

Une façon simple de vérifier si les équipements fonctionnent correctement, est de les déconnecter de l'installation et de les tester directement sur le circuit microprocesseur EL500SE.

Un court-circuit entre les différentes bornes (ou fils) n'endommagera jamais les équipements connectés, à l'exception d'un court-circuit entre les bornes CTO et '-' du moniteur ou du distributeur.

❏ Rien ne fonctionne.

⚙ Vérifier la tension de sortie entre les bornes '-' et '+' de l'alimentation. Celle-ci doit être comprise entre 17,5 et 18,5Vc.c. Si ce n'est pas le cas, déconnecter l'alimentation de l'installation et mesurer la tension. Si celle-ci est correcte, déconnecter l'alimentation du réseau 220/230Vc.a. et vérifier l'installation (possibilité d'un court-circuit).

⚙ Vérifier que la borne 'D' ne soit pas en court-circuit avec les bornes '-' ou '+'.

⚙ Vérifier que les bornes 'D' et 'A' n'aient pas été inversés dans le câblage.

❏ Le volume audio n'est pas satisfaisant.

⚙ Régler le niveau comme expliqué page 69. En cas d'effet Larsen, réduire le volume jusqu'à disparition de celui-ci. Si l'effet Larsen disparaît seulement lorsque le volume est au minimum, il est possible qu'il y ait un autre problème.

❏ Effet Larsen persistant.

⚙ Vérifier que la borne 'A' ne soit pas en court-circuit avec une autre.

❏ La commande de gâche ne fonctionne pas.

⚙ N'oubliez pas que cette fonction ne peut être activée qu'après un appel ou durant une communication.

⚙ Les bornes CV1 et CV2 pour l'ouverture de la porte sont une sortie libre de potentiel et il faut brancher le câblage selon le besoin, 12Vc.c.(page 85 à 96) ou 12Vc.a.(page 97).

⚙ Réalisez un court-circuit entre les bornes 'CV1' et 'CV2' du circuit microprocesseur EL500SE; à cet instant, il devrait y avoir 12V (c.c. ou c.a. en fonction du type de gâche installé) entre les bornes de la gâche. Si tel est le cas, vérifiez l'état de la gâche.

❏ Impossible de programmer le système.

⚙ Vérifier que les micro-interrupteurs de configuration SW2 il a le switch n° 2 sur ON (page 65) et que la séquence de programmation soit correcte.

⚙ Vérifier que la borne 'D' ne soit pas en court-circuit avec une autre.

❏ Certains moniteurs (ou postes) ne reçoivent pas l'appel.

⚙ Vérifier qu'un et un seul moniteur (ou poste) soit programmé comme principale. Vérifier que le moniteur (ou poste) soit bien programmé et allumé.

Audio and Video  
door entry system  
digital installation

(One or several  
accesses doors /  
General door panel)

Stadio Plus

Instructions manual

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

- ❏ Do not use excessive force when tightening the power supply connector screws.
- ❏ The entire installation must be at least **40cm.** away from any **other installation.**
- ❏ Before to connect the system, check the connections between door panel, distributors, monitors, telephones, and the transformer connection. Do always follow the enclosed information.
- ❏ Each time the power supply is restarted, or after a modification, the system will remain blocked during 30 seconds.
- ❏ Always use **RG-59 B/U MIL C-17** or **RG-11** coaxial cables, (see page 138). **Never use coaxial antenna cable.** In installations no longer than 100m., **Golmar RAP-5130** cable can be used.

- ❏ 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 monitor, telephones and distributor:
  - ⚡ 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.
- ❏ Remember, the installation and handling of these equipments must be performed by authorized personnel and in the absence of electrical current.
- ❏ Do always follow the enclosed information.

## SYSTEM CHARACTERISTICS

- ❏ Microprocessed system with simplified installation:
  - ⚡ Audio door entry system with 4 common wires installation.
  - ⚡ Video door entry system with 3 common wires plus coaxial cable installation.
  - ⚡ Video door entry system with 4 common wires plus twisted pair installation.
- ❏ Microprocessed circuit EL500SE with two operating modes (EL500 or EL501).
- ❏ Unlimited number of door panels (access) being not necessary the use of switching units.
- ❏ Up to 120 monitors/telephones per installation or backbone.
- ❏ General door panel (EL501 mode): Up to 120 monitors/telephones, distributed in max. 120 buildings.
- ❏ EL560 module for video installations with twisted pair cable, integrated in EL500SE circuit.
- ❏ Communications resistor for the system UNO or PLUS, integrated in EL500SE circuit.
- ❏ Acoustic busy channel and call acknowledgement signals.
- ❏ Door opening timed at 3 seconds.
- ❏ Input for external door release push button (timed at 3 or 15 seconds).
- ❏ a.c or d.c lock release operated by relay.
- ❏ Up to 13 monitors or telephones in the same apartment, (see page 154):
  - ⚡ Up to 3 monitors or telephones (without additional power supply).
  - ⚡ From 4th to 8th monitor/telephone (1st additional power supply FA-Plus/C, **placed on technical cabinet**).
  - ⚡ From 9th to 13th monitor/telephone (2nd additional power supply FA-Plus/C, **placed on technical cabinet**).
- ❏ Common features for Tekna Plus monitors, T-540Plus and T-740Plus telephones:
  - ⚡ Privacy on audio communications (and video in the monitors).
  - ⚡ Intercommunication function with other monitor or telephone of the same apartment (**only one slave unit configured with intercommunication**).
  - ⚡ Input for external door bell push button.
  - ⚡ Output for additional call repeater.
  - ⚡ Call to a master porter's exchange.
  - ⚡ Panic call to the porter's exchange.
  - ⚡ Different call reception tones depending where the call is coming from: main or slave door panels, door bell push button, intercom, ...

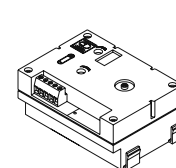
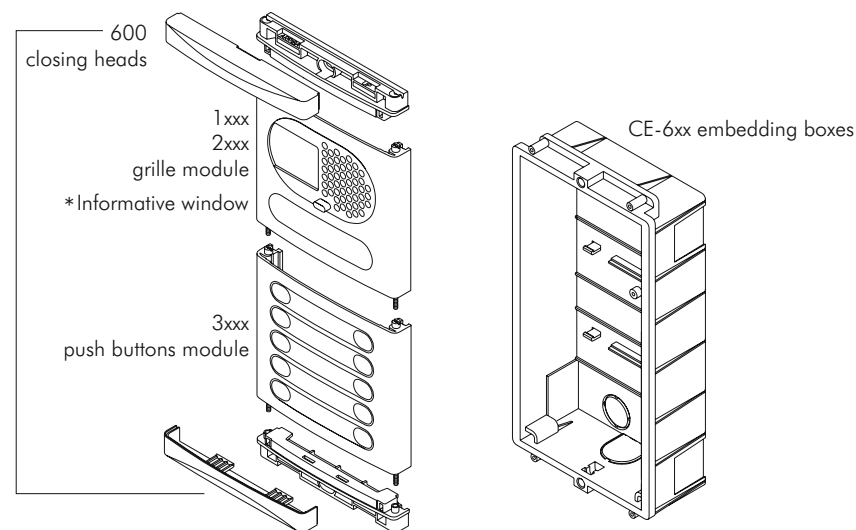
**Continue**

**Coming from previous page**

- ☞ With T-540 Plus and T-740 Plus telephones, addition to the previous features:
  - ☞ Three-position control for call volume: maximum, medium and off.
  - ☞ Input for external door release push button.
  - ☞ Allows one of these functions at once, Configuration with dip switch Sw1 (see page 130 & 134):
    - ☞ "Autoswitch-on" function.
    - ☞ Output for auxiliary relay activation (18Vdc/0,5 A maximum).
    - ☞ Call to a slave porter's exchange.
    - ☞ Intercommunication function with other monitor or telephone of the same apartment.
- ☞ With Tekna Plus monitors, addition to the common features:
  - ☞ Three-position control for call volume: maximum, medium and minimum.
  - ☞ "Autoswitch-on" function.
  - ☞ "Video-spy" function with the communication channel remaining free.
  - ☞ Call to a slave porter's exchange.
  - ☞ Activation of two auxiliary devices: secondary telecamera, courtesy light, ...
  - ☞ B/W & Color monitor.
  - ☞ Brightness and contrast control (color control in case of color screen).

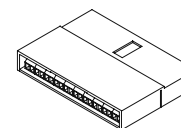
## SYSTEM OPERATION

- ☞ To make a call the visitor should press the push button corresponding to the apartment he wishes to contact. An acoustic tone will be heard confirming the call is in progress once the push button has been pressed. At this moment the call will be received at the monitor (telephone) in the dwelling. During the call the visitor can correct his call by pressing a push button corresponding to a different apartment, in which case the original call is cancelled.
- ☞ In systems with several accesses doors, the other(s) door panel(s) will be automatically disconnected: If a visitor tries to call from other door panel an acoustic tone will be heard confirming the system is busy and the led of busy system from informative window will lights (if it exists).
- ☞ General door panel (EL501 mode): If the call is made from the general door panel, the inner door panel of the building called and other possible general door panel will remain automatically disconnected, if another visitor tries to call from an inner busy door panel or from another general door panel, an acoustic tone will be heard confirming the system is busy and the led of system busy will blink (in the general door panel). The door panels of the others inner buildings will remain free to be used.
- ☞ General door panel (EL501 mode): In the case that the call is made from an inner door panel, the rest of inner door panels will remain free to be used. From general door panels only will be able to make calls to the inner buildings whose door panels are not in use, if the visitor tries to make a call to a busy inner door panel, an acoustic tone will be heard confirming the system is busy and the led of system busy from informative window will blink.
- ☞ The call tone will be reproduced on the monitor during 3 seconds: after this time the picture will appear on the master monitor without the visitor being aware of this. To see the picture in a slave monitor press the ⊕ push button, disappearing the picture on the other monitor. If the call is not answered in 45 seconds, the system will be freed.
- ☞ To establish communication pick up the monitor (telephone) handset.
- ☞ The communication will last for one and a half minutes or until the handset is replaced. Once the communication has finished the system will be freed.
- ☞ To open the door, press the door release push button during call or communication progresses: with one press, the door release operates during 3 seconds. During the lock release activation an acoustic tone will be heard on the door panel confirming the lock release is activated.
- ☞ The monitor and telephones push buttons description is shown on pages 124, 130 & 134 respectively.

**D**oor panel description.

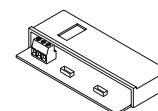
Sound module

EL530 , on video systems with b/w camera.  
 EL531 , on video systems with color camera.  
 EL540 , on audio systems.



Microprocessed circuit

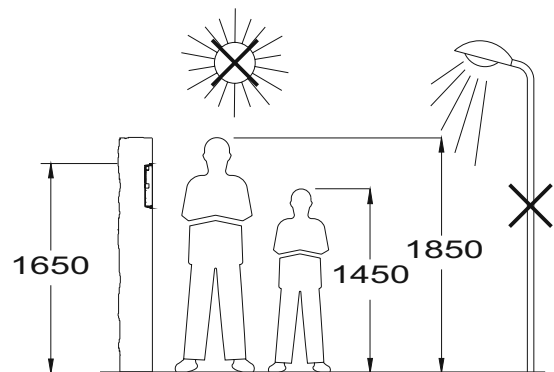
EL500SE , on audio and video systems.  
 Operating modes EL500 or EL501,  
 configuration with dip switch, (page 116).



Push buttons encoder

EL516SE , on systems with more than eight push buttons.

- \* Informative window to indicate of a visual way that the system is busy. It is recommended use the following types of installations:
- Buildings or backbones with more than one access.
  - Systems with general door panels.

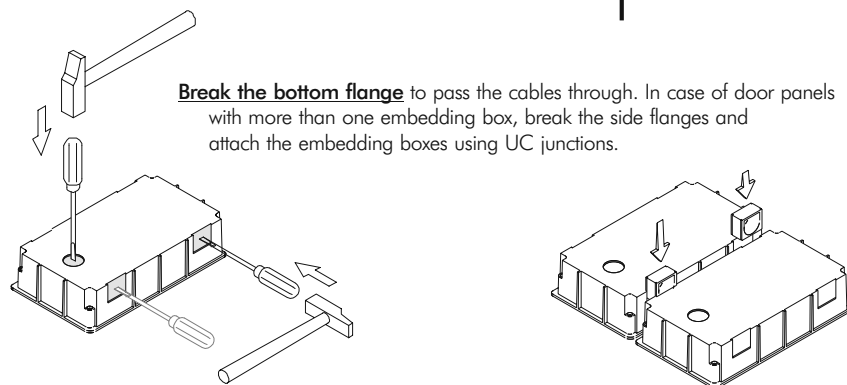
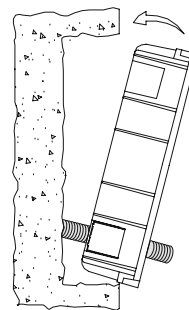
**E** mbedding box positioning.

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

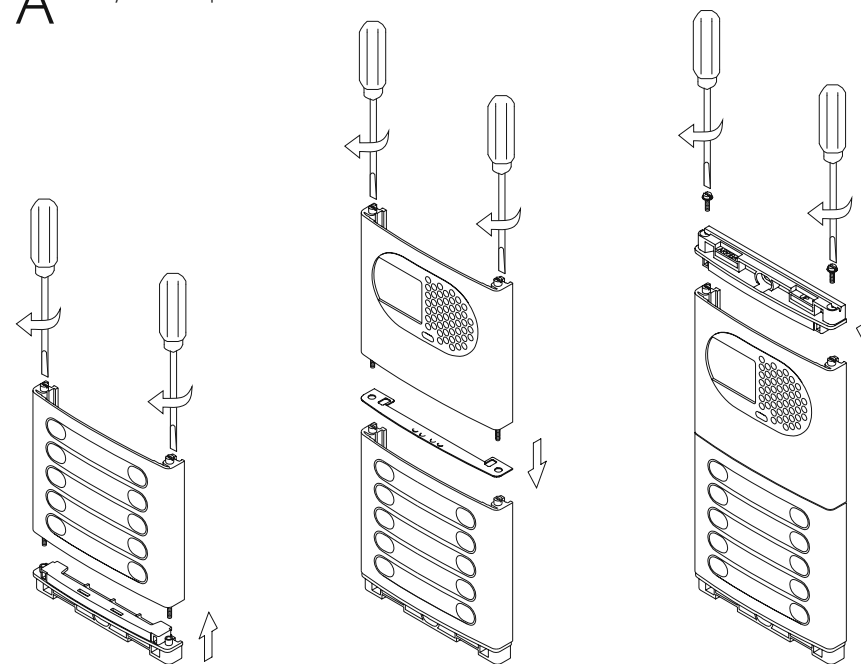
Modules	1	* Compact	2	3
Model	CE610	CE615	CE620	CE630
W	125	125	125	125 mm.
H	140	220	257	374 mm.
D	56	56	56	56 mm.

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. To obtain a good quality picture on video door entry systems, avoid direct incidence from light sources.

\* Compact size Stadio Plus (audio/video) panels, allow configurations up to 10 push buttons.

**P**reparing the cables entry.**P**lace the embedding box.

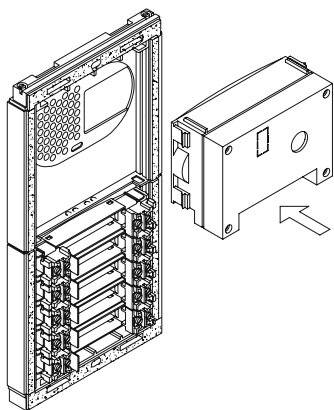
Pass the wiring through the hole made in the bottom part of the embedding box. Level and flush the embedding box. Once the embedding box is placed, remove the protective labels from the attaching door panel holes.

**A**ssembly the door panel modules.

Insert the header DOWN marked in the lower module and fix it by screwing the module shafts. Place the module spacer between lower and next modules, assuring that the spacer adjustment notches are inside the panel. Fix the module by screwing the shafts. Repeat this procedure in case of door panels with one more module (the maximum number of modules placed vertically is three). Insert the header UP marked in the last module and fix it by screwing the supplied screws.

## A

assembly the sound module.

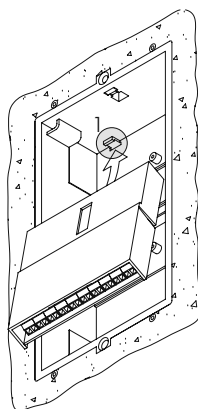
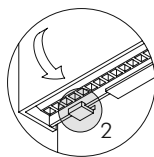
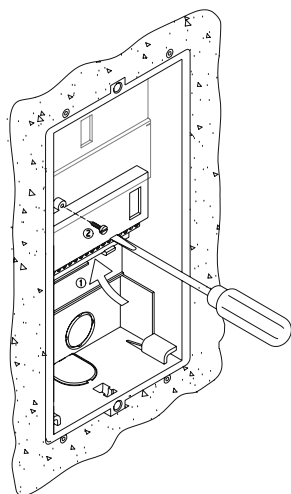


Insert the sound module in the grille module. For a proper assembly, align the light push button and the microphone rubber of the sound module with its corresponding holes in the grille module.

## A

ssembling the EL500SE microprocessed circuit and the EL516SE push buttons encoders.

The EL500SE circuit is to be assembled on the top of the embedding box. Insert the circuit in the top flanges of the embedding box (1). Push-in the circuit in the bottom flanges (2) by pressing the pcb board.



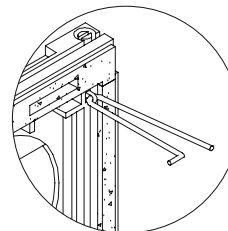
To assembly the EL516SE encoder, screw the top tab of the case to the corresponding plastic lug of the embedding box.

In case of more than one encoder, place them underneath or in the next embedding box.

The use of EL516SE encoders is only necessary for panels with more than 8 push buttons. Each encoder allows to connect 15 push buttons, obtaining a maximum of 120 push buttons by using 8 encoders.

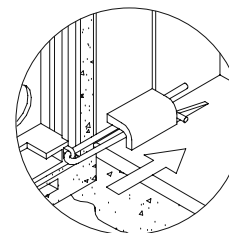
## H

old the door panel on the embedding box.

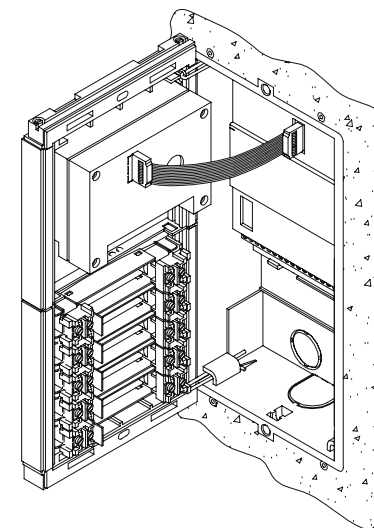


Select a direction to open the door panel; this selection should ease the door panel wiring. The opening direction will be settled through the hinges position, that must be passed through the header clips as shown. For example, if the hinges are placed on both clips of the lower header, the door panel will open downwards; if they are placed on the right clips of both headers, the door panel will open to left.

To hold the door panel on the embedding box, insert the hinges in the embedding box lockers as shown.

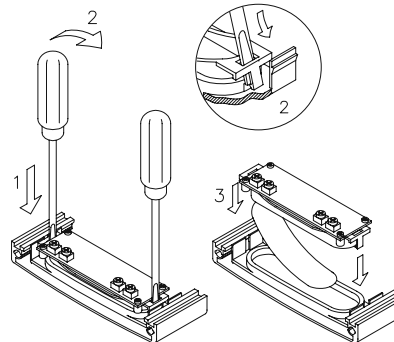


Link the sound module with the EL500SE microprocessed circuit by using the supplied flat cable.



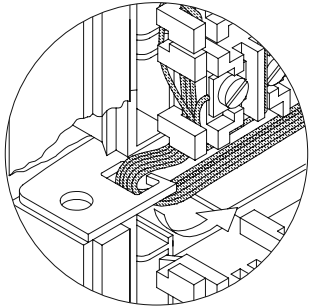
## P

lace the label (informative window).



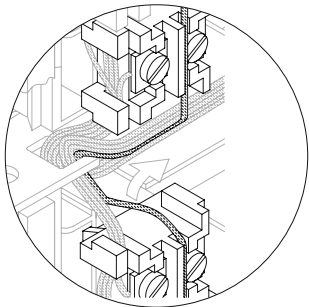
Before connecting the circuit of the informative window (if it exists) for the indication of busy system, should place the identification label. insert a flat screwdriver to lever the flange to access to the place of the label. Once put the label replace the circuit.

## Push buttons wiring.



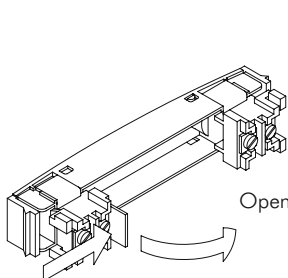
For a quality finish, pass the push buttons wires through the spacer hole of the closest module. It's recommended to use wires of less than 0,25mm<sup>2</sup> section.

Twist the call wires as shown. The call wires will be connected to the EL500SE microprocessed circuit or to the corresponding EL516SE push buttons encoder.

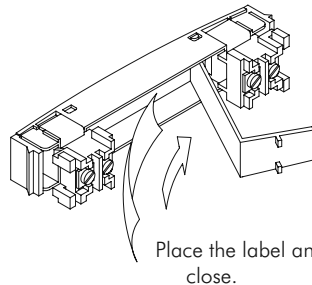


**IMPORTANT:** link the push buttons common terminal of the several push buttons modules. The common terminal of the push buttons contained in a module are linked from factory. The CP terminal of the EL500SE microprocessed circuit must be connected at the push buttons common and to the CP terminal of the corresponding EL516SE encoder circuit (if it exists).

## Place the nameplate labels.

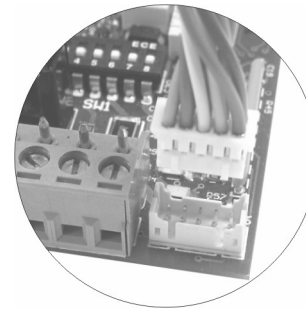


Open the label holder.



Place the label and close.

## Push buttons wiring.

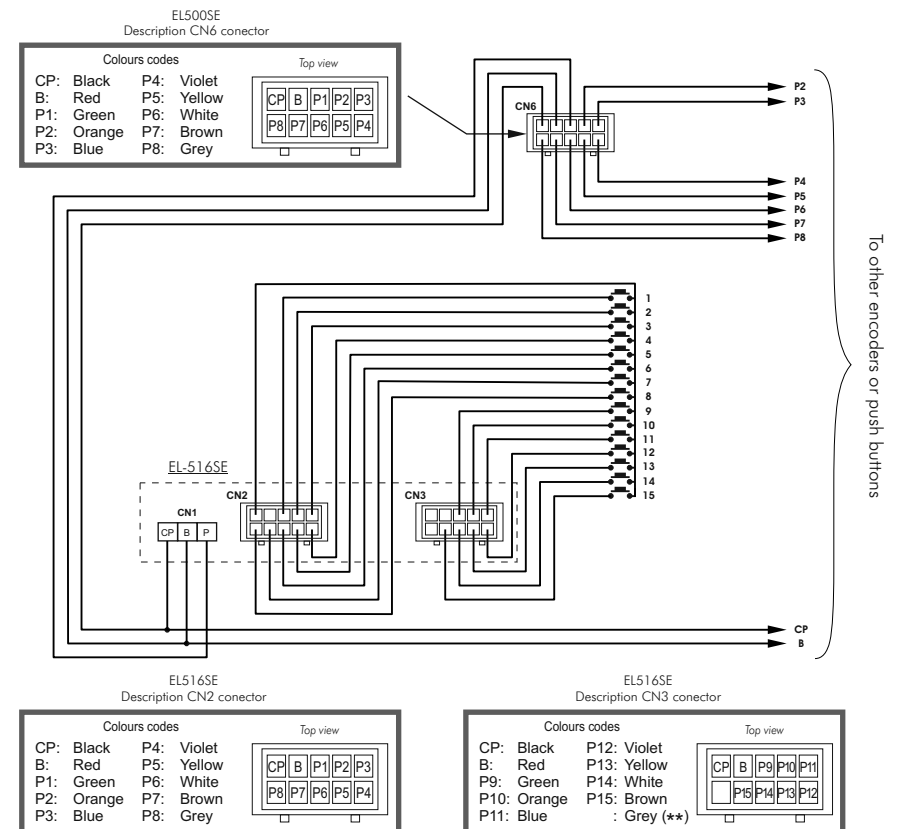


Plug the push buttons connection cable to the CN6 connector of the EL500SE microprocessor circuit, this cable has 10 conductors (P1 to P8, B and CP) for the connection of push buttons or EL516SE.

The CP terminal must be connected to the push buttons common terminal and to the CP terminal of the push buttons encoder circuits. Connect B terminal to the B terminal of the encoders.

Link the push button inputs (P1...P8) to the push buttons and/or to the encoder circuits (P) as shown in the example.

**IMPORTANT:** In case of more than one access, wire all the push buttons and modules EL-516SE following the same order in all the door panels.



(\*\*) No function.

## Push buttons limit.

The maximum number of push buttons to be connected depends on the number of installed EL516SE encoders, as it is shown on the following chart:

Without EL516SE circuit:	8
With 1 EL516SE circuit:	$7 + 15 = 22$
With 2 EL516SE circuits:	$6 + 15 + 15 = 36$
With 3 EL516SE circuits:	$5 + 15 + 15 + 15 = 50$
With 4 EL516SE circuits:	$4 + 15 + 15 + 15 + 15 = 64$
With 5 EL516SE circuits:	$3 + 15 + 15 + 15 + 15 + 15 = 78$
With 6 EL516SE circuits:	$2 + 15 + 15 + 15 + 15 + 15 + 15 = 92$
With 7 EL516SE circuits:	$1 + 15 + 15 + 15 + 15 + 15 + 15 + 15 = 106$
With 8 EL516SE circuits:	$0 + 15 + 15 + 15 + 15 + 15 + 15 + 15 + 15 = 120$

## Push buttons digital code.

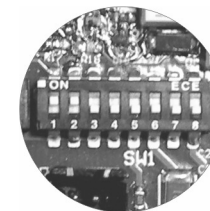
In case to combine these door panels with coded door panels or porter's exchange it will be necessary to know these codes for a properly system configuration.

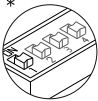
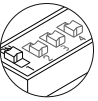
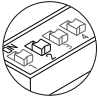
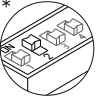
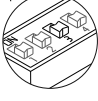
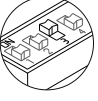
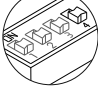
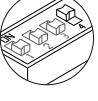
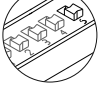
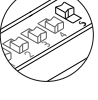
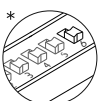
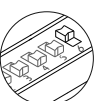
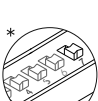
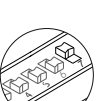
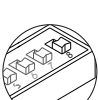
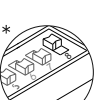
The codes shown on the first column (shadowed) correspond with the push buttons directly connected to the corresponding terminal on the CN6 terminal connector of the EL500SE circuit, or with the terminal 1 of its corresponding EL516SE encoder.

		EL516SE terminals														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EL500SE terminals	P1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	P2	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	P3	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	P4	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	P5	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	P6	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
	P7	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
	P8	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120

## Description of the SW1 configuration dip-switch of the EL500SE microprocessor module.

The SW1 configuration dip-switch is located at the right side of the circuit. It is accessed by opening the terminal connection block protection cover.

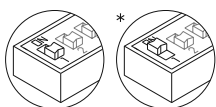
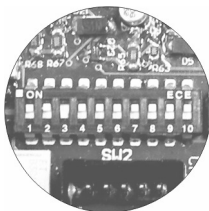


- \*   Placed to OFF if the EL500SE microprocessor module is configured as EL500 operating mode.  
Set to ON if the EL500SE microprocessor module is configured as EL501 operating mode (general door panel).
- \*   Selects the door opening time, done from the external push button ('AP' terminal), see page 150.  
Placed to ON: door opening timed at 3 seconds.  
Set to OFF: door opening timed at 15 seconds.
- \*   Selects the type of cable to be used for the video signal.  
Placed to OFF: coaxial cable RG-59 o RG-11.  
Set to ON: twisted pair.
- \*   Selects if the door panel has telecamera or not. In case of door panels without telecamera (EL540 sound module) set to ON.
- \*   **Plus system**, loads the installation with a communications resistor **Plus**. For a proper system operation, placed to ON only in the closest door panel to the backbone installation or in the general door panel (if exists), set the rest to OFF.
- \*   **Uno System**, loads the installation with a communications resistor **Uno**. For a proper system operation, set to ON only in the closest door panel to the backbone installation, placed the rest to OFF.  
**With digital repeater RD Plus/UnoSE:**  
In the backbone installation or after the inner door panel in systems with general door panels, placed the door panel/s to OFF.
- \*   Set to ON so that the volume tone emitted by the door panel: (call reception, busy system and lock release) are **HIGH**, or placed to OFF if a **LOW** volume tone is desired.
- \*   Placed to ON, the calls made on the door panel will be transferred to the porter's exchange (if exists). Set to OFF, the call is received in the apartment.  
In general door panels systems with porter's exchange, this function is only applicable to the general door panels not to the inner door panel/s.

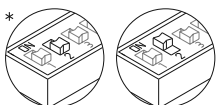
\* Factory default

**D**escription of the SW2 configuration dip-switch of the EL500SE microprocessor module.

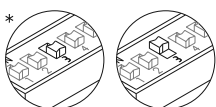
The SW2 configuration dip-switch is located in the center of the circuit. It is accessed by opening the terminal connection block protection cover.



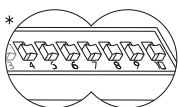
Allows to activate the autoswitch-on function (audio-video communication without previous call) at the door panel that has this switch to ON position. In systems with several door panels activate this function only in one of them; in systems with general door panel this function can be activated in one door panel of each inner backbone (building).



Set to ON for monitor or telephones programming. Once the programming progress is finished return the switch to OFF position. The programming process is described on pages 128 (monitors), 132 and 136 (telephones). In general door panel (EL501 mode), set to ON for general door panel push buttons programming or backbone (building) monitor/telephones. The programming process is described on pages 118 to 120. Once the programming progress is finished return the switch to OFF position.



Set to OFF in case of a master door panel. Each system must have only one master door panel; the rest must be slaves (ON). In systems with general door panel, set as master one door panel of each inner backbone (building) and the general door panel as slave. Of this way, the user will be able to distinguish since door panel are calling him.



Switches number 4 to 10 set the building code. In backbones with several door panels, set the same code in all the panels; in systems with general door panel, set different codes for each inner backbone (building). Set a code between 1 and 120 for inner backbones (up to 127 with coded panel) and a code 0 (Factory default) for general door panel/s. To set the code use binary coding as shown on the next paragraph.

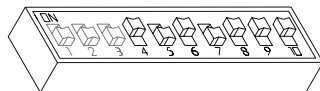
\* Factory default

**B**inary coding of the SW2 configuration dip switch of the EL500SE microprocessor module.

The switches set to OFF have null value. The values of the switches set to ON are shown in the enclosed chart.

The backbone code will be calculated as the sum result of the switches values set to ON.

Switch number:	4	5	6	7	8	9	10
ON value:	64	32	16	8	4	2	1



Example:  $64 + 0 + 16 + 0 + 4 + 2 + 1 = 87$

**G**eneral door panel (programming modes).

Configure the microprocessor module of the general door panel in EL501 mode, (see page 116).

The general door panel permits the following programming modes:

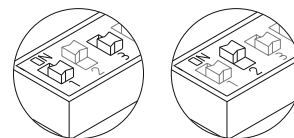
- ☞ Programming the push button (by call of monitor).
- ☞ Programming the push button (with a backbone code).
- ☞ Programming the push button (with a monitor/telephone code).
- ☞ Programming the monitor/telephone.

**P**rogramming the push buttons of the general door panel.

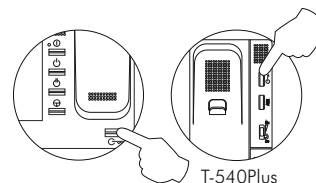
### Programming the push button (by call of monitor/telephone):

This programming mode allows to assign a monitor / telephone (programmed) to the push button of the general door panel that it wishes to call.

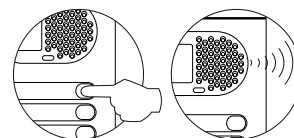
Before the monitors/telephones of the inner door panel/s must be programmed, see page 128 (monitors), 132 and 136 (telephones).



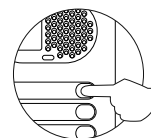
Locate the SW2 configuration dip switch of the general door panel to program, placed in the center of the EL500SE circuit. With the switches 1 and 3 to OFF, set the switch 2 to ON: to show that the system is ready for programming, the general door panel will reproduce a tone.



(\*) Pick up the monitor/telephone handset of the apartment to program and press the door release push button until to establish communication of audio with the general door panel.



Press the general door panel push button that will call to this monitor or telephone. At this moment the general door panel will reproduce a tone. To finish the push button programming, replace the monitor/telephone handset; to show that the push button has been successfully programmed, the general door panel will reproduce a tone.



Make a call to check that the push button has been successfully programmed. Repeat these steps to program the rest of push buttons. Once the programming has been finished, set to OFF the programming switch. If you don't, the general door panel will reproduce a tone to advise that the system is still into programming mode.

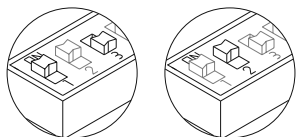
**IMPORTANT:** Before programming the general door panel push buttons, switch off the porter's exchange (if exists).

(\*) With Szena Plus SE monitor, only press the door release push button during 2 seconds.

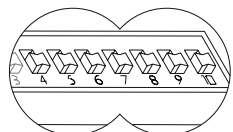


**Programming the push button (with a backbone code):**

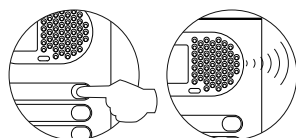
This programming mode allows to assign a backbone code to push button of the general door panel.



Locate the SW2 configuration dip switch of the general door panel to program, placed in the center of the EL500SE circuit. With the switch 1 to ON and 3 to OFF, set the switch 2 to ON: to show that the system is ready for programming, the general door panel will reproduce a tone.



Define a backbone code to program with dip switches Sw2-4 to Sw2-10. Set a code between 1 and 120. To set the code use binary coding, (see page 117).

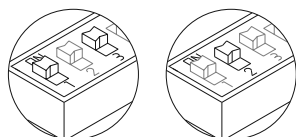


Press the general door panel push button that is wished has this backbone code. At this moment the general door panel will reproduce a tone, confirming that the push button has been successfully programmed.

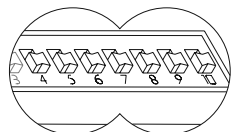
Repeat these steps to program the rest of push buttons. Once the programming has been finished, set to OFF the programming switch. If you don't, the general door panel will reproduce a tone to advise that the system is still into programming mode.

**Programming the push button (with a monitor/telephone code):**

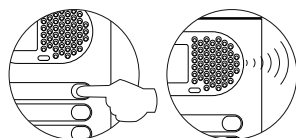
This programming mode allows to assign a monitor/telephone code to push button of the general door panel.



Locate the SW2 configuration dip switch of the general door panel to program, placed in the center of the EL500SE circuit. With the switches 1 and 3 to ON, set the switch 2 to ON: to show that the system is ready for programming, the general door panel will reproduce a tone.



Define a monitor/telephone code to program with dip switches Sw2-4 to Sw2-10. Set a code between 1 and 120. To set the code use binary coding, (see page 117).



Press the general door panel push button that is wished has this monitor/telephone code. At this moment the general door panel will reproduce a tone, confirming that the push button has been successfully programmed.

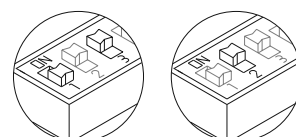
Repeat these steps to program the rest of push buttons. Once the programming has been finished, set to OFF the programming switch. If you don't, the general door panel will reproduce a tone to advise that the system is still into programming mode.

**P**rogramming the monitors/telephones from a General door panel.

**Programming the monitor/telephone:**

This programming mode allows to assign to a monitor / telephone a push button of the general door panel that it wishes to call.

Before the push button of the general door panel must be programmed with backbone and monitor/telephone code, (see page 119).



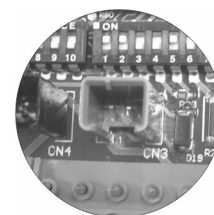
Locate the SW2 configuration dip switch of the general door panel to program, placed in the center of the EL500SE circuit. With the switch 1 to OFF and 3 to ON, set the switch 2 to ON: to show that the system is ready for programming, the general door panel will reproduce a tone.

Then program the monitor/telephone, as it is described in the page 128 (monitor), 132 and 136 (telephone), (see manual T1ML if the monitor/telephone is Tekna Uno, T-540 Uno or T-740 Uno).

**Bear in mind the configuration dip switch (as it is described in the previous step).**

## DOOR PANEL INSTALLATION

**I**nformative window connection.



The EL500SE microprocessor module supplies a cable with connector for the indication of busy system.

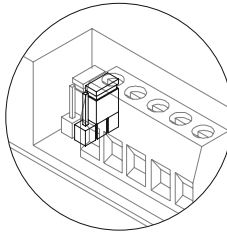
Insert the side of the cable that takes the connector in the connector CN3 of the EL500SE microprocessor module. It is accessed by opening the terminal connection block protection cover.

Connect the red cable to the terminal 1 of the informative window circuit and the white cable to the terminal 2 (if the informative window exists).

## Lamps wiring.

Once the nameplate labels are placed, wire the lamps from different modules and connect them to terminals L1 and L2 of the sound module.

If the number of door panel lamps is higher than 6, connect a TF-104 transformer between ~1 and ~2 terminals of the sound module and change JP2 jumper position.



**NOTE:** Don't change JP1 jumper position. JP1 and JP2 jumpers are placed on the left side of the sound module terminal connector.

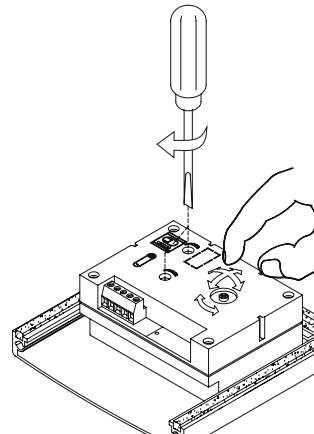
If the TF-104 transformer with alternating current lock release is also used, wire ~1/~2 terminals of the sound with CV1/CV2 terminals respectively of the EL500SE module.

## Final adjustments.

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

The telecamera has a pan and tilt mechanism built in to adjust the telecamera position.

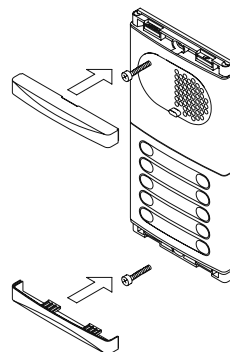
In case of low light conditions, an external illumination can be activated by connecting a SAR-12/24 relay between terminals '+H' and 'L2' of the sound module.



## Close the door panel.

Fix the door panel by using the supplied screws.

Finish the door panel assembly by pressing the closing heads.



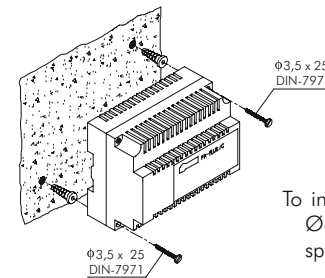
## Installing the FA-PLUS and FA-PLUS/C power supplies.

Install the power supply in a dry and protected place without risk of drip or water projections.

To avoid an electrical shock, neither remove the primary protection cover nor handle the connected wire in the terminals.

The installation and handling of these equipments must be performed by authorised personnel and without the power connected.

To avoid damage, the power supply has to be firmly fixed.



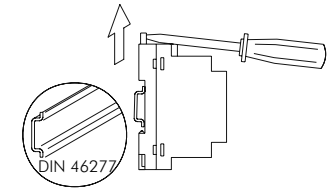
It's recommended to protect the power supply by using a thermo-magnetic circuit breaker. Use a ground connection with FA-Plus power supply.

To install the power supply directly on the wall, drill two holes of Ø6mm. and insert the wallplugs. Fix the transformer with the specified screws.

The power supply can be installed on a DIN 46277 guide simply pressing it.

To disassemble the power supply from the DIN guide, use a plain screwdriver to lever the flange as shown on the picture.

The FA-Plus/C model uses 6 units over DIN guide and 10 units the FA-Plus model.



**IMPORTANT:** the maximum number of units that can be connected to a FA-Plus/C power supply is 10, and 50 units in case of a FA-Plus model. Link power supplies to connect more units than the specified as it's shown on page 149.

**Replace the protection cover once the input terminals have been wired.**

## Lock release installation.

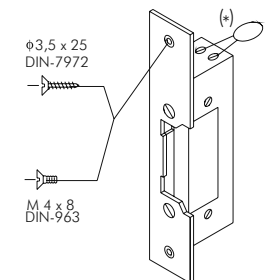
If the lock release will be installed in a metal door, use a Ø3,5mm. drill and tap the hole. In case of wood door, use a Ø3mm. drill.

### IMPORTANT:

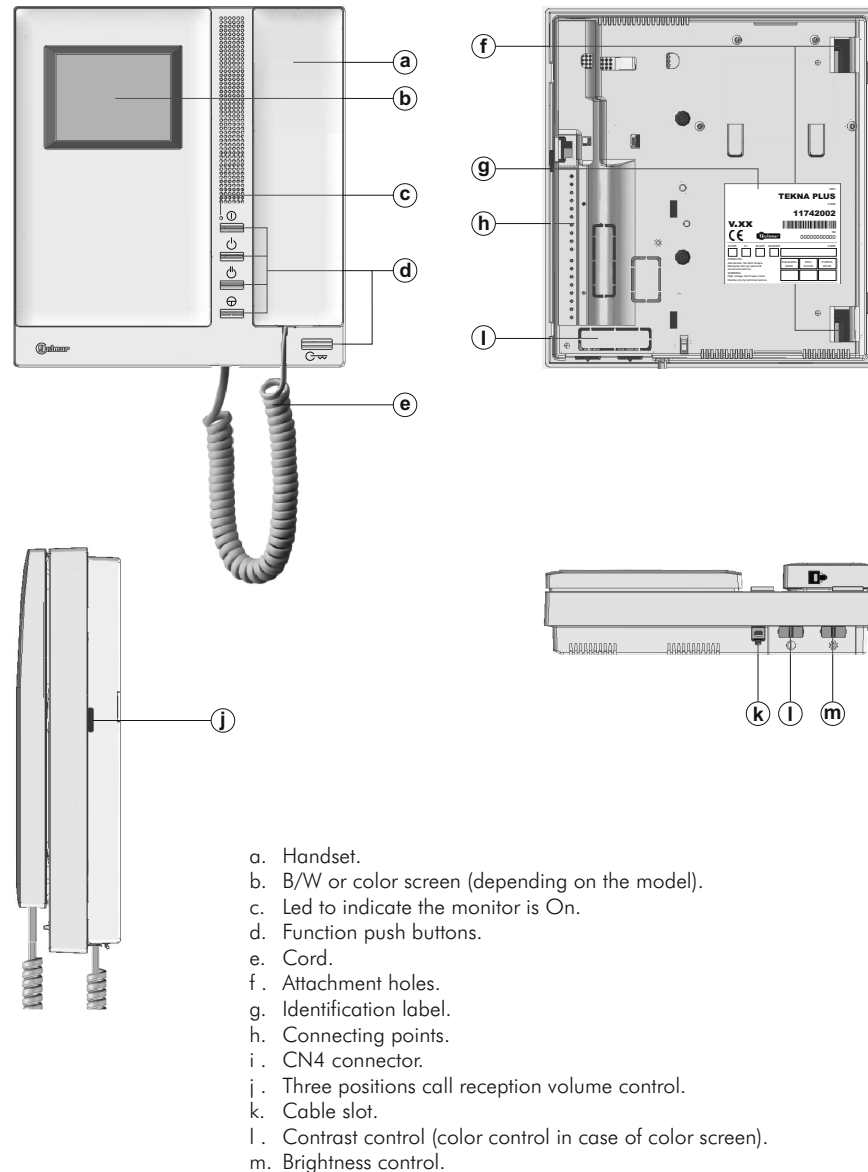
The lock release must be of 12Vd.c. or a.c.

See page 149 (a.c. lock releases) and page 137 to 148 (d.c lock releases).

(\*) In case to connect an a.c. lock release, place the varistor that is supplied with the EL500SE microprocessor circuit on the lock release terminals directly. (Varistor code: 50170155).



## Description of the Tekna Plus monitor.



## Function push buttons.

- On-Off push button. After any monitor reset and during the next 45 seconds, all the monitor functions will be disabled, with the exception of call reception.
- If the handset is on the cradle allows the activation of an optional second camera (\*). If not, allows to make an intercom call or to activate the second camera (\*).
- If the handset is on the cradle allows the activation of an optional device. If not, allows to call to a slave porter's exchange (\*) or to activate the optional device.
- If the handset is on the cradle allows to see the picture from the master door panel. If not, allows to establish audio and video communication with the door panel that has been configured with the autoswitch-on function. This function is disabled if a communication is already established.
- If the handset is on the cradle sends a panic call to the porter's exchanges that have enabled the reception of this type of call. If not, allows to call to the master porter's exchange. During call reception and communication progresses allows the lock release activation.

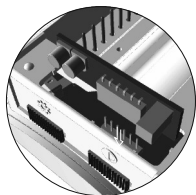
(\*) Second camera activation and call to a slave porter's exchange functions require an internal modification of the monitor. If any of these functions are required, contact with your nearest authorized distributor.  
Second camera activation disables the intercomm function and call function to a slave porter's exchange disables optional device function.

## Description of the identification label.

<b>TEKNA PLUS</b>				REF:
CODE				
<b>11742002</b>				
V.XX				
CE				
Golmar				
SN				
00000000000				
CODE				
INTER	A1	SLAVE	MASTER	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<small>ATENCIÓN</small> <small>Alta tensión. No abrir la tapa.</small> <small>Manejar sólo por personal</small> <small>del servicio técnico.</small>				<small>ESCALERA</small> <small>STAIR</small>
<small>WARNING</small> <small>High voltage. Don't open cover.</small> <small>Handle only by technical service.</small>				<small>PISO</small> <small>FLOOR</small>
				<small>PUERTA</small> <small>DOOR</small>

For an easiest repair, replacement or increase of the existing monitors, fill the identifying label information.

MASTER: master monitor.  
SLAVE: slave monitor.  
INTER: slave monitor with intercom function.  
A1: monitor connected to an auxiliary device.  
CODE: push button code (see page 115).  
STAIR: backbone code (building) (see page 117).

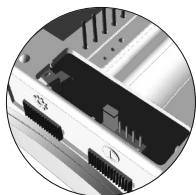


**E**L562 module for video installations with twisted pair cable.

Locate the CN4 connector, that's placed in the monitor base. Remove the existing jumper and plug the EL562 module.

NOTE: on this type of installations the EL500SE microprocessed circuit must be setting with SW1-3 to ON (page 116). Refer to the specific installation diagram.

**H**andling the end of line jumper.

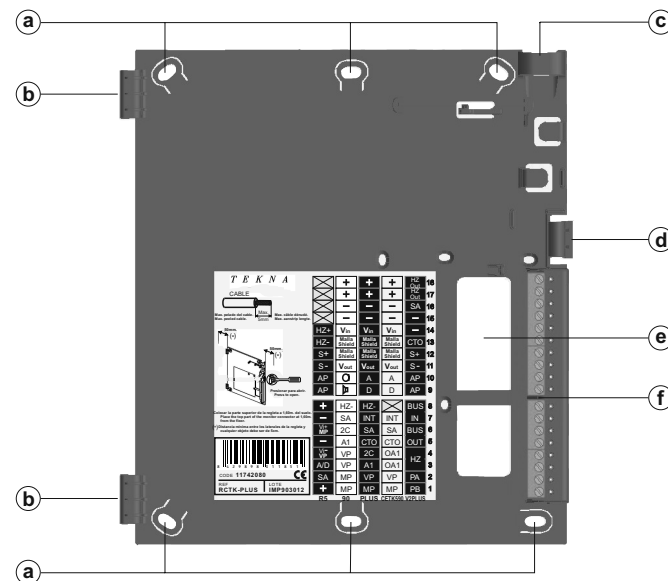


The end of line jumper is placed on the CN4 connector, that can be located on the monitor base.

In case of twisted pair cable installations, the end of line jumper is placed in the EL562 module, also located in the CN4 connector of the monitor base.

Do not remove the jumper on monitors where the video cable finish. Remove the jumper on monitors where the video cable continue.

**D**escription of the RCTK-PLUS monitor connector.



- a. Wall attachment hole (x6).
- b. Monitor attachment hook (x2).
- c. Vertical wiring input.
- d. Attachment clip.
- e. Wiring input hole.
- f. Installation terminals:

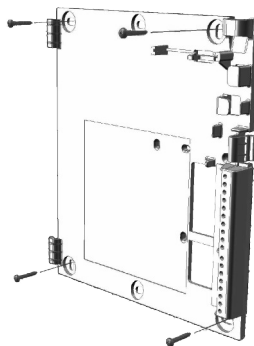
+, -:	positive, ground.
Vin :	video signal coaxial input.
Malla:	coaxial shield.
Vout :	video signal coaxial output.
A :	audio communication.
D :	digital communication.
HZ- :	door bell push button input.
INT :	intercom.
SA :	auxiliary calling device output.
CTO :	video distributor activation output.
2C :	2nd camera activation output.
A1 :	optional device activation output.
Vp, Mp :	twisted pair video signal.

Terminals +, - and Malla (shield) are duplicated for easiest cascade installation of parallel monitors or telephones. If the first monitor is not placed on the connector, cascade units will not be powered.

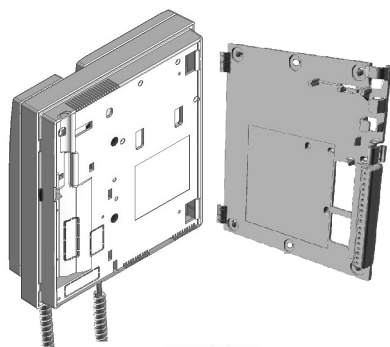
**F**ix the monitor connector to the wall.

Avoid to place the monitor near to heating sources, in dusty locations or smoky environments.  
To install the monitor directly over the wall, drill two holes of Ø6mm. and use the supplied screws.

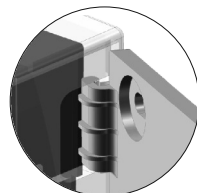
**The upper part of the monitor connector must be placed at 1,60m. height roughly. The minimum distance between the monitor connector and the closest object must be 5cm.**



**F**ix the monitor.

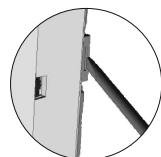
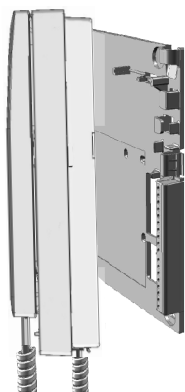


Place the monitor at right angles to the connector and align the attaching holes of the monitor with the attachment hooks of the connector, as it is shown on the drawing.



Lock out the monitor. Press the right side till the attachment clip locks the monitor firmly.

To disassemble the monitor from the connector, use a plain screwdriver to release the attachment clip. Remove the monitor from the connector, with special attention do not falls.

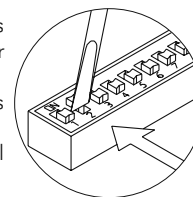


**P**rogramming the Tekna Plus monitors.

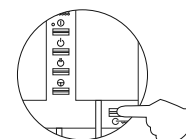
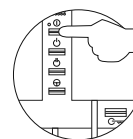
Set to ON the switch number 2 of the SW2 configuration dip switch, that's accessible in the EL500SE module by opening the terminal connector protection cover.

The door panel will reproduce a sound to advise that the system has entered into programming mode.

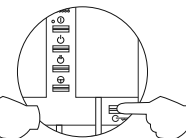
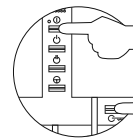
In systems with more than one door panel, the programming process shall be done on the master door panel only.



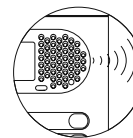
To program the monitor from a general door panel (if it exists), see page 120.



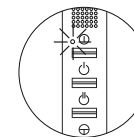
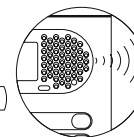
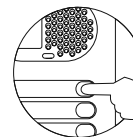
Switch off the monitor to be programmed.  
Once the monitor is off, press the door release push button.



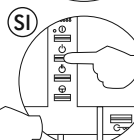
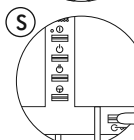
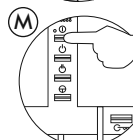
With the door release push button pressed switch on the monitor.



To show that the system is ready for programming, the door panel will reproduce a tone and the picture will appears on the monitor. At this moment, the door release push button can be released. Lift the handset to establish audio communication with the door panel.




Press the door panel push button that will call to this monitor. At this moment the door panel will reproduce a tone and the monitor led will blink.

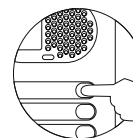


To program the monitor as **Master**, switch it off and on again.

To program it as **Slave**, press the door release push button.

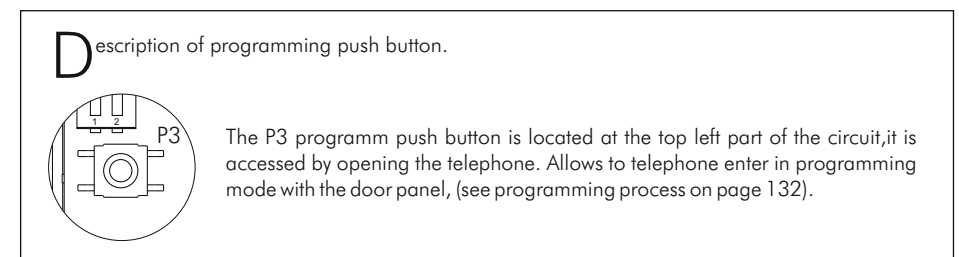
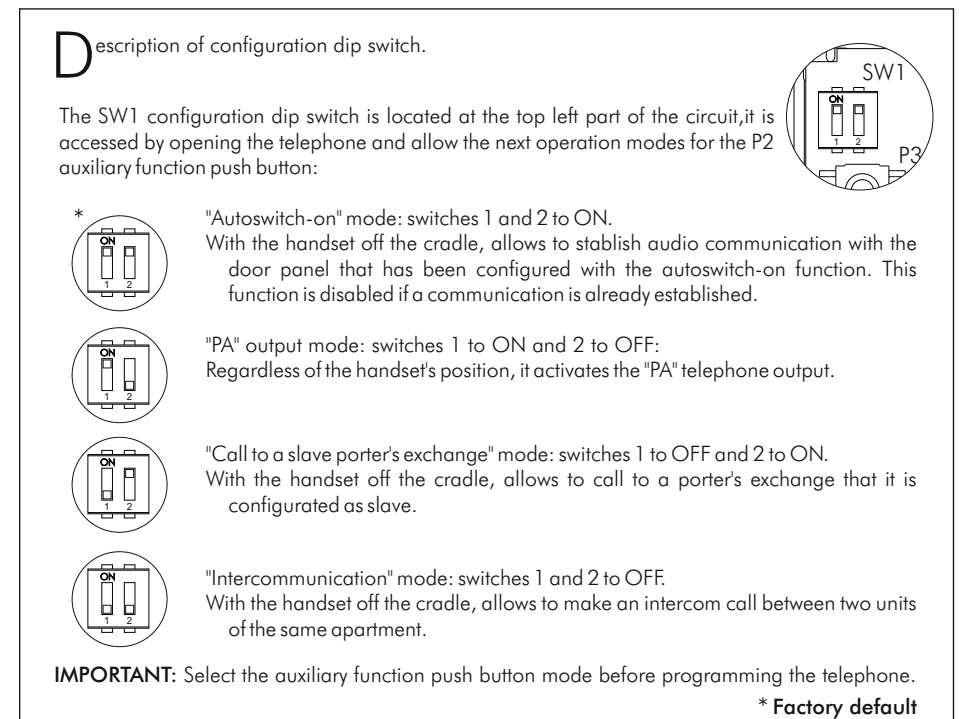
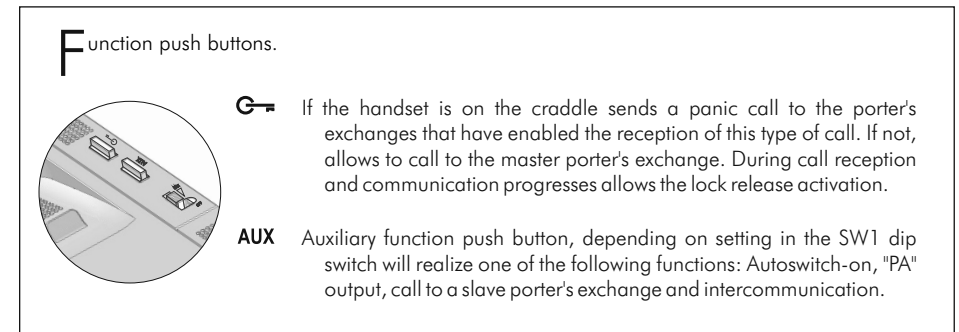
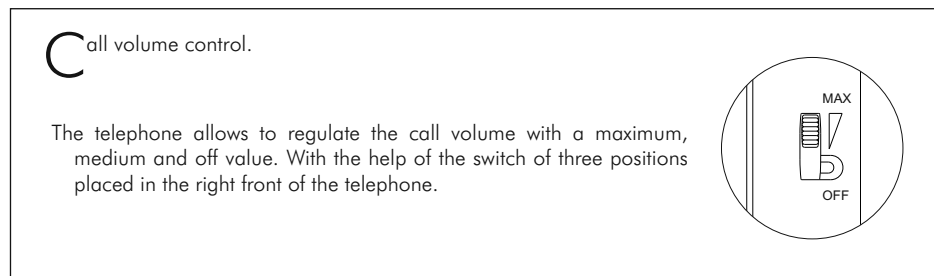
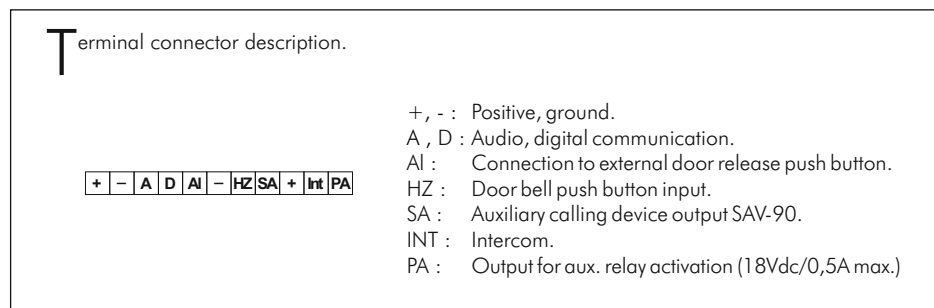
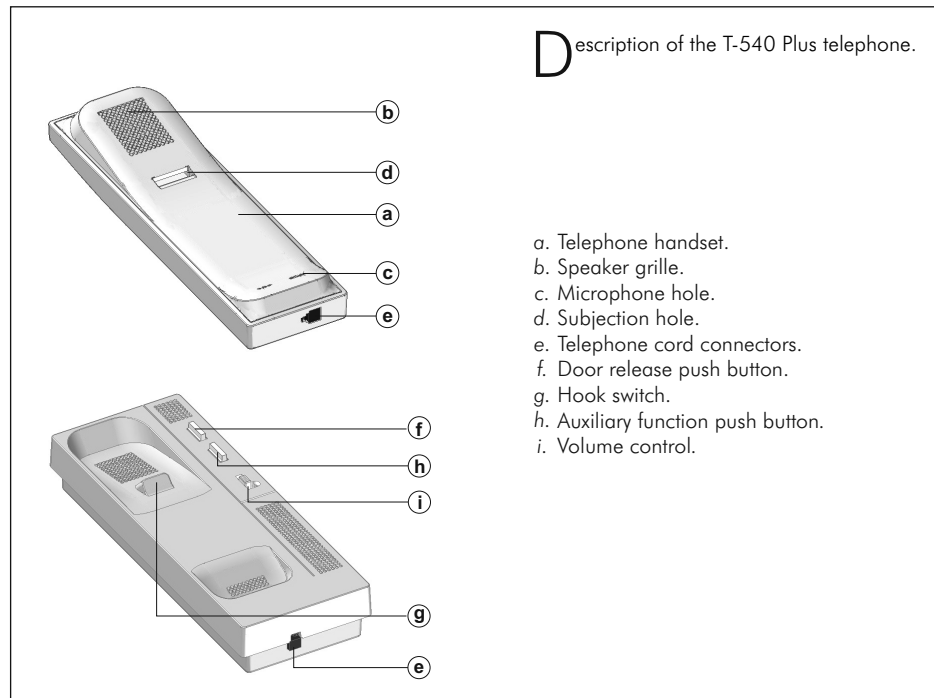
To program it as **Slave with intercom** function press the  push button.

Each apartment must have one master unit only; in case of parallel units configure them as slaves, both monitors or telephones.

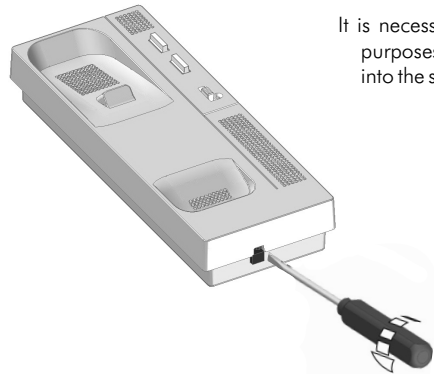


Make a call to check that the monitor has been successfully programmed.  
Repeat these steps to program the rest of monitors.

Once the programming has been finished, set to OFF the programming switch. If you don't, the door panel will reproduce a tone to advise that the system is still into programming mode.

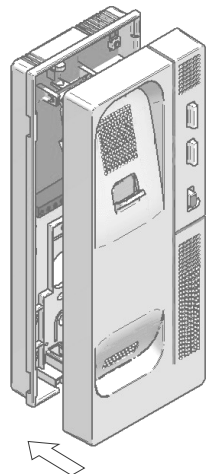
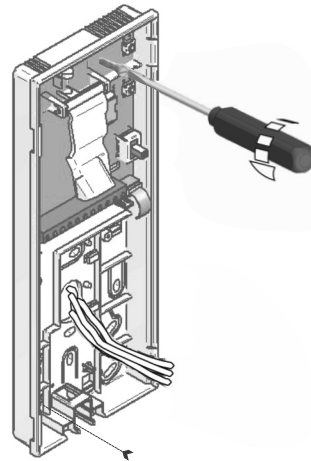


**F**ix the telephone to the wall.



It is necessary to open the telephone for wiring and fixing purposes. To open the telephone, insert a plain screwdriver into the slots and gently lever as shown in the drawing.

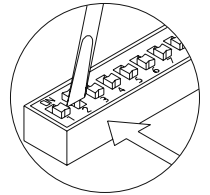
Avoid placing the telephone near sources of heat, in dusty locations or smoky environments. The telephone can be fixed using an electrical embedding box or directly on the wall, as shown on the picture. If the telephone will be installed directly over the wall, drill two holes of Ø6mm on the specified positions, using 6mm wall plugs and Ø3.5 x 25mm screws.



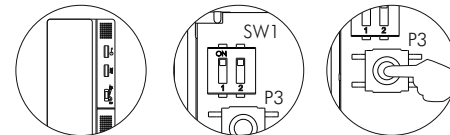
Pass the installation wires through the corresponding hole and connect them as shown on the installation diagrams. Close the telephone as shown on the picture. Once the telephone is closed, connect the handset using the telephone cord and put it on the cradle.

**P**rogramming the T-540 Plus telephones.

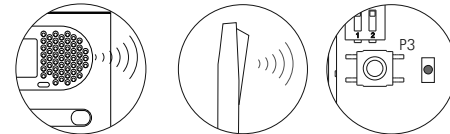
Set to ON the switch number 2 of the SW2 configuration dip switch, that's accessible in the EL500SE module by opening the terminal connector protection cover. The door panel will reproduce a sound to advise that the system has entered into programming mode. In systems with more than one door panel, the programming process shall be done on the master door panel only.



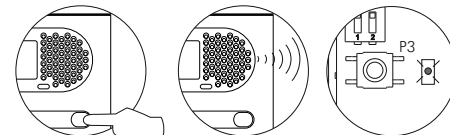
To program the telephone from a general door panel (if it exists), see page 120.



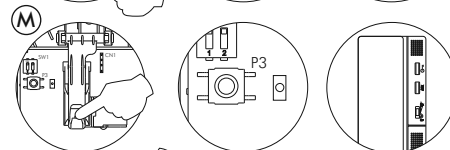
Open the telephone to programming (see page 131). Select in the SW1 dip switch the function mode for the auxiliary function push button (see page 130) and later press the P3 programming push-button.



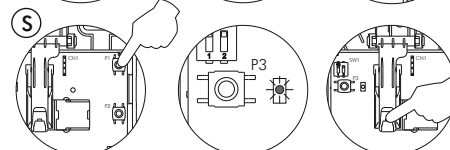
To show that the system is ready for programming, the door panel and the telephone's handset will reproduce a tone (the telephone led will light). Audio communication can be established.



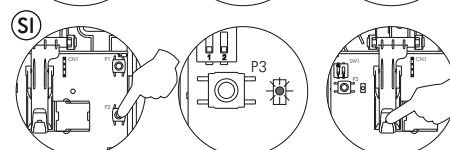
Press the door panel push button that will call to this telephone. At this moment both door panel and handset will reproduce tones (the telephone led will slow blink).



To program the telephone as **Master**, press the hook switch (the telephone led will off). Close the telephone.

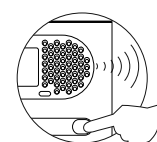


To program the telephone as **Slave**, press the P1 door release push button (the telephone led will quick blink) and later press the hook switch (the led will off). Close the telephone.

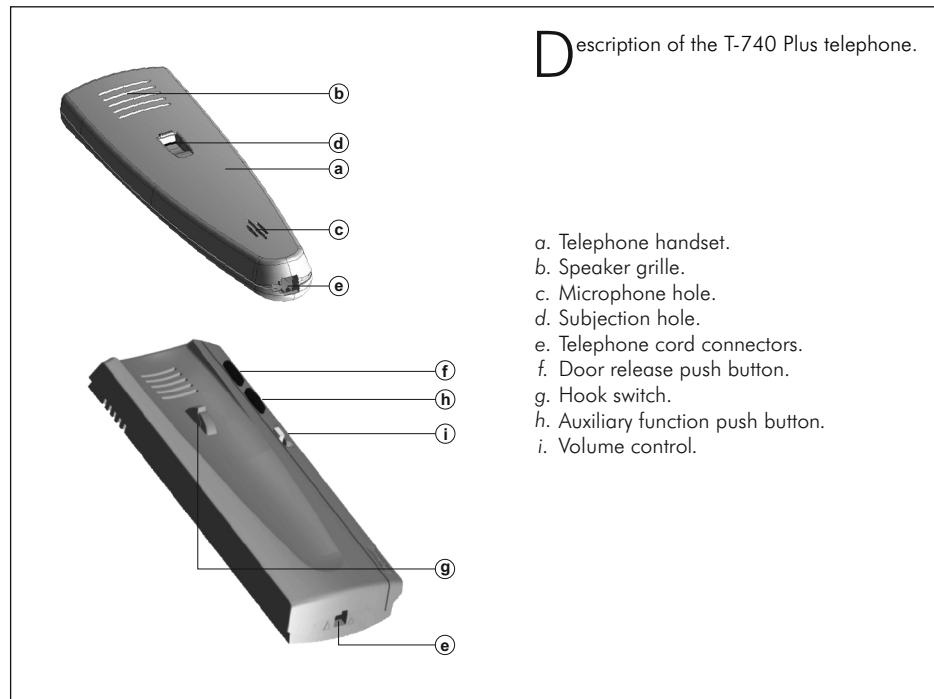


To program the telephone as **Slave + Intercom.**, press the P2 auxiliary function push button (the led will quick blink) and later press the hook switch (the led will off). Close the telephone.

Each apartment must have one master unit only; in case of parallel units configure them as slaves, both monitors or telephones.



Make a call to check that the telephone has been successfully programmed. Repeat these steps to program the rest of telephones. Once the programming has been finished, set to OFF the programming switch. If you don't, the door panel will reproduce a tone to advise that the system is still into programming mode.

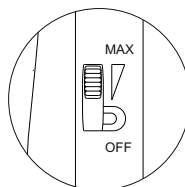


### Terminal connector description.

+ , - : Positive, ground.  
A , D : Audio, digital communication.  
AI : Connection to external door release push button.  
HZ : Door bell push button input.  
SA : Auxiliary calling device output SAV-90.  
INT : Intercom.  
PA : Output for aux. relay activation (18Vdc/0,5A max.)

### Call volume control.

The telephone allows to regulate the call volume with a maximum, medium and off value. With the help of the switch of three positions placed in the right front of the telephone.



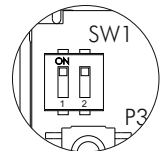
### Function push buttons.



- ☞ If the handset is on the cradle sends a panic call to the porter's exchanges that have enabled the reception of this type of call. If not, allows to call to the master porter's exchange. During call reception and communication progresses allows the lock release activation.
- ⏻ Auxiliary function push button, depending on setting in the SW1 dip switch will realize one of the following functions: Autoswitch-on, "PA" output, call to a slave porter's exchange and intercommunication.

### Description of configuration dip switch.

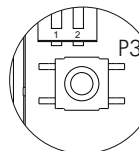
The SW1 configuration dip switch is located at the top left part of the circuit, it is accessed by opening the telephone and allow the next operation modes for the P2 auxiliary function push button:



- \* "Autoswitch-on" mode: switches 1 and 2 to ON.  
With the handset off the cradle, allows to establish audio communication with the door panel that has been configured with the autoswitch-on function. This function is disabled if a communication is already established.
- "PA" output mode: switches 1 to ON and 2 to OFF.  
Regardless of the handset's position, it activates the "PA" telephone output.
- "Call to a slave porter's exchange" mode: switches 1 to OFF and 2 to ON.  
With the handset off the cradle, allows to call to a porter's exchange that it is configured as slave.
- "Intercommunication" mode: switches 1 and 2 to OFF.  
With the handset off the cradle, allows to make an intercom call between two units of the same apartment.

**IMPORTANT:** Select the auxiliary function push button mode before programming the telephone.  
**\* Factory default**

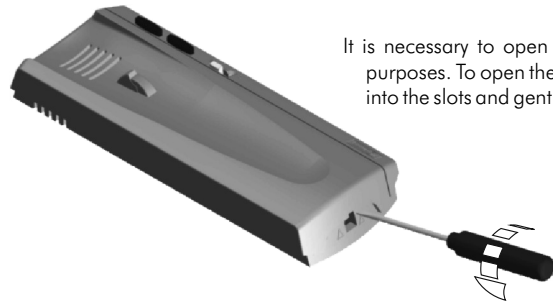
### Description of programming push button.



The P3 programm push button is located in the top part left of the circuit, it is accessed by opening the telephone. Allows to telephone enter in programming mode with the door panel, (see programming process on page 136).

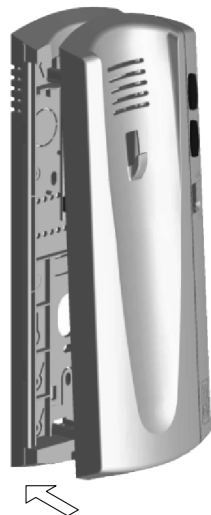


**F**ix the telephone to the wall.

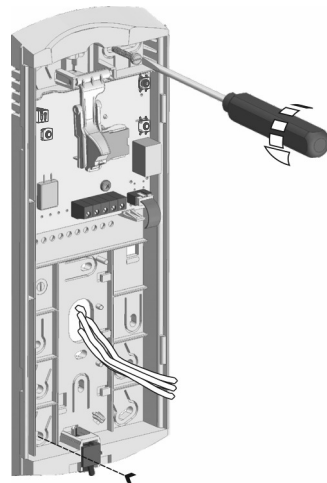


It is necessary to open the telephone for wiring and fixing purposes. To open the telephone, insert a plain screwdriver into the slots and gently lever as shown in the drawing.

Avoid placing the telephone near sources of heat, in dusty locations or smoky environments. The telephone can be fixed using an electrical embedding box or directly on the wall, as shown on the picture. If the telephone will be installed directly over the wall, drill two holes of Ø6mm on the specified positions, using 6mm wall plugs and Ø3.5 x 25mm screws.

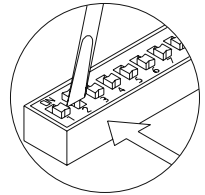


Pass the installation wires through the corresponding hole and connect them as shown on the installation diagrams. Close the telephone as shown on the picture. Once the telephone is closed, connect the handset using the telephone cord and put it on the cradle.

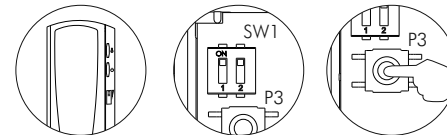


**P**rogramming the T-740 Plus telephones.

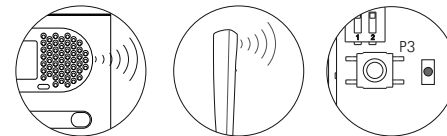
Set to ON the switch number 2 of the SW2 configuration dip switch, that's accessible in the EL500SE module by opening the terminal connector protection cover. The door panel will reproduce a sound to advise that the system has entered into programming mode. In systems with more than one door panel, the programming process shall be done on the master door panel only.



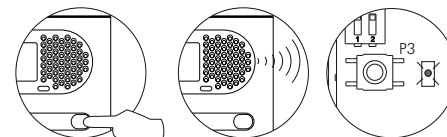
To program the telephone from a general door panel (if it exists), see page 120.



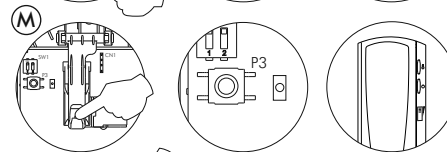
Open the telephone to programming (see page 135). Select in the SW1 dip switch the function mode for the auxiliary function push button (see page 134) and later press the P3 programming push-button.



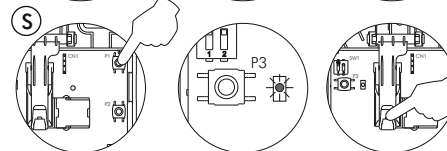
To show that the system is ready for programming, the door panel and the telephone's handset will reproduce a tone (the telephone led will light). Audio communication can be established.



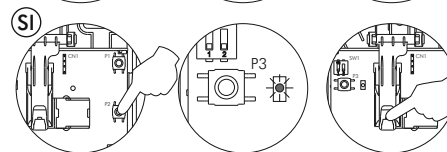
Press the door panel push button that will call to this telephone. At this moment both door panel and handset will reproduce tones (the telephone led will slow blink).



To program the telephone as **Master**, press the hook switch (the telephone led will off). Close the telephone.

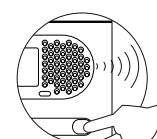


To program the telephone as **Slave**, press the P1 door release push button (the telephone led will quick blink) and later press the hook switch (the led will off). Close the telephone.

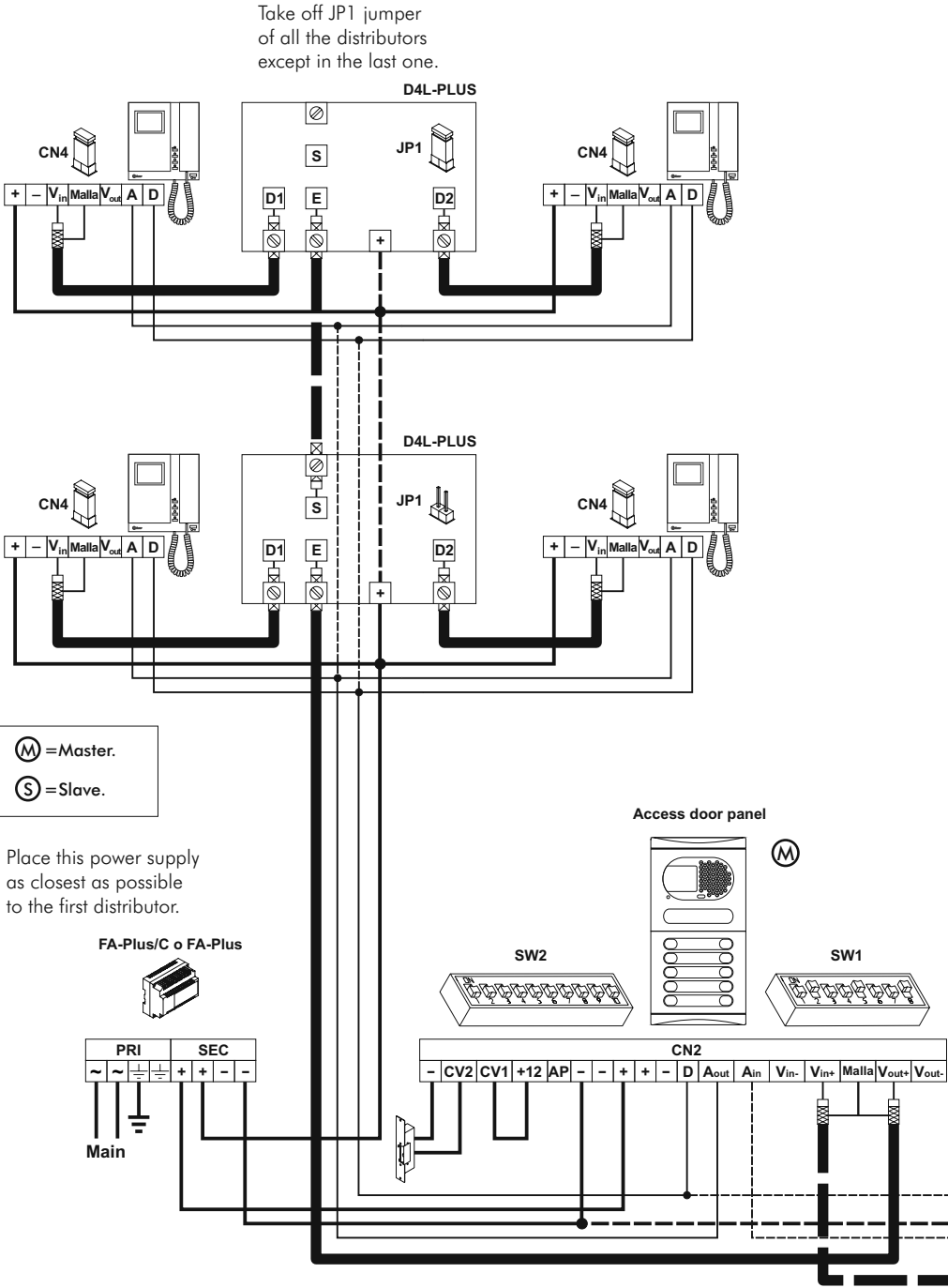


To program the telephone as **Slave + Intercom.**, press the P2 auxiliary function push button (the led will quick blink) and later press the hook switch (the led will off). Close the telephone.

Each apartment must have one master unit only; in case of parallel units configure them as slaves, both monitors or telephones.



Make a call to check that the telephone has been successfully programmed. Repeat these steps to program the rest of telephones. Once the programming has been finished, set to OFF the programming switch. If you don't, the door panel will reproduce a tone to advise that the system is still into programming mode.



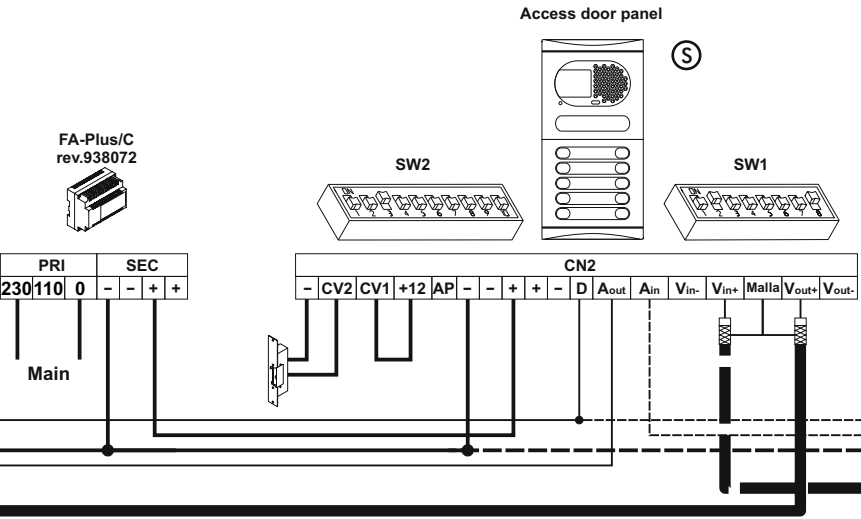
Video installation with coaxial cable.

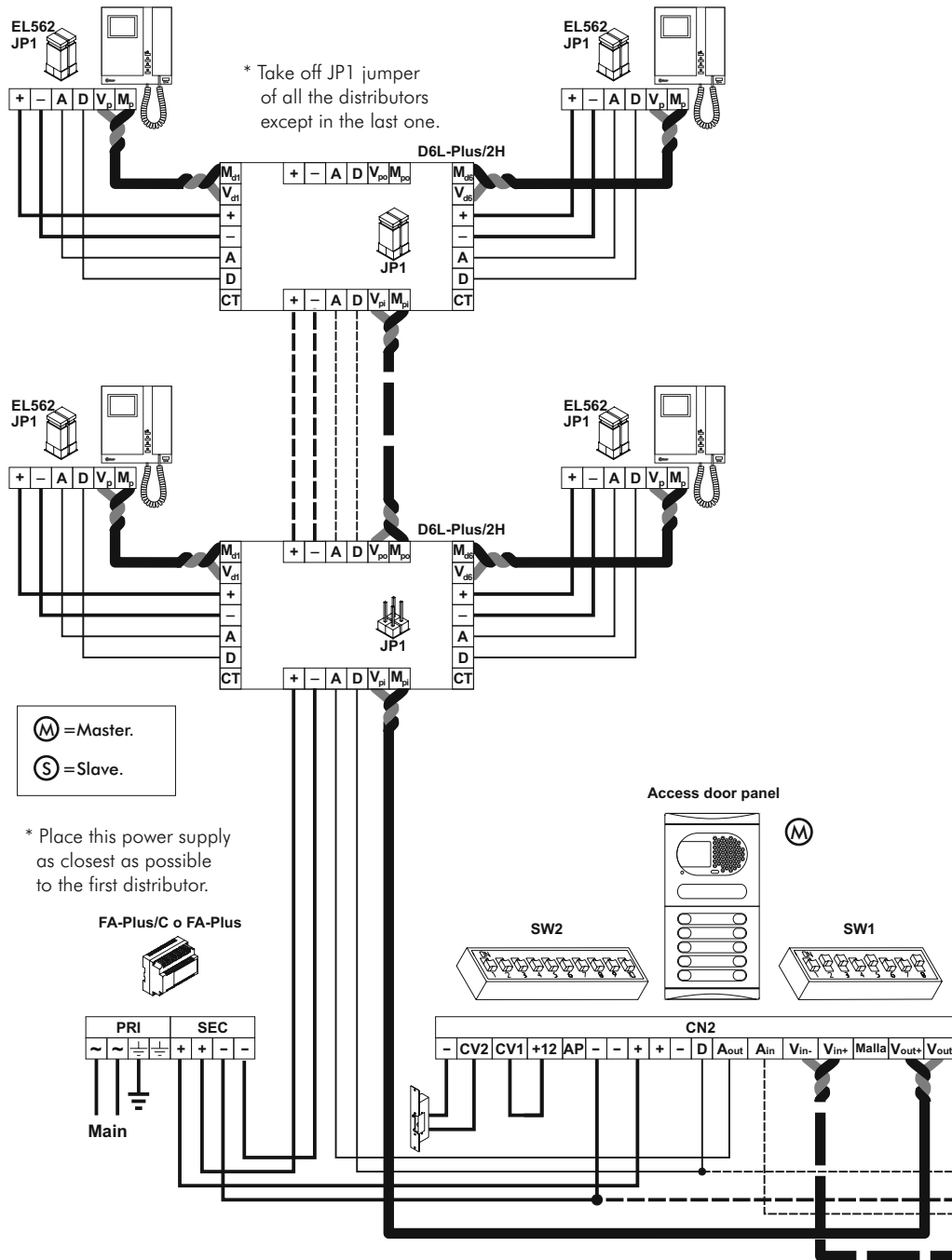
The installation diagram shows the connection of a video system with one or several door panels for the same building.  
If the system has one access door panel only, override the wiring to the second door panel.  
If the system has more than one access door panel, wire the second panel as shown on the diagram. In case of more than two door panels, wire them as the second is connected.

SECTIONS CHART	Distance	
	50m.	150m.
Terminal	50m.	150m.
+, -, CV1, CV2	1,00mm <sup>2</sup>	2,50mm <sup>2</sup>
A <sub>in</sub> , A <sub>out</sub> , A, D	0,25mm <sup>2</sup>	0,25mm <sup>2</sup>
V <sub>in+</sub> , V <sub>out+</sub> , V <sub>in-</sub> , V <sub>out-</sub>	*RG-59	*RG-59

Coaxial cable characteristics RG-59 B/U MIL C-17.

* ELECTRICAL CHARACTERISTICS	VALUES
Core max. electrical resistance to 20°C	
Copper core	≤ 158 Ω/Km
Copper shield	≤ 10 Ω/Km
Nominal capacitance	≤ 67pf/m
Characteristic impedance	75 ± 3 Ω
Velocity of Propagation	≥ 66,6 %





## Video installation without coaxial cable.

The installation diagram shows the connection of a video system with one or several door panels for the same building.

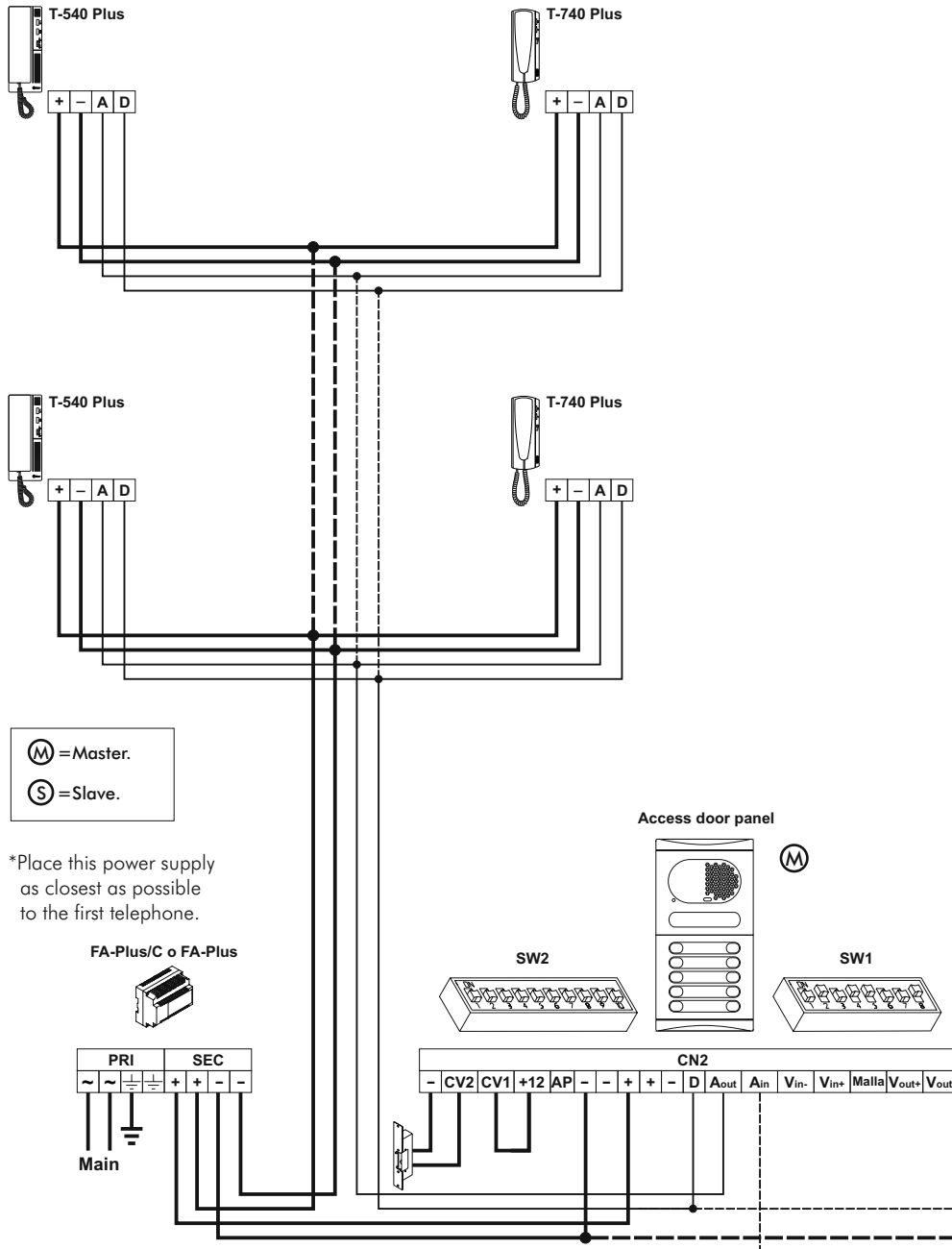
If the system has one access door panel only, override the wiring to the second door panel.

If the system has more than one access door panel, wire the second panel as shown on the diagram.

In case of more than two door panels, wire them as the second is connected.

**IMPORTANT:** For this type of installation, the door panels must have configured the switch n°.3 of the SW1 configuration dip-switch to ON in each (page 116) and the monitors must have an EL562 plugged in each (page 125).

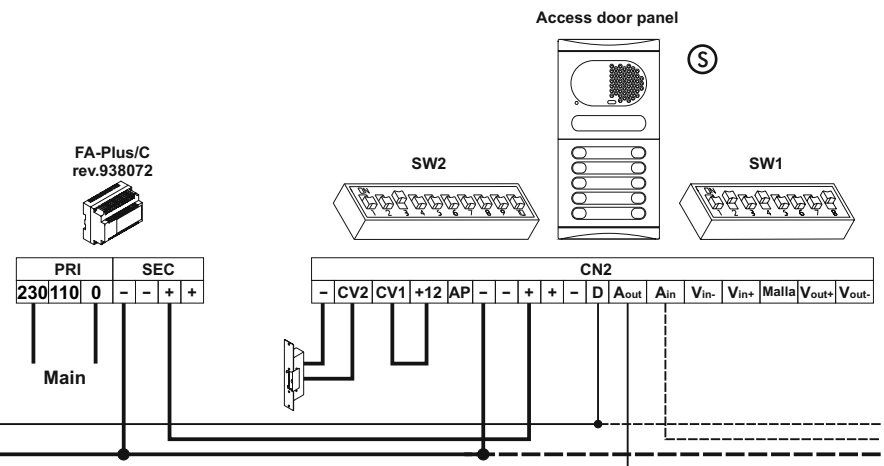
SECTIONS CHART	Distance	
	50m.	150m.
Terminal	50m.	150m.
+, -, CV1, CV2	1,00mm <sup>2</sup>	2,50mm <sup>2</sup>
A <sub>in</sub> , A <sub>out</sub> , A, D	0,25mm <sup>2</sup>	0,25mm <sup>2</sup>
V <sub>in</sub> , V <sub>out</sub> , V <sub>p,d</sub> , M <sub>p,d</sub>	CAT-5	CAT-5

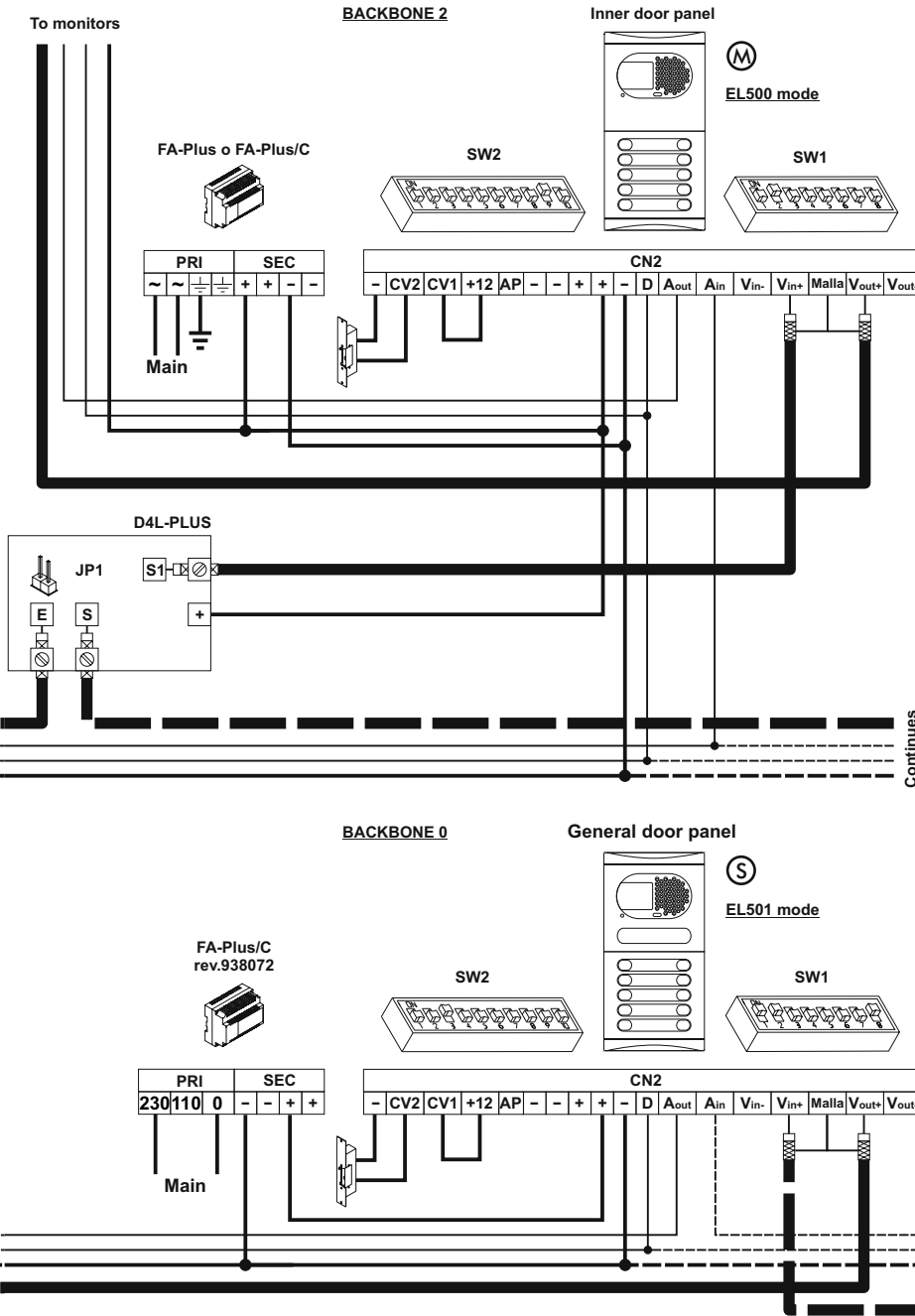
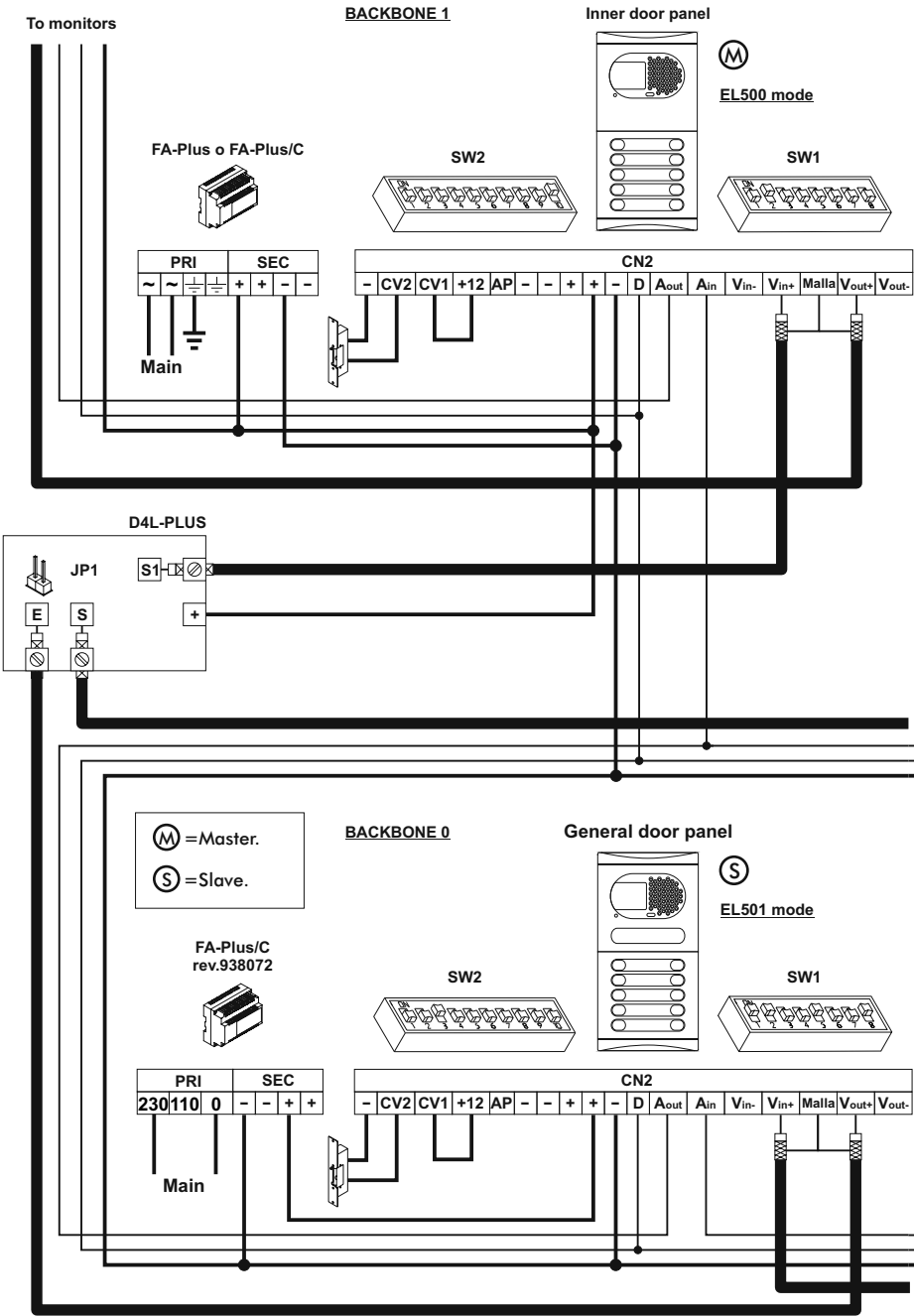


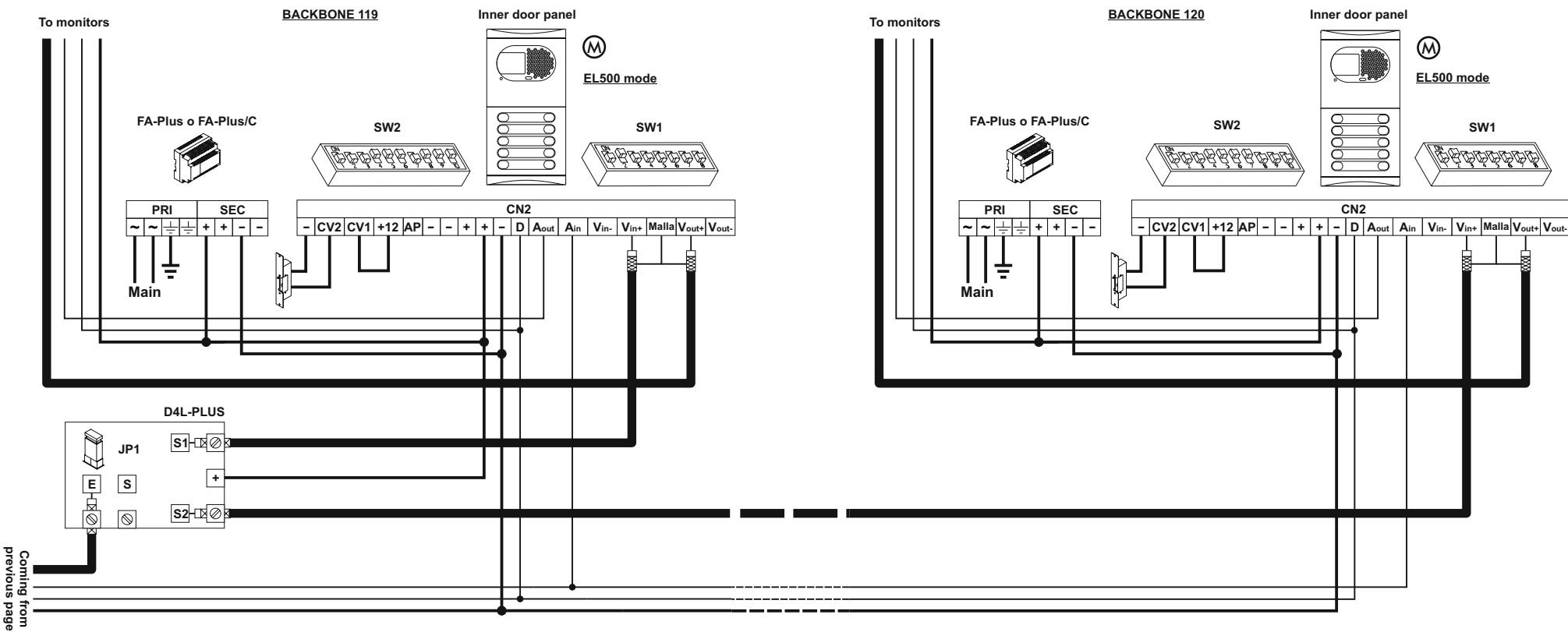
## Audio installation.

The installation diagram shows the connection of an audio system with one or several door panels for the same building.  
 If the system has one access door panel only, override the wiring to the second door panel.  
 If the system has more than one access door panel, wire the second panel as shown on the diagram.  
 In case of more than two door panels, wire them as the second is connected.

SECTIONS CHART	Distance	
	50m.	150m.
+, -, CV1, CV2	1,00mm <sup>2</sup>	2,50mm <sup>2</sup>
A <sub>in</sub> , A <sub>out</sub> , A, D	0,25mm <sup>2</sup>	0,25mm <sup>2</sup>



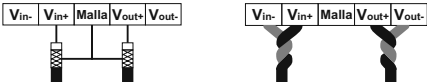




Video installation with general door panel to large residential complexes.

IMPORTANT NOTES:

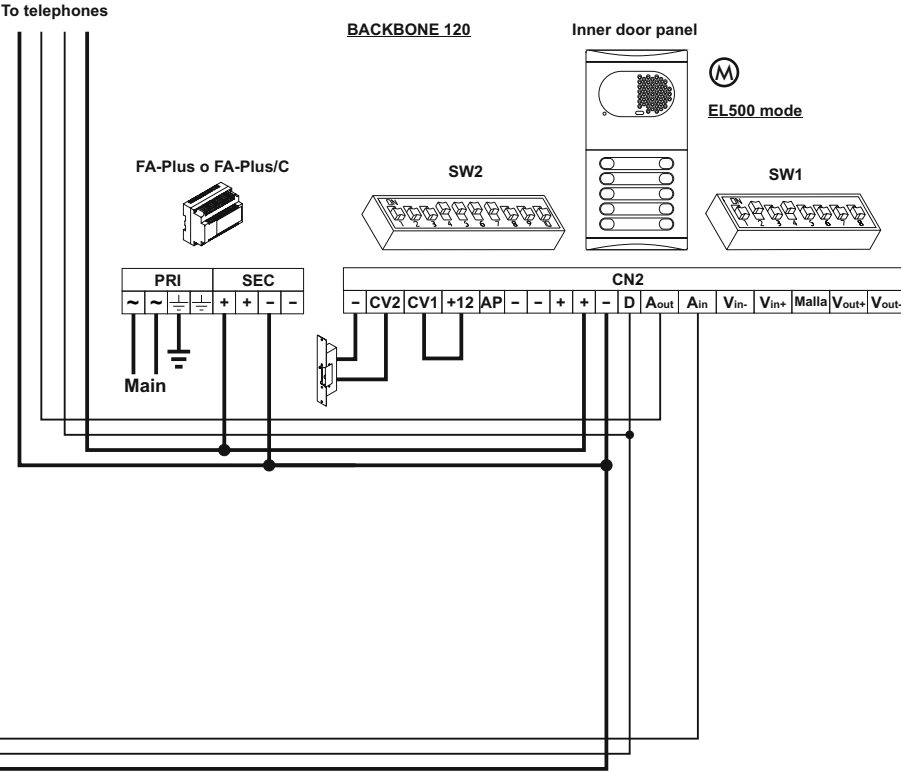
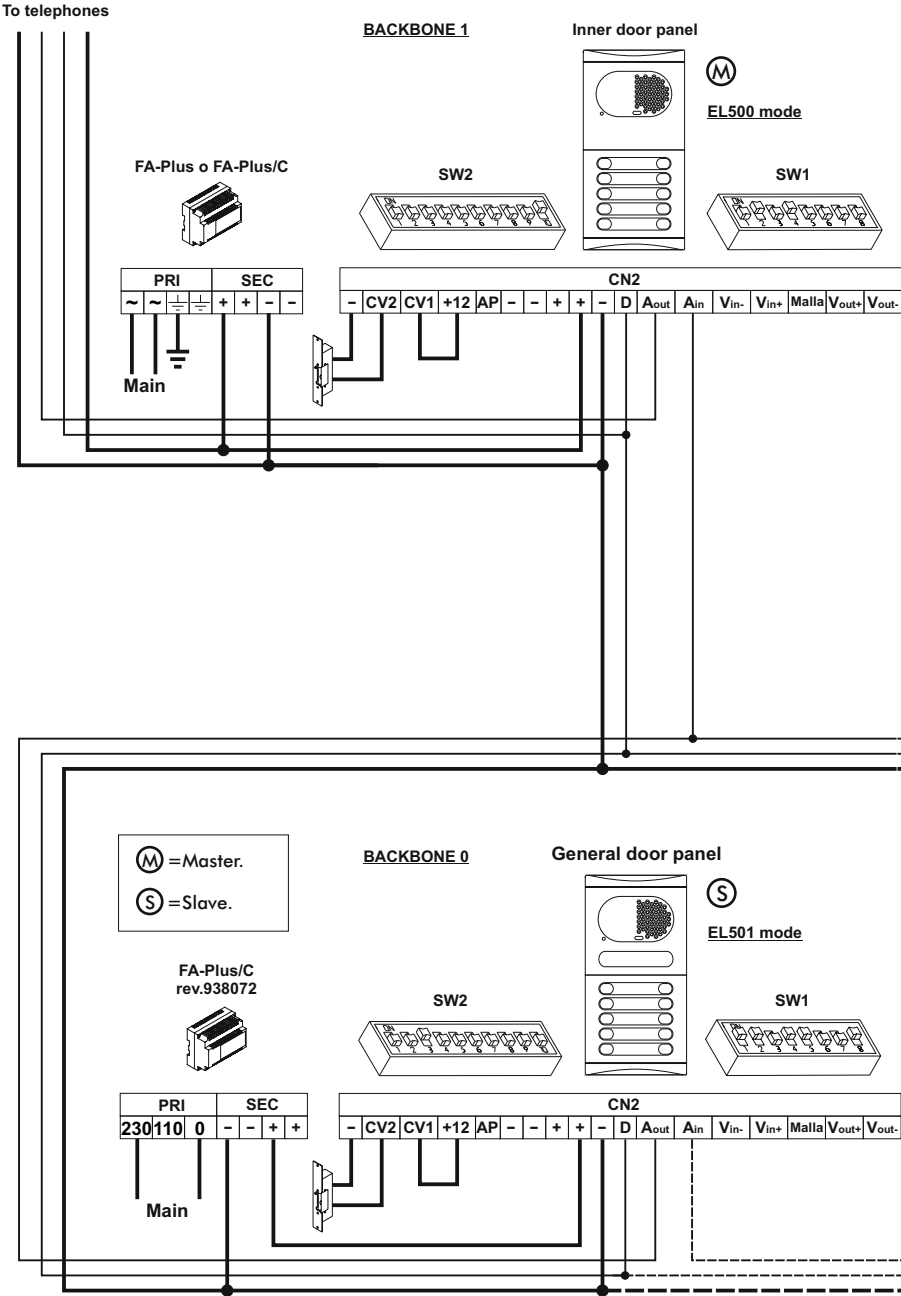
To install and configure properly, do always follow the enclosed information.  
The installation diagram shows the connection of a video system with two general door panels and up to 120 inner door panels (backbones/buildings).  
In case of more than two door panels, wire them as the second is connected.  
In video systems use a D4L-Plus distributor before each inner building except in the last one. Take off JP1 jumper of all the distributors except in the last one.  
In video systems with twisted pair use the D6L-Plus/2H distributor instead of D4L-Plus distributor. Take off JP1 jumper of all the distributors except in the last one. Add a negative in the inner building installation riser, (see page 139).  
Below shows the connection of the twisted pair instead of coaxial cable.



Video installation with general door panel to large residential complexes.

SECTIONS CHART	Distance			
Terminal	100m.	300m.		
+, -, CV1, CV2	1,50mm <sup>2</sup>	2,50mm <sup>2</sup>		
A <sub>in</sub> , A <sub>out</sub> , A, D	0,25mm <sup>2</sup>	0,25mm <sup>2</sup>		
V <sub>in+</sub> , V <sub>out+</sub>	* RG-59	* RG-59		
V <sub>in+</sub> , V <sub>in-</sub> , V <sub>out+</sub> , V <sub>out-</sub>	CAT-5	CAT-5	Twisted pair	Sw1-3 On

For greater distances contact our technical support department.  
\* Coaxial cable characteristics RG-59 B/U MIL C-17, (see page 138).



IMPORTANT NOTES:

To install and configure properly, do always follow the enclosed information. The installation diagram shows the connection of an audio system with one general door panel and up to 120 inner door panels (backbones/buildings). In case of more than one general door panel, wire them as it shows in the video installation diagram, (see page 143).

SECTIONS CHART	Distance	
Terminal	100m.	300m.
+, -, CV1, CV2	1,50mm <sup>2</sup>	2,50mm <sup>2</sup>
A <sub>in</sub> , A <sub>out</sub> , A, D	0,25mm <sup>2</sup>	0,25mm <sup>2</sup>

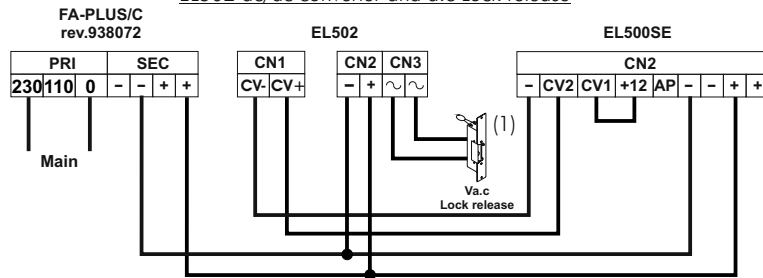
For greater distances contact our technical support department.

Audio installation with general door panel to large residential complexes.

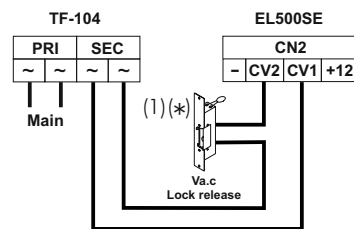
## Connexion of an a.c. lock release.

If an alternating current lock release has been installed, use a TF-104 transformer or an EL 502 dc/ac converter and connect it to the lock release as it is shown on the respective diagram.

EL502 dc/ac converter and a.c Lock release



TF-104 and a.c Lock release



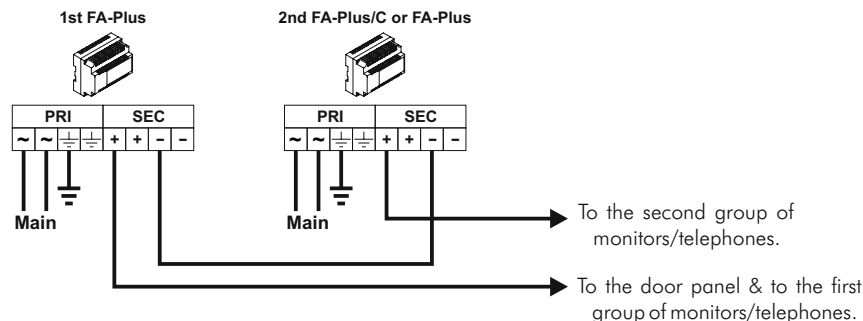
**\* IMPORTANT:** If the TF-104 transformer is used to supply the a.c lock release and the door panel lamps, wire ~1/~2 terminals of the sound module with CV1/CV2 terminals respectively of the EL-500SE module.

(1) Place the varistor that is supplied with the EL500SE microprocessor circuit on the a.c lock release terminals directly, (see page 122).

## Link of several power supplies units.

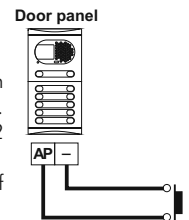
If the quantity of monitors or telephones to be connected is bigger than the supported from one power supply (see page 122), use additional power supplies to match the required quantity. The first power supply should be connected to the door panel and to the first group of monitors or telephones; connect the next groups to the positive terminal of its corresponding power supply. To wire several power supplies link their ground terminals.

**NEVER link positive terminals of different power supplies.**



## External lock release activation.

The lock release can be activated at any moment by using an external push button, that must be connected between 'AP' and '-' terminals of the door panel. Door opening timed at 3 or 15 seconds, with the help of the dip switch SW1-2 (see page 116). This function will allow to exit from the building being not necessary the use of a key.

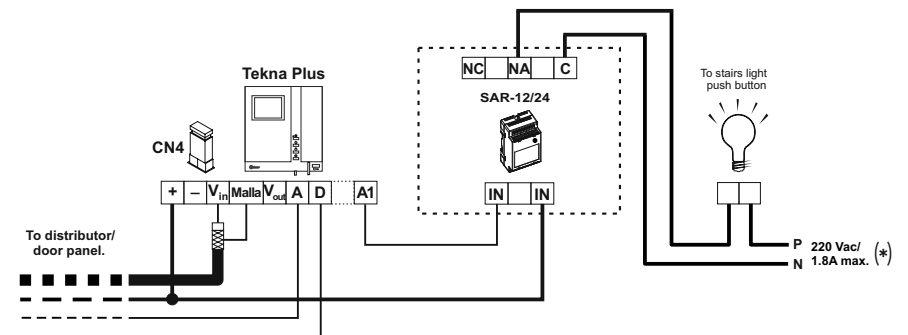


## Auxiliary devices activation with Tekna Plus monitors.

To activate auxiliary devices the use of a SAR-12/24 relay unit will be required. If this device is shared for all the monitors, link their A1 terminal and use just one relay unit. In case that each monitor has its own application use a SAR-12/24 relay unit for each monitor and don't link the A1 monitor terminals.

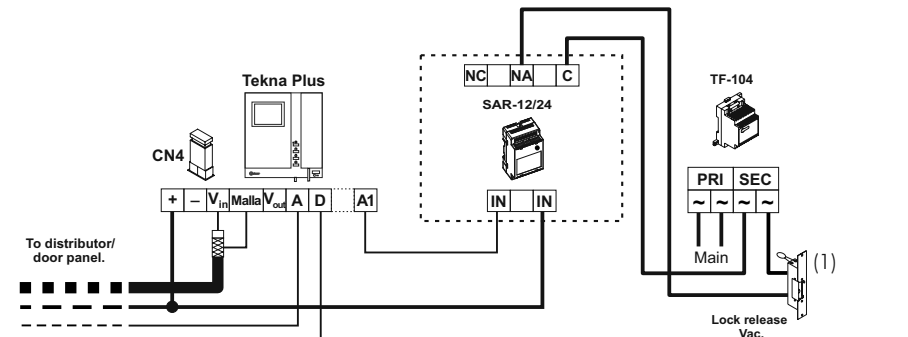
To activate this function, press monitor push button at any moment with no dependence of the handset position.

Usual applications are the activation of stairs light, second lock release, ...



(\*) The neutral supply from the stairs light will be wired through the relay contacts SAR-12/24, the maximum current for stairs light will be 1.8A.

The use of a TF-104 transformer will be necessary to activate a second lock release.



(1) Place the varistor that is supplied with the EL500SE microprocessor circuit on the a.c lock release terminals directly, (see page 122).

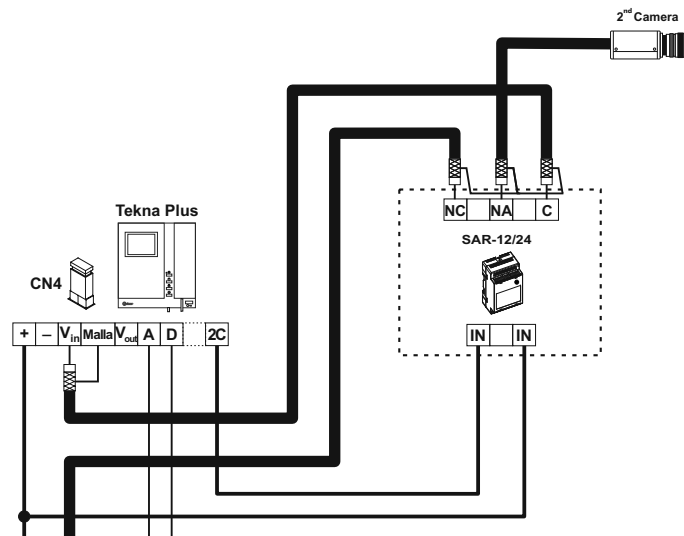


## Activation of a second camera.

The use of a SAR-12/24 relay will be required to activate a second camera and an internal modification on the monitor shall be done, as it's described on page 124. This facility disables the intercom function. If both functions are required, use A1 terminal to activate the second camera. To activate this function, press  $\phi$  monitor push button at any moment with no dependence of the handset position.

If this device is shared for all the Tekna Plus monitors, link their 2C terminal and use just one relay unit. In case that each monitor has its own camera use a SAR-12/24 relay unit for each monitor and don't link the 2C monitor terminals.

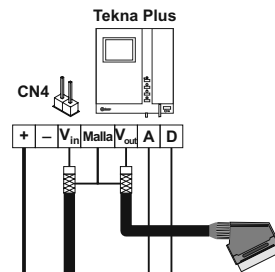
This push button can be used to activate other auxiliary devices, as the A1 terminal is used. Usual applications are the surveillance of the elevator entrance, reception hall, ...



## Connecting the Tekna Plus monitor to a video recorder or TV.

If your TV or video recorder have a SCART connector, it will be possible to view the picture from the door panel on the TV screen.

Remove the end of line jumper, that's placed on the CN4 connector. Connect the coaxial cable between terminals 17 (shield) and 20 (hot) of the SCART connector.



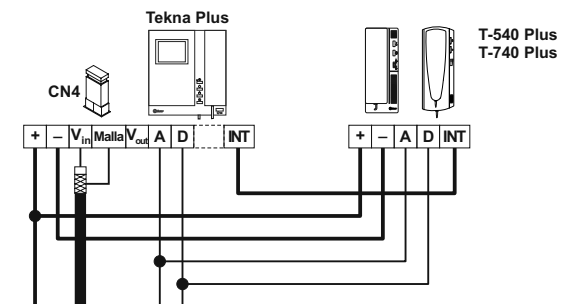
## Intercom function.

Tekna Plus monitor, (\*) T-540 Plus and T-740 Plus telephones have intercom facility between two units of the same apartment. To enable this function check the following conditions:

- One of the units has been configured as master and the other unit as slave with intercom (**only one slave unit configured with intercom**), as described on pages 128, 132 and 136. In case to intercom one monitor with one telephone, configure the monitor as master.
- Link the INT terminal of the units, as it is shown on the enclosed diagram.

To establish an intercom communication lift the handset and press the intercom push button; acoustic tones will be reproduced on the handset confirming the call is in progress or that the other unit is communicating with the door panel. To establish communication lift the handset of the called unit. If during an intercom communication a call is made from the door panel, acoustic tones will be heard on the master unit handset and the picture will appear in case of a monitor; press the intercom push button of the master unit to establish communication with the door panel, or press the door release push button to activate the lock release.

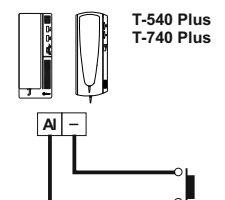
The reproduced acoustic tones are different depending on their provenance, that allows the user to distinguish where the call is made from.



**\* IMPORTANT:** The T-540 Plus and T-740 Plus telephone must be configured with SW1 dip switch in "Intercom" mode function (see page 130 and 134 respectively).

## External lock release activation with T-540Plus and T-740Plus telephone.


During call reception and communication progresses allows the lock release activation, by using an external push button, that must be connected between 'A1' and '-' terminals of the telephone.



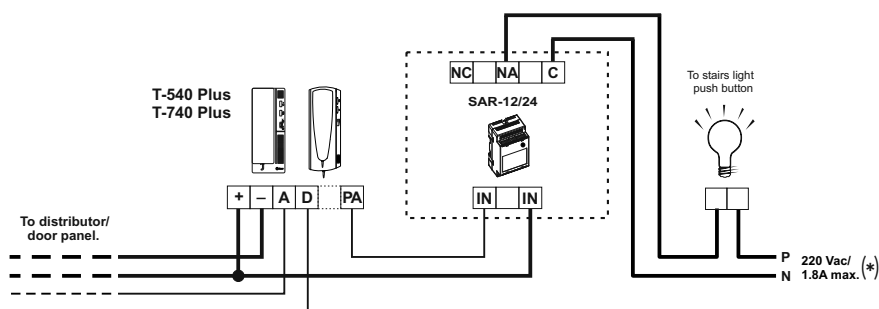
## Auxiliary devices activation with T-540 Plus and T-740 Plus telephone.

First the T-540 Plus and T-740 Plus telephone must be configured with SW1 dip switch in "PA" output mode function (see page 130 and 134 respectively).

To activate auxiliary devices the use of a SAR-12/24 relay unit will be required. If this device is shared for all the T-540 Plus and T-740 Plus telephones, link their PA terminal and use just one relay unit. In case that each telephone has its own application use a SAR-12/24 relay unit for each telephone and don't link the PA telephone terminals.

To activate this function, press 'AUX' push button of the telephone T-540 Plus or  push button of the telephone T-740 Plus at any moment with no dependence of the handset position.

Usual applications are the activation of stairs light, second lock release, ...

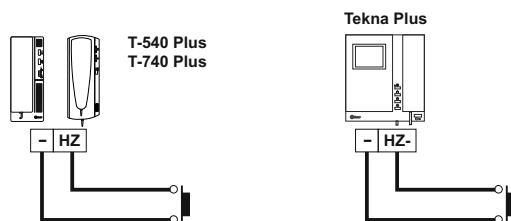


(\*) The neutral supply from the stairs light will be wired through the relay contacts SAR-12/24, the maximum current for stairs light will be 1.8A.

## Door bell push button connection.

The Tekna Plus monitor and the T-540 Plus / T-740 Plus telephones can be used to receive the calls made from the apartment door, saving the use of a bell. Wire the push button of the apartment door to the 'HZ-' and '-' monitor or telephone terminals.

The reproduced acoustic tones are different depending on their provenance, that allows the user to distinguish where the call is made from. If during a conversation a call is made from the apartment door, acoustic tones will be reproduced on the handset to advise that someone is calling.



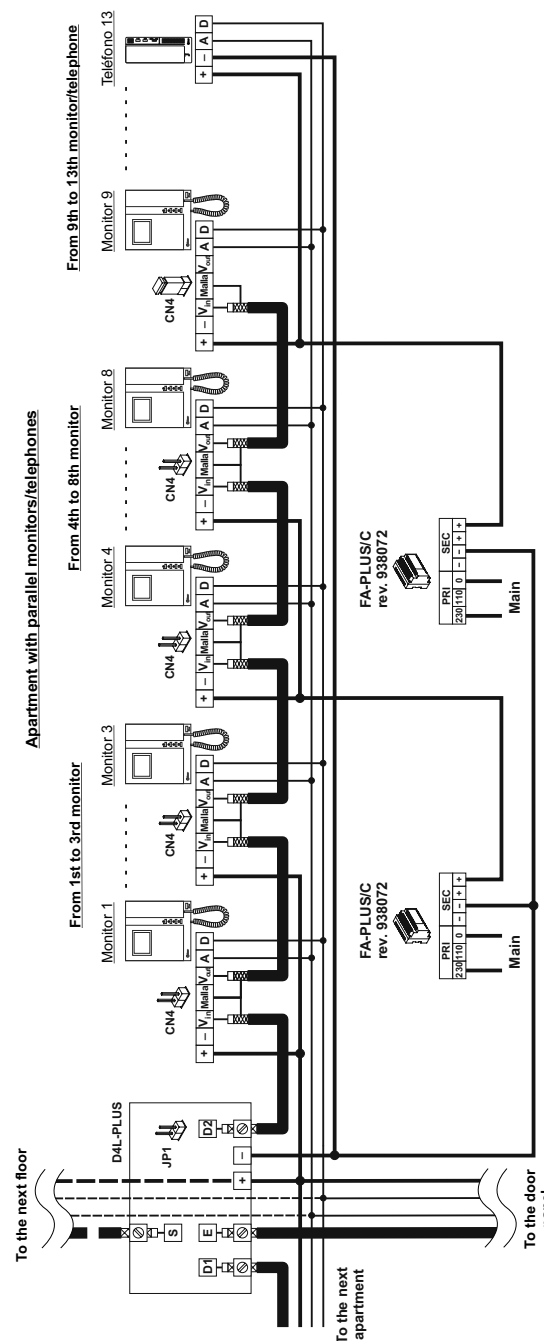
## Parallel monitor/telephone.

Up to 13 monitors/telephones connected in parallel in the same apartment, configuring one master and 12 as slaves. Depending on the number of monitors/telephones to be connected in parallel, it may be necessary to install 1 or 2 additional power supplies FA-Plus/C; as described below:

- Up to 3 monitors/telephones (without additional power supply).
- From 4th to 8th monitor/telephone (1st additional power supply FA-Plus/C, placed on technical cabinet).
- From 9th to 13th monitor/telephone (2nd additional power supply FA-Plus/C, placed on technical cabinet).

To wire more than one power supply link their ground terminals.  
Never link positive terminals of different power supplies.

Important: Up to 5 parallel monitors/telephones for each additional power supply.



An easy way to check that the system is working properly is to disconnect the wiring from the door panel and to check the monitor directly connected to the EL500SE circuit.

No short circuit will damage the connected units, with the exception of a short circuit between 'CTO' and 'L' monitor or distributor terminals.

- ❏ Nothing operates.
  - ⌚ Check the output power supply voltage between '-' and '+' terminals: it should have 17,5 to 18,5Vd.c. If not, disconnect the power supply from the installation and measure again. If it's correct now, it means there is a short circuit in the installation: disconnect the power supply from mains and check the installation.
  - ⌚ Check that 'D' terminal is not short circuited with '-' or '+' terminals.
  - ⌚ Check that 'D' terminal hasn't been changed by 'A' terminal somewhere in the installation.
- ❏ Inappropriate audio level.
  - ⌚ Adjust the level volumes as shown on page 121. In case of feedback, reduce the audio levels until feedback fade out. If feedback don't disappears refer to the following hint.
- ❏ Continuous audio feedback.
  - ⌚ Check that 'A' terminal is not short circuited with other terminals.
- ❏ Door open function no operates.
  - ⌚ Remember that this function is only available during call and communication progresses.
  - ⌚ The CV1 and CV2 terminals for door opening are voltage free outputs. The cable requires a connection depending on whether 12Vdc (page 137 to 148) or 12Vac (page 149) is needed.
  - ⌚ Make a short circuit between the 'CV1' and 'CV2' terminals on the EL500SE microprocessor circuit; there should be 12V (d.c. or a.c. depending on the type door release installed) between the terminals on the door release. If so, check the lock release and its wiring.
- ❏ The system cannot be programmed.
  - ⌚ Check that the switch number 2 of the SW2 configuration dip switch is set to ON (see page 117) and that the programming steps are correctly followed.
  - ⌚ Check that 'D' terminal is not short circuited with other terminals.
- ❏ Some units don't receive calls.
  - ⌚ Remember that each apartment must have a master unit only. Check that the units are switched on and correctly programmed.

This image shows a full page of primary-ruled paper. It features approximately 20 horizontal rows. Each row is defined by two parallel dashed lines, creating a series of uniform gaps for writing. The paper is otherwise completely blank, with no margins, text, or other markings.

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