

INSTALLATION MANUAL FOR “ELLISSE” 22701B AND 22701COLB VIDEO SYSTEMS.

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acet_{s.r.l.}
around the world

ACET VIDEOSYSTEM have been proved to be easy to install and provides a high quality of operation. The system uses only 3+n (without image picture recall) or 4+n (with picture image recall) wires. This will allow replacement of an old 5 wire audio door phone system with a new video door phone system without any change in the wiring. As for all ACET systems the quality of the speech and of the image is of the highest standard.

Each videosystem includes:

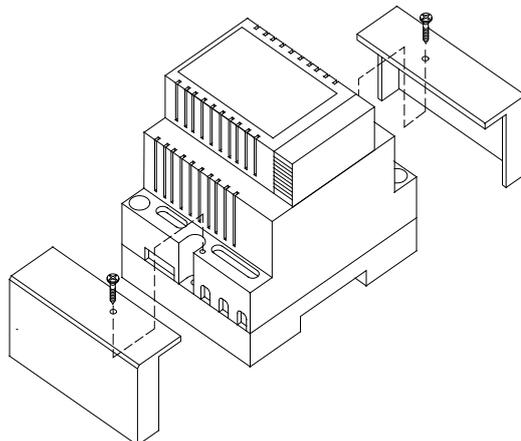
- 1 Video push button panel.
- Inside the push button panel we find the speaker amplifier 2272X , the camera 10609 or 10609COL, one or more bulbs and secrecy of conversation board 10210 for n tenants.
- The transformer 21809 supplies power to speaker amplifier.
- The Power Supply 22803 for the monitors 13,5V DC (400mA) or 22805(800mA) or 21847(1300mA)
- n monitor 22701B or 22701COLB for kit.
- The monitor has 1 button to open the electric lock release (if fitted), 1 button for the picture recall and 4 free use buttons.
- It is possible to adjust the volume of the ring-tone and contrast for B/W monitors and ring-tone, picture color, and brightness for the color monitor.
- Installation instructions.

SAFETY INSTRUCTIONS FOR THE INSTALLER

- 1) Carefully read the instructions in this manual: they give important information of the safety, use and maintenance of the installation.
- 2) After removing the packing, check the integrity of the set. Packing components (plastic bags, expanded polystyrene etc.) are dangerous for children. **Installation must be carried out according to national safety regulation.**
- 3) A safety switch, installed before the power supply, is recommended.
- 4) Before connecting the set, ensure that the data on the label corresponds to the local supply voltage.
- 5) Use this set only for the purposes designed, i.e. for video doorphone system. Any other use may be dangerous. The manufacturer is not responsible for damage caused by improper, erroneous or irrational use.
- 6) Before cleaning or maintenance, disconnect the set.
- 7) In case of failure or faulty operation, disconnect the set and do not open it. For repairs consult only the technical assistance centre authorized by the manufacturer. Safety may be compromised if these instructions are disregarded.
- 8) Don't obstruct openings of ventilation/heat exit slots.
- 9) Installer must ensure that manuals with the above instructions are left on connected units after installation, for user's informations.
- 10) Don't use water to clean any of the system components.
- 11) For installation and maintenance use only proper material.
- 12) ACET reserve the right to change the components or part of the components to improve the system.
- 14) Please refer to appendix 1 for the choice of the cables.

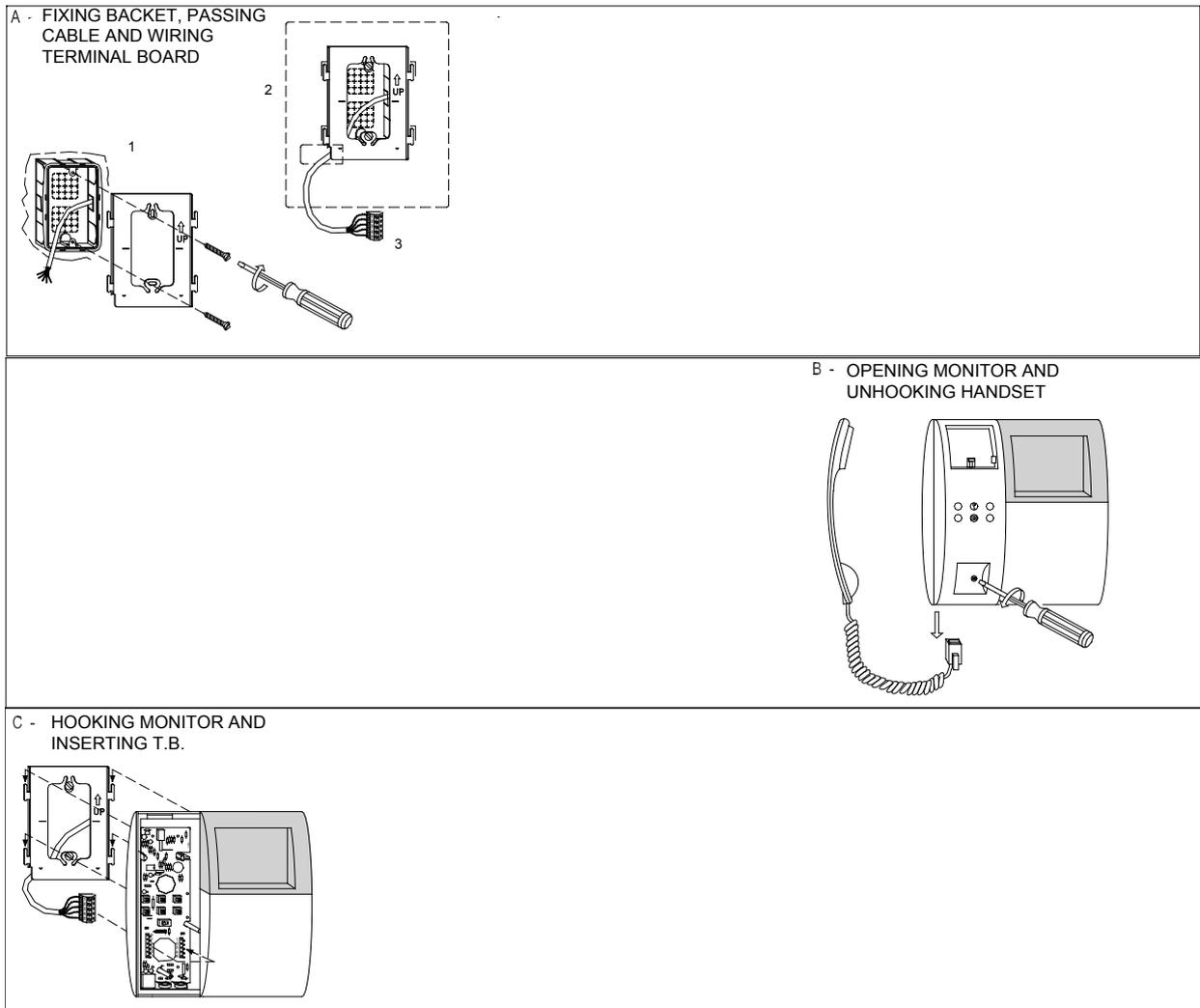
POWER SUPPLY

Don't cover or obstruct any of the heatsink slots. Wire exactly as the enclosed diagram. Use a mains circuit breaker. Don't change fuses with different types or ratings. (figure 1)



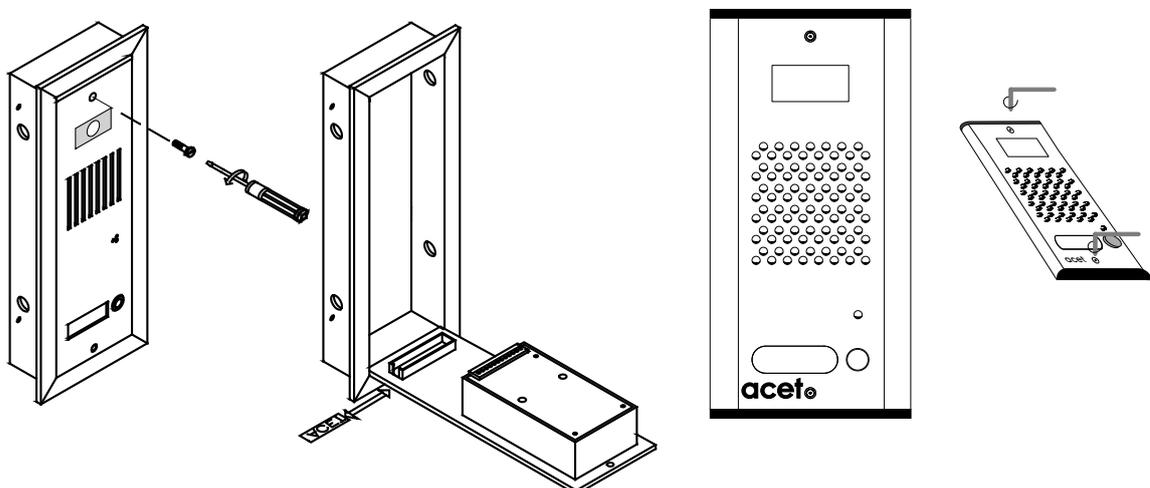
MONITOR

Fix the mounting plate on the wall with 2 screws and slide the monitor paying attention to the correct centering on the 4 holders. (figure 2)



PUSH BUTTON PANEL

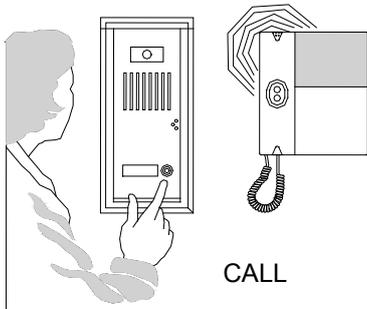
Install the external panel with the camera at about 160 cm (5 ft) from ground. Unlock the panel with the enclosed key and open the panel. The name tag holder is now accessible for inserting the name tag. (figure 3)



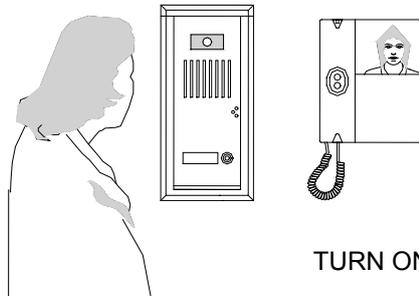
OPERATIONS

CALL AND ANSWER:

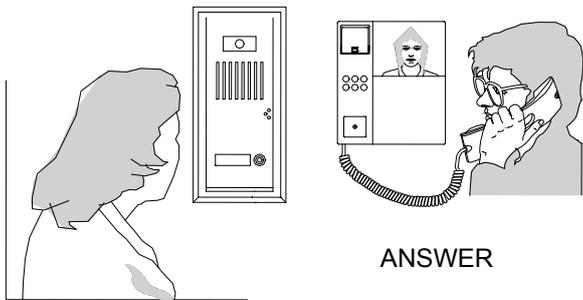
- 1) Push the button on the panel.
- 2) The monitor will ring and light up the picture.
- 3) Pick up the telephone and talk.
- 4) Push the button with the key to open the door.
- 5) Replace the telephone on the monitor. After 5 seconds the system is ready for a new call. (figure 4)



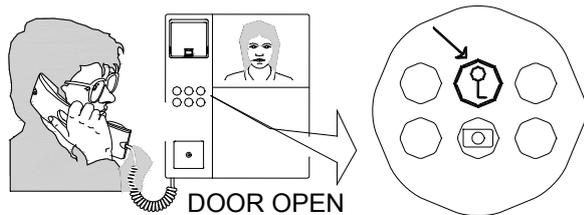
CALL



TURN ON MONITOR



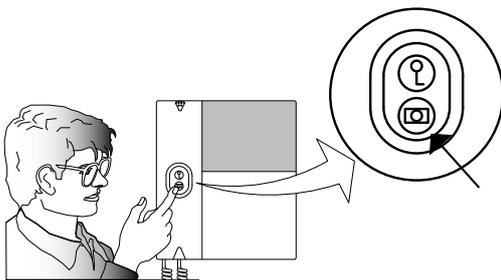
ANSWER



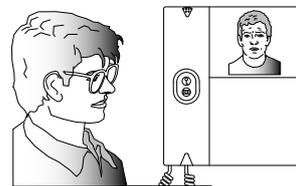
DOOR OPEN

PICTURE RECALL

Push the button with the circle inside the square, the monitor will be working for about 30 seconds, after 10 seconds is possible repeat the operation.



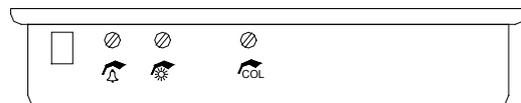
PICTURE
RECALL



TURN ON
MONITOR

ADJUSTMENT OF CALL VOLUME, BRIGHTNESS AND COLOR OF MONITOR ELLISSE 22701COL.

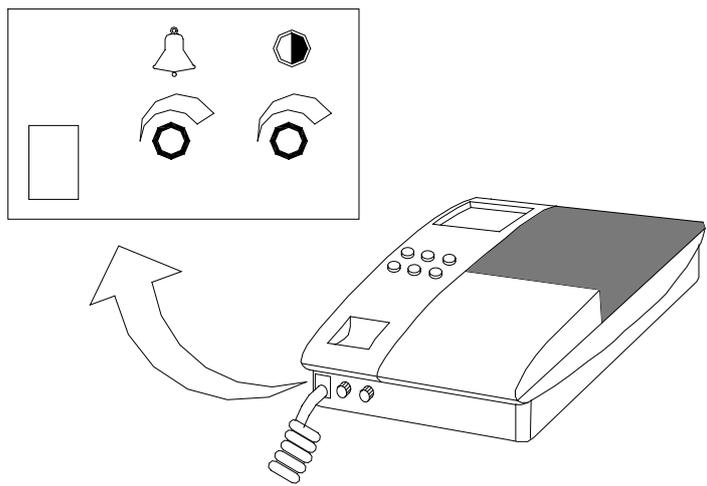
On the bottom of the monitor are placed three potentiometers to adjust the volume of the call (left) and Brightness (center) and the color (right).



- CALL'S VOLUME
- BRIGHTNESS
- COLOUR

ADJUSTMENT OF CALL VOLUME AND CONTRAST OF MONITOR 22701.

On the bottom of the monitor are placed two potentiometers to adjust the volume of the call (left) and contrast (right).



ADJUSTMENT RING TONE AND PICTURE CONTRAST

APPENDIX 1: TABLE SHOWING SIZE OF CABLES FOR LENGTH OF RUN.

Between power supply 21809 or 21810 and speaker amplifier 2272X:

Length of cable (mtrs)	8	16	24	40
Wire section (mmq.)	1	1,5	2,5	4
Wire diameter (mm.)	1,13	1,38	1,78	2,25

N.B. PLEASE VERIFY A MINIMUM TENSION OF 12V AC BETWEEN 1 AND 10 OF THE SPEAKER AMPLIFIER (with the monitor on)

Between power supply 21847/22803 and the monitor 22701:

Length of cable (mtrs)	8	16	24	40
Wire section (mmq.)	0,5	0,75	1,5	2
Wire diameter (mm.)	0,8	0,98	1,38	1,60

Between electric lock and speaker amplifier 2272X:

Length of cable (mtrs)	8	16	24	40
Wire section (mmq.)	1	1,5	2,5	4
Wire diameter (mm.)	1,14	1,38	1,78	2,25

for electric lock that requires more than 12VA, use the relay 10076 and an additional power supply.

Between monitor 22701 and speaker amplifier 2272X:

a) no coax used and one transformer 21809 for the speaker amplifier and one power supply 21847/22803 for the monitors (maximum distance 50 mtrs):

Length of cable (mtrs)	30	50
Wire section (mmq.)	0,5	0,75
Wire diameter (mm.)	0,8	0,98

b) with coax cable RG59 and one transformer 21809 for the speaker amplifier and one power supply 21847/22803 for the monitors:

Length of cable (mtrs)	50	100	200	400*
Wire section (mmq.)	0,5	0,75	1,5	2,5
Wire diameter (mm.)	0,8	0,98	1,38	1,78

* Add 1 wire (1 mmq. of section) to the common and for a distance higher than 200 mtrs use a 10239 with 22802 power supply.

Please check the quality of the cable and of the connections.

APPENDIX 2: INFORMATIONS RELATED TO THE CONNECTORS AND THEIR VOLTAGE VALUE

MONITOR 22701B AND 22701COLB

terminal	function
1	DC positive power
2	Call and speech signal
3	GND for video, conversation and power
4	Video signal
5	Output for picture recall
N	DC negative power (parallel to Pin 3)

terminal	Monitor 22701B		Monitor 22701COLB		Voltage Measurement or description
	AC V.	DC V.	AC V.	DC V.	
3 - 1		11,2 - 15V		12,2 - 15V	Monitor Supply
3 - 2		10 V		10V	System in Stand-By
3 - 2		7 V		7V	Handset Unhooked
3 - 2		0 V		0V	Door Opener Button pushed
3 - 4		3 V		3V	Video Signal
N - 1		11,2V - 15V		12,2V - 15V	Monitor Supply
3 - 5		-16V		-16V	Image Recall Off
3 - 5		4V		4V	Image Recall On

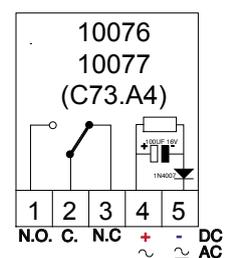
Terminal Connections on Speaker Amplifier 2272X and Cameras 10609, 10609COL

terminal	function
1	Output 12,5 VDC positive for supply of monitor
2	Speech line speaker amplifier - monitor
3	GND for video, conversation and power
4	Output for video signal
5	Output for picture recall
6	GND (parallel to Pin 3)
7	
8	Output for call signal
9	Output to electric lock
10	Electric lock power supply (parallel to Pin 11)
11	Ground (GND) AC power
12	AC Power

terminal	AC Voltage	DC Voltage	Measurement or description
11 - 12	12V -12,5 V		Stand-by
11 - 12	4,5 V		Door Opener Button pushed
11 - 12	12,2V -13,5		AC Power
10 - 9	0 V		Stand-by
10 - 9	6,5 V		Door Opener Button pushed
3 - 1		12,5V - 12,8V	Monitor Supply
3 - 2		11 V	System in Stand-By
3 - 2		8 V	During the Conversation
3 - 2		0 V	Door Opener Button pushed
3 - 8		-16 V	System in Stand-By
3 - 8		-4 V	During the Call
3 - 4	0,3 V		Video Signal with Camera On
3 - 6	0 V	0 V	Short circuit
3 - 5		-16 V	Picture recall Off
3 - 5		4 V	Picture recall On

Terminal Connections on Relay 10076 and 10077

terminal	Function
1	Normally Open
2	Common
3	Normally Closed
4	Input current (positive for DC input, live for AC input)
5	Input current (negative for DC input, neutral for AC input)



APPENDIX 3: TROUBLE SHOOTING LIST ON “ELLISSE” VIDEO SYSTEMS.

The first operation is to verify, in which part of the system the problem is located. Where possible the audio and video functions are separated and usually a problem with the video still means the audio may function correctly, however not the reverse.

A short circuit or a break of the call or the ground cable can cause a failure of the system.

During the measurement of the voltages on the speaker amplifier and monitor, place the GND terminal of the tester on pin 3 and use the and other terminal like a probe.

A) The call is not present for anyone

1) Verify the output voltage of the Transformer 21809 (minimum 12 V AC, usually around 13V AC); if it is lower, verify the voltage on the primary of the 21809 (minimum 215 V AC). In case of voltage missing on the output verify the fuses and the connection with the mains.

2) Verify the voltage between 11 and 12 of the speaker amplifier 2272X (**minimum 12 V AC**). If the value is lower, verify the cables between the 21809 and the 2272X.

3) Verify, with a loudspeaker 45 ohm of impedance or with a dual tone ACET telephone, the presence of the call between 3 (t.p. 5 of the telephone) and 8 (t.p. 6 of the telephone) of the 2272X speaker amplifier. In absence of call signal, repair or change the 2272X.

B) The call to one of the tenants causes the opening of the electric lock.

1) Usually the problem is due to a short circuit between the call wire and the common (ground) wire. Particularly, verify on the monitor if there is a short circuit between 2 and 3. This problem causes a complete loss of audio and opening of the electric lock on every call. The system works without problems for the other tenants.

2) It is possible that 2 and 3 on the monitor, or if there are telephones in parallel, 5 and 6 of the telephones has been inverted.

3) Verify that net tension cable (230VAC) are not placed together with 12V or signal cables. If so, please inserted a filtered board.

4) Verify the tension between terminal point 11 and 12 of speaker amplifier 2272X (minimum 12V AC).

C) The call is good but there is no audio and no function of the electric lock

1) Measure the voltage between t.p. 3 and t.p. 2 of 2272X: the voltage has to be 10 V DC with the system in stand-by (all the telephones hooked) and has to be 8 V DC with 1 telephone on. Different values maybe caused by a 2272X out of order.

2) Make the same test disconnecting the circuit 10210.

D) Call, audio and picture are present but the electric lock doesn't work.

1) Verify the electric lock with a direct voltage input.

2) Link t.p. 2 to t.p. 3 and check the voltage between t.p. 9 and t.p. 10 of 2272X which should be about 6,5 V AC.

3) Check the same voltage on the electric lock. If it is lower (not high enough for lock operation), verify the cables between the 2272X and the electric lock. If the cables are too thin and cause a voltage drop too high for the AC electric lock, add a 10155 device close to the electric lock.

4) Remove the link between t.p. 2 and t.p. 3 and repeat the test pushing the door lock button of the monitor. If the test fails, the problem is due to the cables between 2272X and monitor or to the button of the monitor.

5) If between 3 and 10 of 2272X there is a lack of voltage, verify it with a short circuit between 2 and 3 of 2272X. The electric lock should open. If it opens it means that the problem is on the cables or in the integrity of the button in the monitor.

If after the tests 1, 2, 3, 4 and 5 it still doesn't open, repair or replace the 2272X.

E) Call, audio, door opener button works but the picture is bad or missing.

1) The monitor screen remains black after the call:

verify the supply between t.p. 3 and t.p. 1 of the monitor (12 V DC).

If the voltage is lower verify the voltage between 3 and 1 of 2272X.

If the voltage value is good in the 2272X but is lower further along the circuit, the problem is on or in the cable, or in the connection. If between 3 and 1 there is no voltage repair or replace the 2272X.

If the system uses a 21847

verify the output of the power supply instead of the voltage between 3 and 1 of the 2272X.

If there is no voltage, verify the fuses and the input of 21847 (220 - 240 V AC).

2) The monitor lights up but without picture.

verify that the last monitor is correctly terminated or with 1017J or 1017C. (End-of-line termination should be present just on one monitor)

verify that between 3 and 4 of 2272X the voltage (with camera activated) has to be 3 V DC; a higher value, 10- 12 V DC, means no or defective end-of-line termination. The voltage between 4 and 3 of 10171 has to be 3V DC.

verify between t.p. 3 and 8 of 2272X a voltage of approx 11 V DC; otherwise replace the 2272X.

3) Low quality of picture: verify the voltage between 3 and 1 of the monitor. Has to be between 11,5 V DC and 15,5 V DC. If lower, verify the connection from the power supply or the 2272X to the monitor. Locate the voltage drop and eventually replace the cable or place a power supply 21847 close to the monitor.

If the system has more than 3 monitors in parallel, use circuit 1017J like termination of the end-of-line.

F) In a multistorey system, some monitors work properly, other monitors do not.

- 1) If the monitor doesn't light up:
 - verify the proper connection and polarity in the monitor .
- 2) If the monitor switches on, but only with a screen without picture:
 - Verify the values on the monitor's terminals.

G) The monitor will not shut down after replacing the handset.

- 1) Verify that the tension on terminal point 1 and 3 of the monitor is at least 11,2V DC. If lower, please increase the size of cables. VALUE LOWER THAN 11,2V DC MAY CAUSE SERIOUS DAMAGE TO THE MONITOR.
- 2) If the monitor remains on, the problem is in the circuit of the 2272x or in a leakage current which has entered the audio line. Verify, hooking the telephone, that the voltage between 2 and 3 of the 22701 has decreased from 6-7 V to 0 Volt for around 10 seconds. If not, check another telephone in the same apartment or, if the system is without secrecy of conversation check that the telephone or handset in the apartment is properly hooked.
Eventually disconnect all the monitors and telephones in the same line and reconnect one after the other to find the fault.
- 3) If the monitor screen remains white, check or replace the monitor.

I) Noise during the conversation.

- 1) This is due to a low supply (usually lower than 220 V AC) or too many monitors in parallel without an additional power supply (21847). Add one 21847 and change the connection following the relative schematic.

APPENDIX 4: BAD CONNECTION ON "ELLISSE" VIDEO SYSTEMS.

In this section will be examined the problems due at connection mistakes or wires reversal.

A)SINGLE INVERSION:

- 1) Inversion wires 1-2: System doesn't work.
- 2) Inversion wires 1-3: Audio and picture don't work, call tone low.
- 3) Inversion wires 1-4: Call and audio well, picture doesn't work.
- 4) Inversion wires 1-5: Call and audio well, picture doesn't work.
- 5) Inversion wires 1-6: Audio and picture don't work, call tone low.
- 6) Inversion wires 2-3: Call tone low, audio and picture don't work, pushing call button the electric lock is open.
- 7) Inversion wires 2-4: Audio doesn't work, monitor is on but without signal;
- 8) Inversion wires 2-5: System doesn't work.
- 9) Inversion wires 2-6: Call tone low, audio and picture don't work, pushing call button the electric lock is open.
- 10) Inversion wires 3-4: Call well, picture don't work, noise on audio signal.
- 11) Inversion wires 3-5: System doesn't work.
- 12) Inversion wires 4-5: Call and audio well, picture doesn't work.
- 13) Inversion wires 4-6: Call and audio well, picture doesn't work.

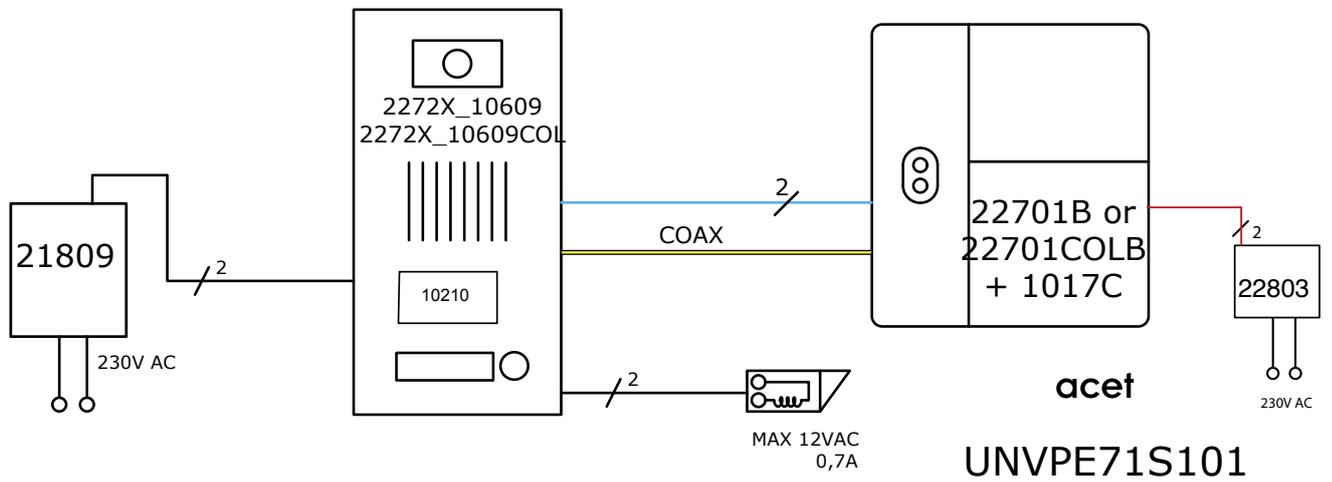
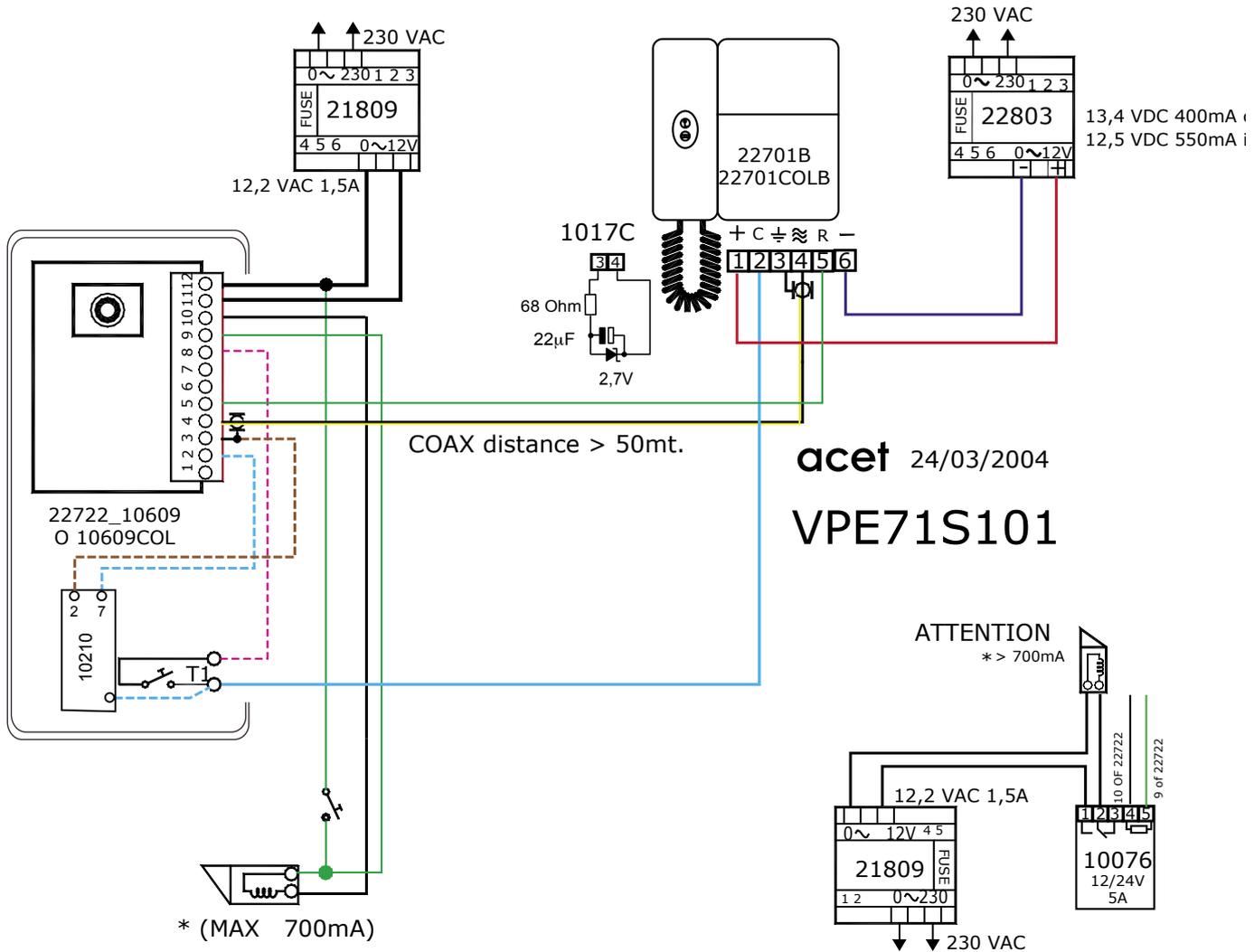
B)DOUBLE INVERSION:

- 1) Inversion pair 1-2 with pair 3-4: Call and picture don't work, noise on audio signal.
- 2) Inversion pair 1-2 with pair 5-6: Picture don't work, call tone low and noise on audio signal.
- 3) Inversion pair 3-4 with pair 5-6: Call and audio well, picture don't work;

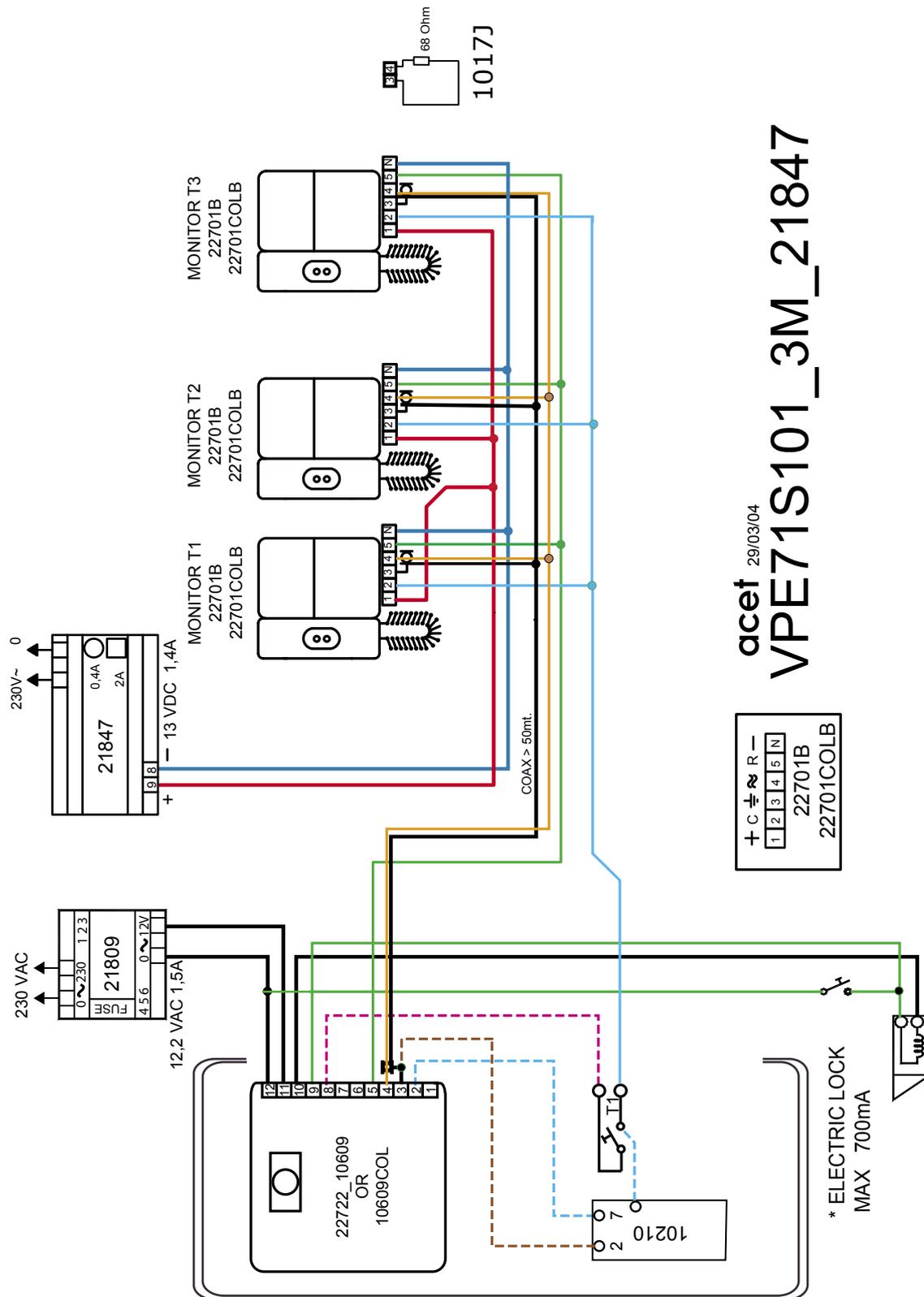
C)TOTAL INVERSION:

This case happen when the connector on monitor 22701 is place in wrong way.
When call button is pushed, ring the speaker amplifier 2272X and the electric lock is open.

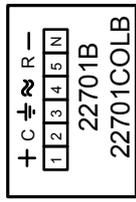
WHEN A CONNECTION MISTAKES IS PRESENT, TURN OFF THE POWER SUPPLIES AND RESTORE THE RIGHT CONNECTIONS.

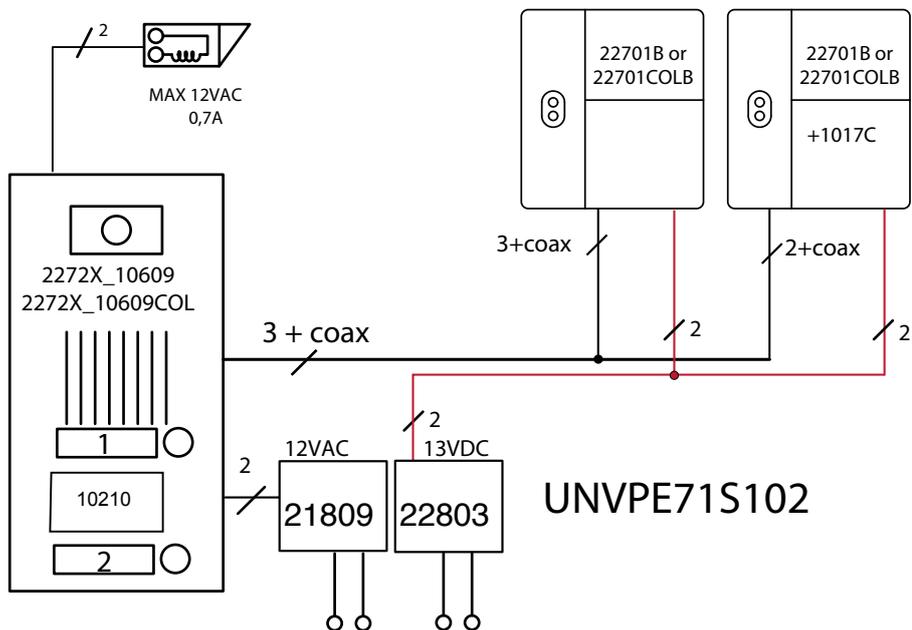
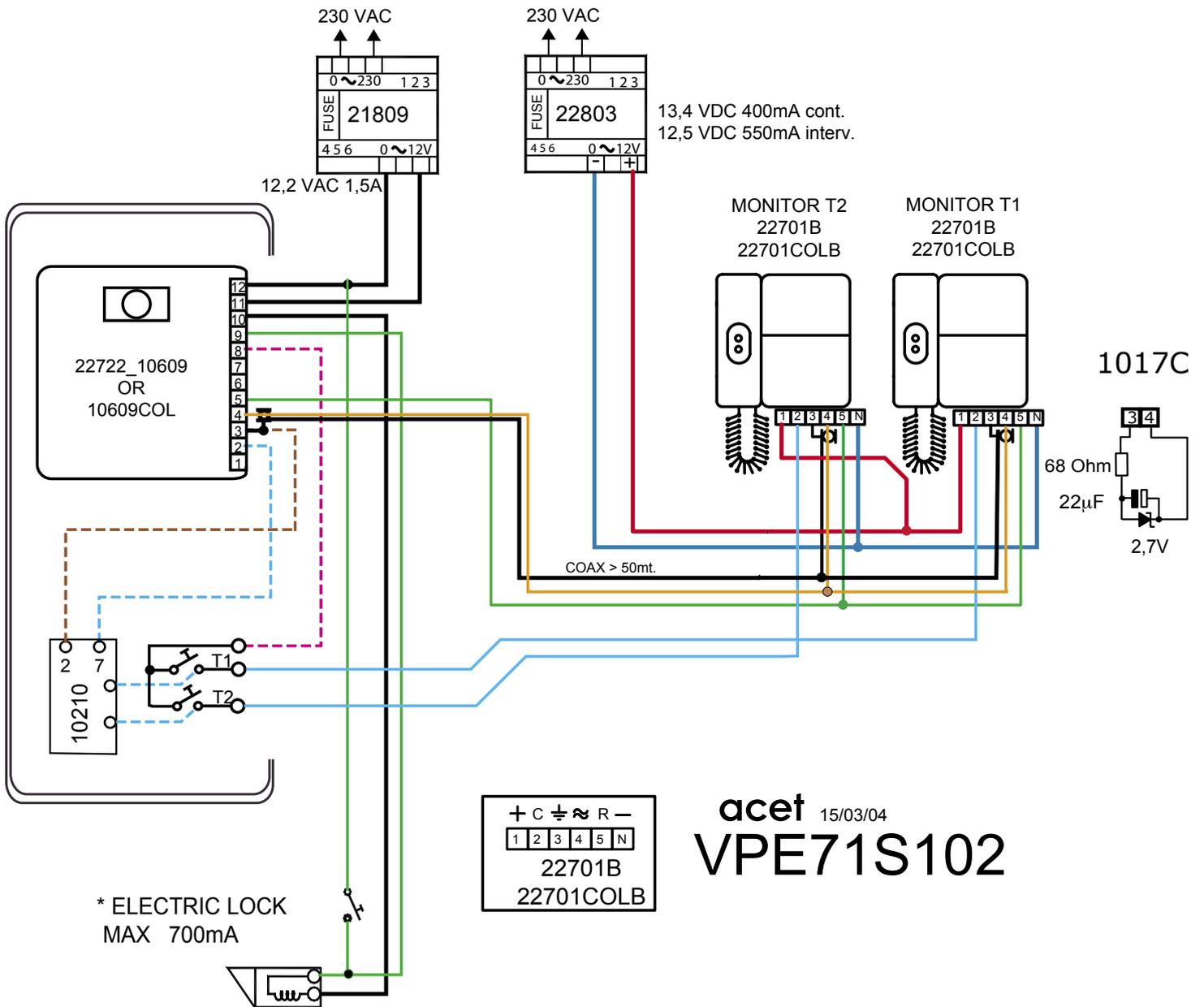


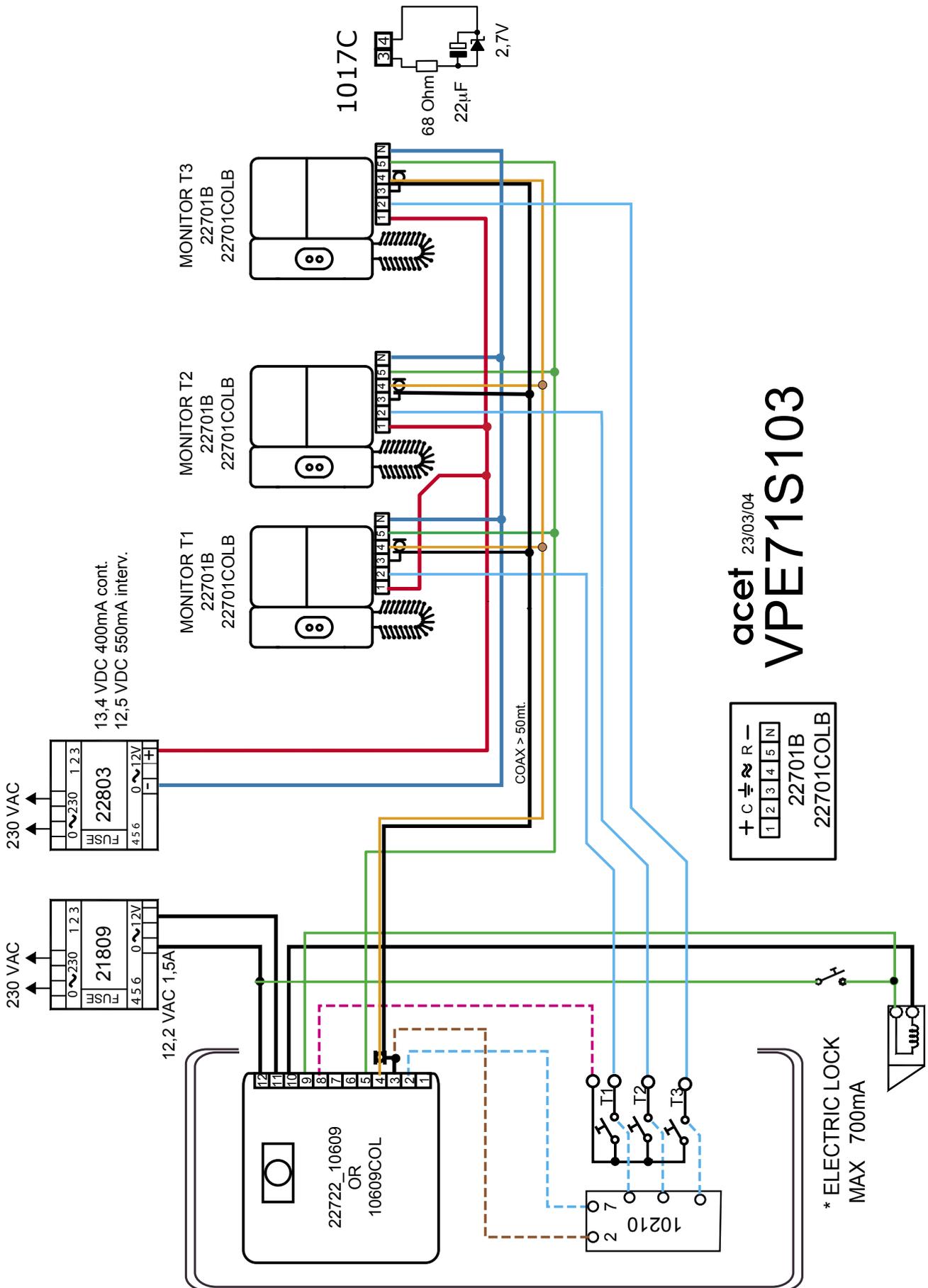
----- DASHED LINES MEAN CONNECTIONS MADE FROM CONSTRUCTOR.



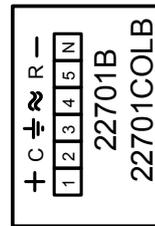
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VPE71S101_3M_21847



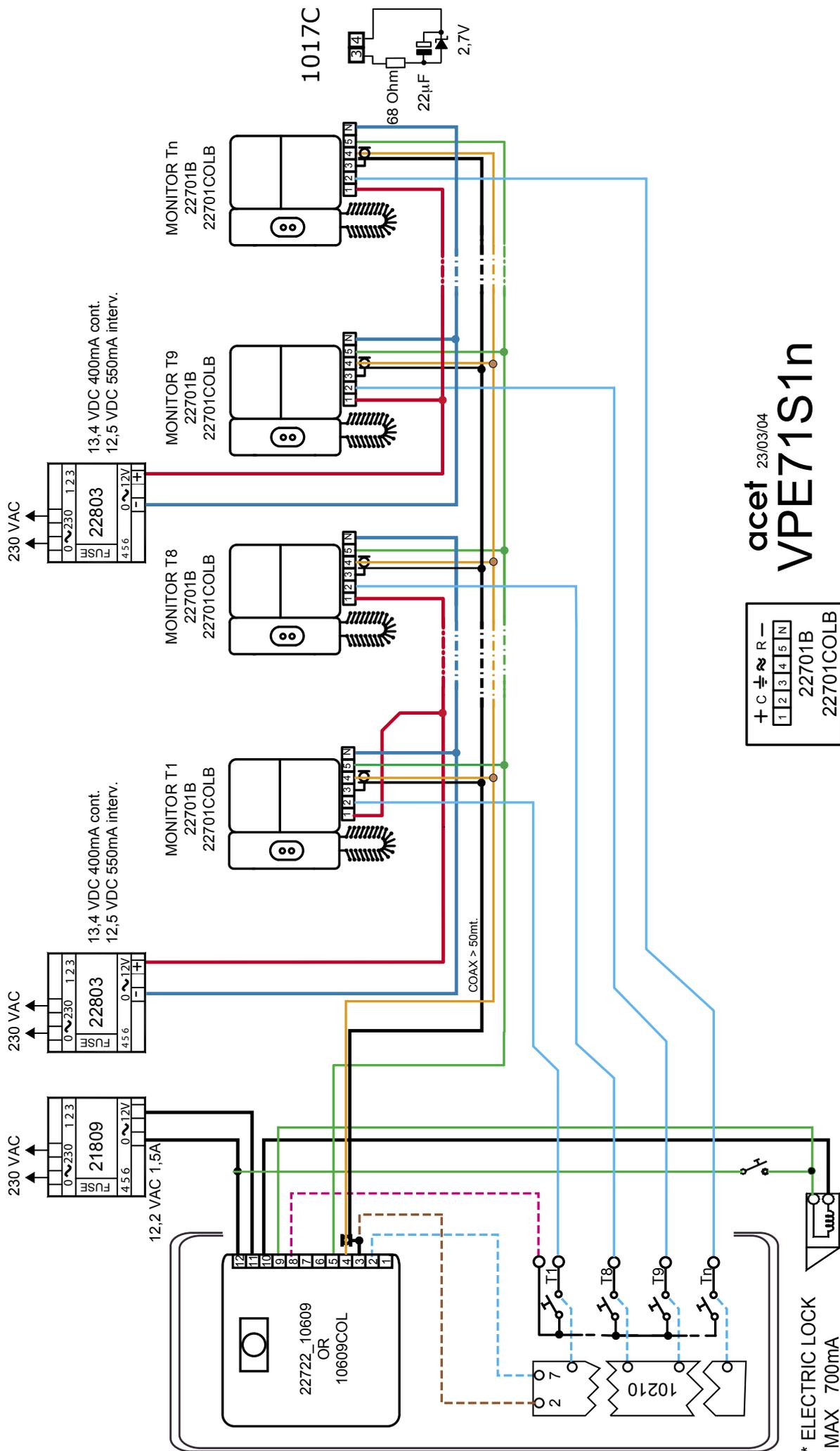




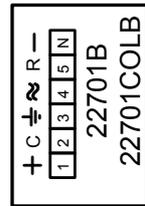
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VPE71S103



* ELECTRIC LOCK
 MAX 700mA



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VPE71S1n



VERY IMPORTANT

AFTER THE INSTALLATION, WHEN THE SYSTEM WORKING, PLEASE VERIFY THE FOLLOWING TENSIONS:

- ON SPEAKER AMPLIFIER 2272X BETWEEN T.P. 11 AND 12 = 12,2 - 15 VAC
- ON MONITOR 22701B BETWEEN T.P. 1(+), 2 AND 3(-) = 11,2 - 13,5 VDC
- ON MONITOR 22701COL BETWEEN T.P. 1(+), 2 AND 3(-) = 12,2 - 13,5 VDC
- ON MONITOR 22701B, 22701COL BETWEEN T.P. 2 AND 3 MORE THAN 6VDC
- EVERY 8 MONITOR ADD 1 POWER SUPPLY.

-IF THE TENSION IS LOWER THAN 10,5VDC, THE MONITOR DON'T TURN ON. THIS IS DUE TO THE SELF-PROTECTION CIRCUIT SYSTEM. AUDIO WORK NORMALLY, BUT THERE COULD BE NOISE ON THE SIGNAL.

