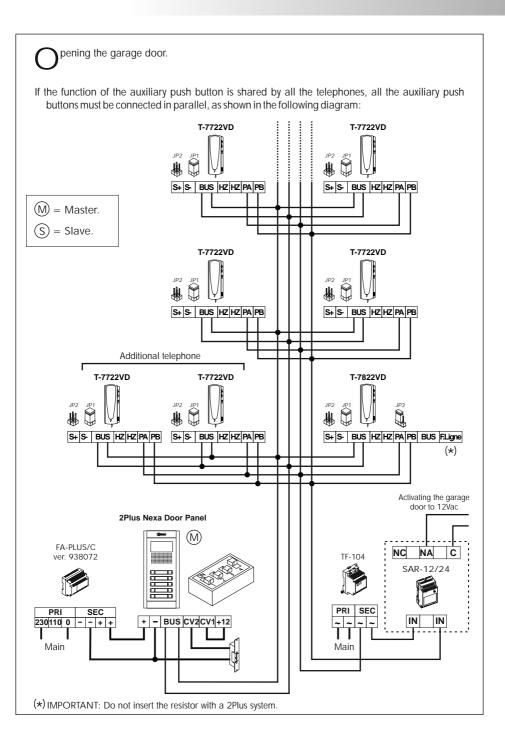


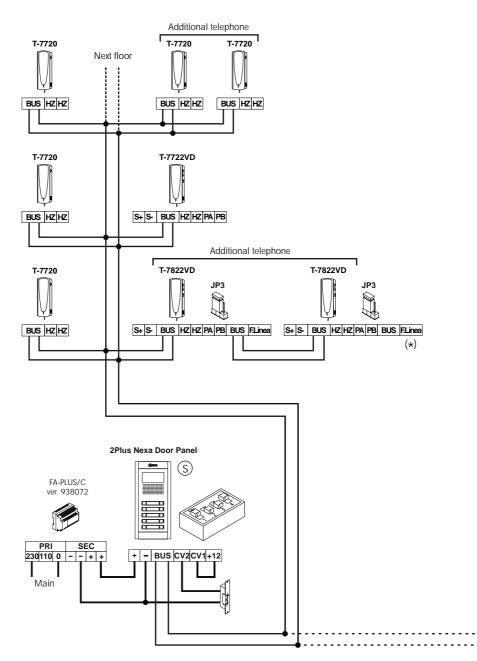
Activate the SAR-2PLUS unit to switch on the ligths, etc.
See document TSAR-2Plus for its connection and configuration.



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 40mA; for higher values, install a relay SAR-12/24 and a transformer TF-104 as shown in the diagram.







^(*) IMPORTANT: Do not insert the resistor with a 2Plus system.

▲ udio door entry system with d.c. lock release.

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 not take into account the 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 without using converters is three.

Maximum distance between door panels: 50m.

Maximum distance between the remote door panel and furthest telephone: 100m.

Maximum length of all the bus wiring in the installation: 600m.

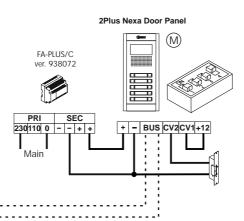
Sections chart

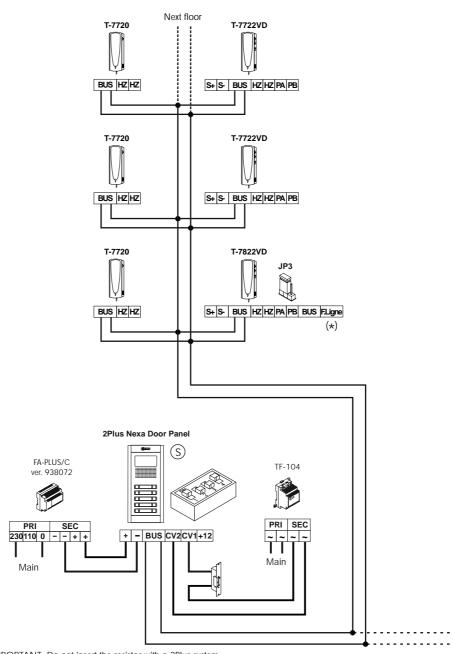
SECTIONS CHART	Panel - Telephone	Panel - Panel	F.A Panel - CV
Terminal	100m.	50m.	50m.
BUS	1,00mm²	1,50mm²	
+, -, CV1, CV2			1,50mm²

For higher distances, consult our Technical Assistance Service.

(M) = Master.

(S) = Slave.





^(*) IMPORTANT: Do not insert the resistor with a 2Plus system.

Audio door entry system with a.c. lock release and additional TF-104 transformer.

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 not take into account the 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 without using converters is three.

Maximum distance between door panels: 50m.

Maximum distance between the remote door panel and furthest telephone: 100m.

Maximum length of all the bus wiring in the installation: 600m.

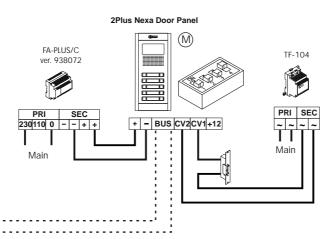
Sections chart

SECTIONS CHART	Panel - Telephone	Panel - Panel	F.A Panel - CV
Terminal	100m.	50m.	50m.
BUS	1,00mm²	1,50mm²	
+, -, CV1, CV2, ~,~			1,50mm²

For higher distances, consult our Technical Assistance Service.

(M) = Master.

(S) = Slave.



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 different terminals of the system will not damage the connected units.

- Nothing operates.
 - Remember that once the power supply is plug in, the system remains inactive for 45 sec, likewise when connecting any other unit into the installation.
 - Check the output power supply voltage between '-' and '+' is among 17,5 to 18,5Vd.c. Otherwise, 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).
- ➡ Inappropriate audio level.
 - 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.
- ⇒ Persistent audio feedback.
 - Check the BUS is not shortcircuited with another terminal or itself.
- ➡ The door opening function no operates.
 - Remember this function is only active during the call and communication processes.
 - Short-circuit 'CV1' and 'CV2' terminals of the EL620/2Plus sound module; then, there must be 12V (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.
- ⇒ The system can't be programmed.
 - Check the switch number 2 of the configuration dip switch is set to ON (see page 63) and that the programming sequence is correct (see page 69).
 - © Check on the EL 620/2Plus sound module the self-testing leds (see page 63).
- ⇒ Some units do not receive calls.
 - Remember there must be only one master unit in each apartment. Check the terminal is programmed appropriately, and if necessary, repeat the programming steps.
- ⇒ Push buttons do not work.
 - When pressing the push button, check the door panel emits a confirmation tone; otherwise, check the push buttons wiring (page 61-62).
 - © If there is confirmation, check the telephones programming (page 69).

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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 CE Marking 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: Operation 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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