Microprocessor based control units
modd. ET8/480, ET8/480S
and ET8/480PT postal version
TECHNICAL MANUAL
FOREWARD

FOR THE INSTALLER:
Please follow carefully the specifications relative to electric and security systems realization further to the manufacturer's prescriptions indicated in the manual provided.
Provide the user the necessary indication for use and system's limitations, specifying that there exist precise specifications and different safety performances levels that should be proportioned to the user needs. Have the user view the directions indicated in this document.

FOR THE USER:
Periodically check carefully the system functionality making sure all enabling and disabling operations were made correctly.
Have skilled personnel make the periodic system’s maintenance. Contact the installer for verifying the correct system operation in case its conditions changed (e.g.: variations in the areas to protect due to extension, change of the access modes etc…)

This device has been projected, assembled and tested with the maximum care, adopting control procedures in accordance with the laws in force. The full correspondence to the functional characteristics is given exclusively when it is used for the purpose it was projected for, which is as follows:

Microprocessor based control units

Any use other than the one mentioned above has not been forecasted and therefore it is not possible to guarantee its correct operativeness.

The manufacturing process is carefully controlled in order to prevent defaults and bad functioning. Nevertheless, an extremely low percentage of the components used is subjected to faults just as any other electronic or meccanic product. As this item is meant to protect both property and people, we invite the user to proportion the level of protection that the system offers to the actual risk (also taking into account the possibility that the system was operated in a degraded manner because of faults and the like), as well reminding that there are precise laws for the design and assemblage of the systems destined to these kind of applications.

The system’s operator is hereby advised to see regularly to the periodic maintenance of the system, at least in accordance with the provisions of current legislation, as well as to carry out checks on the correct running of said system on as regular a basis as the risk involved requires, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. The user must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Design, installation and servicing of systems which include this product, should be made by skilled staff with the necessary knowledge to operate in safe conditions in order to prevent accidents. These systems’ installation must be made in accordance with the laws in force. Some equipment’s inner parts are connected to electric main and therefore electrocution may occur if servicing was made before switching off the main and emergency power.
Some products incorporate rechargeable or non rechargeable batteries as emergency power supply. Their wrong connection may damage the product, properties and the operator’s safety (burst and fire).
1. GENERAL INFORMATION

The ET8/480, ET8/480S and ET8/480PT model of microprocessor based control units have been designed in order to enable the installation of high quality intrusion detection in residential homes, businesses, bank branches, post offices, etc. It is possible also to create multi-installation systems with up to four separate zones and a maximum of 80 double balanced inputs. The users who can be enabled to interact with the control unit are total 32 and they may gain access by means of a code, an electronic proximity key from the following control devices:

**NADIR** = control and programming keyboard featuring a horizontal plastic casing of modern design, equipped with a backlit display for the display of operating and programming messages, four keys for part setting, back-lit rubber keys, a scanner for electronic proximity keys and a connector for the connection of other remote readers.

**AURORA** = control and programming keyboard featuring a horizontal plastic casing of modern design and four keys for part setting, equipped with back-lit rubber keys, a scanner for electronic proximity keys and a connector for the connection of other remote readers.

**ZENITH** = Remote control point, Key point, flush-mounting for 503-type frames equipped with four keys for part setting, a scanner for electronic proximity keys and a connector for the connection of other remote readers.

**NOTE**: This manual is referred to ET8/480 base control unit. In particular cases ET8/480S and ET8/480PT’s characteristics will be indicated.

2. BLOCK DIAGRAM
3. GENERAL FEATURES

For an accurate appraisal, the features of the ET8/480, ET8/480S and ET8/480PT models of control units are as follows:

- Control unit managed by microprocessor for high risk applications used in residential housing, banks, post offices and businesses;
- Multi-system functions covering up to four separate zones with four part-set sections for each zone for total 16 part-set;
- 32 user codes and separate installation and programming code;
- Built-in control keyboard with integrated proximity key scanner (only in ET8/480 and ET8/480PT models);
- Connector for the connection of remote scanner (models I6 and I7) for proximity key;
- 16 inputs which can be connected directly to the master board, expandable up to 80 inputs on serial bus;
- Inputs can be configured as double balanced or normally closed;
- Fully compatible with CP8 series of transponder for serial expansions;
- Balanced input for TAMPER protection of system, protection against opening and removal (against tamper only on ET8/480PT to protect double door housing with window);
- Self-recognition function of the connected peripherals, keyboards and transponders after a total reset;
- RS485 serial port with terminal board connection to connect the following type of control devices:
  - AURORA = Control and programming keyboard equipped with back-lit rubber keys, four keys for part setting, a scanner for electronic proximity keys and a connector for the connection of other remote readers.
  - NADIR = Control and programming keyboard equipped with a back-lit display for display purposes, four keys for part setting, back-lit rubber keys, a scanner for electronic proximity keys and a connector for the connection of other remote readers.
  - ZENITH = Remote control point, Key point, flush-mounting for 503-type frames equipped with four keys for part setting, a scanner for electronic proximity keys and a connector for the connection of other remote readers.
- Accessories to connect to control devices:
  - I6 or I7 = Scanner point for M4 proximity key connected to keyboard, Key point or directly to the control unit terminal board. The I6 version is suitable for installation on the MAGIC TICINO frame; the I7 version on the LIVING TICINO frame.
  - Built-in time programmer for the automatic management of the system or a portion of it, equipped with 24 programmes with weekly/annual pattern and management of weekday holidays, fixed or variable, management of overtime and automatic changeover between GMT/BST and vice versa;
  - Lithium back-up battery for internal clock;
  - 300 events non-volatile log with FIFO management;
  - Definition of events to be sent to printer and to be recorded in the log;
- Programmability of communications parameters according to CEI 79-5 and CEI 79-6 protocols;
- Exit timing programmable in blocks of 1 second for each individual zone;
- General alarm timing programmable from 10 seconds to 600 seconds in blocks of 10 seconds;
- Delay timing on entry, Pre-alarm, programmable for each input from 0 to 65535 seconds in blocks of 1 seconds;
- Tamper alarm timing, TAMPER, programmable from 10 seconds to 600 seconds in blocks of 10 seconds;
- Delay timing for indication mains supply failure programmable in minutes from 0 to 60;
- Control unit operating and programming parameters of the recorded in NVRAM memory;
- 16 programmable electronic MFT outputs divided between two connectors SIGNAL 1 and SIGNAL 2, up to 80 on serial bus;
- Connector-type output for MP64/DRPT model driver board for ET848/SIN mimic panel;
- CENTRONICS parallel port for printer with connector-type output;
- FX/232 optional connector for board with 2 RS232 serial ports, for connection with centralisations;
- RS232 serial port with MINIDIN connector for direct programming by PC using WINASSIST programme or dedicated browser with CP8/SER2 cable;
- Up-date of control unit release via PC with DOWN-LOAD programme and CP8/SER2 cable;
- RS485 serial port with terminal board for serial bus connection for transponders models CP8/TR8B, CP8/TR, etc.
- RS485 serial port with terminal board for network connection of EL.MO. control units and alarm centralizations;
- C-NA-NC contacts outputs terminal of ALARM and TAMPER relays;
- Separate terminals for self-powered sirens control and for the relative internal battery recharging;
- Built-in telephone dialler to calls up to 12 telephone users equipped with telephone line sectioning relay and connection terminal board;
- FAST FORMAT DTMF, SLOW FORMAT EL.Mo PC AND ADEMCO ID-CONTACT communication protocols;
- Connector for SK/SINT voice synthesis board connection for the transmission of two voice messages;
- Modern section for remote service using WINASSIST;
- New generation 2.5A high efficiency switching power supply unit, for the mains supply of the system and the recharging of the buffer battery.
4. TECHNICAL SPECIFICATIONS

Model
ET8/480 (ET8/480S).

Level of performance
2nd with device against removal mounted at installer’s discretion.

Degree of protection
IP3X.

Mains supply
230V +/- 10% 50Hz via safety transformer fixed to the base of the housing; 12V 15 Ah max. back up battery.

Battery recharge voltage
13.8V (13.4V / 14.4V).

Nominal output voltage
13V.

Normal functioning
Between 9V and 15V.

Nominal current supplied
2.5A.

Limitation in current
2.7A.

Residual ripple
40 mV.

VOUT stabilisation
+/- 2% at charge change.

Maximum consumption from mains
300 mA.

Battery recharge current
1.5A for 15Ah battery.

Maximum current on charge
700 mA.

Consumption @ 12V(ET8/480s with a NADIR keyboard connected)
with control unit enabled:
300 mA (340 mA).
with control unit disabled:
260 mA (300 mA).
with control unit in alarm status:
360 mA (400 mA).

Consumption of other accessories possibly connected:

NADIR keyboard:
Increase of 55 mA with system disabled, 90 mA with system enabled, 180 mA max.

AURORA keyboard:
Increase of 50 mA with system disabled, 80 mA with system enabled, 107 mA max.

AURORA/SC keyboard:
Increase of 31 mA with system disabled, 53 mA with system enabled, 87 mA max.

ZENITH Key point:
Increase of 40 mA with system disabled, 70 mA with system enabled.

Readers I6 or I7:
Increase of 30 mA.

SK/SINT voice synthesis card:
Increase of 25 mA in stand-by mode and 40 mA in alarm mode.

CP8/TR two input/output type transponders:
43 mA in stand-by mode and 73 mA with relays in pick-up mode.

CP8/TRS two-input type transponders:
43 mA in stand-by mode.

CP8/TR8 eight-input type transponders:
50 mA in stand-by mode without outputs connected.

CP8/TR8 eight-input type transponders:
50 mA in stand-by mode without outputs connected.

CP6/TR30 concentrator:
110 mA with just one TR9000 module connected, 140 mA with 30 TR9000 connected.

Board with RS232 double serial
80 mA.

Operating temperature - Humidity:
+5 / +40 °C - 93% humidity.

Batteries which can be connected:
12V max. 15Ah.

Dimensions of casing:
L 480 - H 305 - B 140 mm (ET8/480PT L 525 - H 380 - B 280 mm).

Weight:
4 Kg (15 Kg for ET8/480PT).

Equipment:
33 1500 Ohm input balancing resistors, 2 termination resistors for 680 Ohm serial line, small bag with 4 x54 threading screws and 4 S8 wedge, micro-switch against housing opening and removing (Against house-breaking kit with inertial sensor and analysis board for ET8/480PT), rubber-sheathed cable with connector for remote reader (not included as part of ET8/480S equipment), technical and programming manual, Cd programming with PDF manuals.

NOTE:
The transponders must be connected directly to the specific terminal board of the control unit indicated as A and B and may be powered by the mains supply terminals of the keyboard. They must be connected according to this manual’s diagrams by using a screened cable for theft and flame prevention with a minimum section of 0.75 mm2 for short lengths and a minimum section of 1mm2 or greater for long lengths. Maximum connection distance between control unit and the last transponder is 1,000 metres with transponders evenly distributed. For the system’s autonomy and powered load’s optimization, it is recommended the use of remote mains supply boxes such as model C11K, especially when the control unit is used with several keyboards, transponders and volumetric sensors.
ET8/480, ET8/480S and ET8/480PT models of control unit are compliant with CEI 79-2 standard is the level of performance declared. They resulted immune to radio-frequency and voltage pulses to the mains supply terminals; tests have been carried out according to IEC 801-2-3-4. They are also compliant with the 89/336/EEC directive relative to electromagnetic compatibility and the 93/68/EEC directive relative to low voltage safety.

The telephone section provided with TLC 049407/00 Test Report dated 06/07/2000 issued by the Ministry of Communications Accredited Laboratory No. 58.

The following programmaings degrade the performance level from 2nd to 1st:
- Inputs programming as NC and/or TR9000 and CT8/TR transponders.

The following functions and devices are not IMQ - SISTEMI DI SICUREZZA certified:
- Fire alarms management, command devices and inputs tamper disabling, self-disabling function relative to inputs in anomaly conditions when exit time ends
- Printer mod. CP8/PRINT, transponder mod. CP8/TRS, Teleservice, WINASSIST software, modem mod CP8/MDE, browser light WABL0034/CD, the use of TR9000 and TR9000S transponders, FAR and PTN filters.

ATTENTION:
Ensure that electrical system is equipped with an efficient earth connection. The control unit includes a telephone communicator which integrity depends on the earth system efficiency; in any case it is recommended the use of appropriate auxiliary protection devices which should be connected outside the metallic housings, such as FAR model for protection on the electric network and the PTN model for protection on the telephone system. Before proceeding with the installation, it is recommended to consult the CEI 79-3 standard concerning the installation of security systems, the CEI 64-8 standard concerning the installation of low-tension systems. Operate professionally.

A = Check earth connection existence;
B = Control earth connection efficiency;
C = Assure the mains supply voltage quality, in order to avoid excess voltage which could occur in the case the control unit were occasionally powered by a generating set;
D = Provide for the connection of devices outwardly the control unit for suppressing electrical interference (for example FAR module);
E = If mains current instability occurs, provide for the connection of a saturated iron stabilizer;
F = Check the existence of a magnetothermal switch or arrange an adequate one, for protection against the mere overloading of the electrical system. In fact, although the additional use of a differential switch (cut-out switch) is provided by law, in order to avoid the electrocution of individuals, valuations regarding both individuals safety (the equipment below the switch is under low voltage) and the need to guarantee the surveillance system continuity, suggest the sole use of magnetothermal switch in order to guarantee the mains supply continuity;
G = In case of use of built-in telephone communicator, provided for the installation of a telephone interference suppression filter mod. PTN;

This filter must be installed in close proximity instead of the telephone line fuse box; this does not permit the telephone line wires entering and exiting the dialler to be contained in the same duct since the interference on the entering wire is filtered by the PTN module.

If PTN module is installed near the control unit’s housing, it is necessary to separate the entering and exiting telephone line wires in two separate ducts, so as to avoid problems of mutual induction which may occur on the wires upstream the PTN module.

H = Evaluate the configuration of the electrical connections of the various accessories (sensors, keyboards, sirens ...) for the control unit’s optimal positioning;
I = The control unit must be wall-mounted, in a suitable position to permit the access of wires for electricity mains supply and telephone line, the system alarms wiring, the eventual connection of a printer and lastly subsequent maintenance activities on the control unit itself.

THE WALL MUST BE ABLE TO SUPPORT THE CONTROL UNIT WEIGHT.
Avoid to locate the control unit and its accessories in extremely hot and humid places. For instance keyboards must not be placed in proximity of heat sources such as radiators, nor exposed to direct sunlight which would compromise the liquid crystal display legibility. Position the control unit and the various accessories in environments which are not dusty and avoid louver obstruction so as not to block the internal ventilation.

Before proceeding with the installation consult the CEI 79-3 standard concerning the installation of security systems, the CEI 64-8 standard concerning installation of low-tension systems. Operate professionally.

Operations for installation, drill holes marking and subsequent drilling

1 - Open the control unit by unscrewing the lateral screws on the upper side.
2 - Open the control unit door, take the manual out and prepare the panel for fixing.
3 - Fix the control unit to the wall by means of the specific screws and dowels using the holes previously drilled. **NOTE:** The supplied screws are used for fixing to an homogeneous wall. Use specific screws and wedges for different walls.
4 - Insert non-live wires of the system, through the holes indicated on the base of the control unit. If you choose to use the upper and the bottom holes, you shall use tube/box connections with HB or higher flammability rating.
5 - Connect the transformer’s entry terminals to the powered-off mains cable inserted in the hole indicated as B. Avoid that low voltage cables touched mains supplies cables. To serve this purpose, it is necessary to fix the mains cable to the mother board’s connection terminal board by means of the rubber-sheathed supplied as standard issue. Carefully avoid soldering the unshielded cables extremity before connection to terminal board.
6 - Check the accuracy of the connections to be made referring to the diagrams in this manual.
7 - Connect the telephone communicator’s input and output wires. If necessary pass them through the hole indicated as B.
8 - Connect the control devices, keyboards, Key point, with any electronic keys. Connect the telephone communicator if required.
9 - Accurately check the wiring and connect the red and black wires with FASTON ends to the battery respecting polarity. **NOTE:** The battery housing must have a flammability rating of HB or higher.
10 - Switch on the mains and consult the programming manual for installers.
11 - If PC with the specific programming program is available, connect the CP8/SER2 cable to the dedicated connector and activate direct communication.
12 - Proceed M4 keys memorization to the pertinent keyboards.
13 - Test the system.
14 - Connect the sirens and carry out a final test.
15 - Close the control unit up using the screws provided.
6. PREARRANGEMENTS

View of internal positionings ET8/480 and ET8/480S models.

View of internal positionings in ET8/480PT model.
7. MASTER BOARD AND FUSES

View of master board and the power supply transformer

![Master Board Diagram]

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Terminal board for connection of sensor wires</td>
</tr>
<tr>
<td>B</td>
<td>RS485 AUX terminal board for network connection of control units. To use for connection with big alarm centralization.</td>
</tr>
<tr>
<td>C</td>
<td>Driver terminals for transponder serial line. The mains supply must be taken from the terminal board alongside. If the serial line starts from this terminal board, connect the first 680 Ohm resistor between A and B.</td>
</tr>
<tr>
<td>D</td>
<td>Driver terminals for compatible keyboards, NADIR, AURORA and ZENITH key points.</td>
</tr>
<tr>
<td>E</td>
<td>Output terminals for alarm signals, clean contacts of the ALARM and TAMPER relays (only for devices working with SELV voltage), mains supply terminals for sensors, reference for self-powered sirens and +14V for recharging their internal battery.</td>
</tr>
<tr>
<td>F1</td>
<td>F5A fuse protecting, see fuses table.</td>
</tr>
<tr>
<td>F2</td>
<td>F3,15A fuse protecting, see fuses table.</td>
</tr>
<tr>
<td>F3</td>
<td>F 5A fuse protecting, see fuses table.</td>
</tr>
<tr>
<td>F4</td>
<td>F 5A fuse protecting, see fuses table.</td>
</tr>
<tr>
<td>G</td>
<td>Connector-type input of the voltage originating from the secondary of the transformer fixed to the base of the housing.</td>
</tr>
<tr>
<td>F5</td>
<td>Connector for the connection of the SK/SINT voice synthesis card.</td>
</tr>
<tr>
<td>H</td>
<td>Connector for the connection of the telephone dialler section with earth terminal and line sectioning. Connect only to TNV circuit.</td>
</tr>
<tr>
<td>I</td>
<td>Connector for connection of printer with Centronics parallel interface. Use, for example, a CP8PRINT printer.</td>
</tr>
<tr>
<td>J</td>
<td>Connector for I6 or I7 reader.</td>
</tr>
<tr>
<td>K</td>
<td>Connector for future uses.</td>
</tr>
<tr>
<td>L</td>
<td>Connector for I6 or I7 reader.</td>
</tr>
<tr>
<td>M</td>
<td>Connector for future uses.</td>
</tr>
<tr>
<td>N</td>
<td>Connector for future uses.</td>
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<tr>
<td>O</td>
<td>Contrast adjustment of display.</td>
</tr>
<tr>
<td>P</td>
<td>Warning buzzer.</td>
</tr>
<tr>
<td>Q</td>
<td>Items not available in ET8/480S control unit.</td>
</tr>
<tr>
<td>R</td>
<td>Contrast adjustment of display.</td>
</tr>
<tr>
<td>S</td>
<td>Warning buzzer.</td>
</tr>
<tr>
<td>T</td>
<td>Signals 1 and 2 connectors for connection of CP8/REL and UNIREL boards for MFT output function.</td>
</tr>
<tr>
<td>U</td>
<td>Connector for the connection of the MP64/DRTP driver board for the ET848/SIN mimic repeater.</td>
</tr>
<tr>
<td>V</td>
<td>SPEC push-button for special reset operations to be used solely with ET8/48S control unit.</td>
</tr>
<tr>
<td>W</td>
<td>RESET push-button for resetting the control unit or returning to factory status, DEFAULT. These operations are described in the pertinent section.</td>
</tr>
</tbody>
</table>
Description of the terminal boards

**L1 ...L16** = Input terminals of the lines with configuration which can be programmed as double balanced or NC. The events generated by the anomaly of each input can be programmed. The inputs are 80 in total, the transponders of the CP80 CP90 CP100 series of control units must be used from input 17 up to the last one to be managed.

**AUX 485** = RS485 terminal board for connection to a network of El.Mo control units managed by PC or in large centralisation systems.

**B - A** = Connection terminals of the RS485 serial port for a line of compatible transponders with CP80, CP90, CP100 series of control units. The serial line makes it possible to expand the control unit up to a maximum of 80 inputs. It is necessary to connect the cable of the serial line with four wires, taking the mains supply from the right-hand terminal board; in the event of connection with three wires only the terminal B- A and the negative of the right-hand terminal board will be used. With the serial line exiting from the terminal board, it is necessary to connect a 680 Ohm end resistor between the terminals A and B while the second one must be connected to the same terminals of the last transponder used.

**+ 12V - QT** = RS485 terminals for connection of the external control mechanisms of the control unit identifiable in NADIR, AURORA, ZENITH models. The mains supply terminals can also be used for supplying power to the transponder devices of the serial line which may be connected in order to expand the system.

**TAMPER RELAY C - NC - NA** = Output terminals of the TAMPER alarm relay corresponding to contacts free from potential. Contact capacity 800 mA @24V. To use only for connection to circuit working with SELV voltage, for example to drive optical-acoustic warning devices or inputs for radio links, etc.

**ALARM RELAY C - NC - NA** = Output terminals of the general alarm relay corresponding to contacts free from potential. Contact capacity 5A @24V. To use only for connection to circuit working with SELV voltage, for example to drive optical-acoustic warning devices or inputs for radio links, etc.

**SENS. POWER +12V-** = Output terminals for powering sensors or other devices, the voltage is always present and the output is protected by the F3 F5A fuse.

**+RIF SIR** = Output terminal of the control voltage for self-powered sirens. The voltage is present when the control unit is in stand-by; during general alarm status, the voltage drops for the duration of the timing set when programming the control unit. Use two wires for connection, one linked to the +RIF SIR and the other linked to the left-hand negative terminal.

**TAMPER** = Connection terminal of the system TAMPER input to which the various protection microswitches for the system’s housing or other connected devices must link. The WHITE TAMPER CONNECTOR is positioned in series to this input; this connector constitutes the point of connection of the control unit protection circuit made off the microswitch protecting against housing opening placed in contact with the screws fastening the door. It is possible to connect the base protection kit in series to the latter, as shown in the diagram featured in this manual.

**EARTH FASTON** = Male connector for the earth connection of the control unit and housing protections; the connection is made beforehand by the manufacturer.

**LA, LB, LA’, LB’** = Connection terminals of the telephone dialler built into the master board. Follow the connection diagram illustrated in this manual. The earth terminal is placed between the telephone line input terminals (LA and LB) and the output terminals (LA’ and LB’). To the earth terminal connects the standard protections of the telephone interface. Make the connection to an efficient earth.
8. ELECTRICAL CONNECTIONS

8.1 Connection of double balanced inputs

Main diagram for double balanced connection

![Diagram of double balanced connection]

**IMPORTANT**

IN THE EVENT IT IS IMPOSSIBLE TO BALANCE THE LINE, STATE IT AS NC; ONLY USE A SHELLED CABLE WITH BRAIDING CONNECTED TO THE NEGATIVE SOLELY ON THE CONTROL UNIT SIDE.

8.2 Connection of control unit TAMPER input

Main diagram for single balanced connection of system TAMPER protection input.

![Diagram of single balanced connection]

**IMPORTANT**

THE TAMPER INPUT CANNOT BE PROGRAMMED AS NC; ONLY USE A SHELLED CABLE WITH THE BRAIDING CONNECTED TO THE NEGATIVE SOLELY ON THE CONTROL UNIT SIDE.
8.3 Connection of the inputs

Note: Inputs programming as NC lowers the level of performances from 2nd to 1st.

8.4 Connections for control inputs

Diagrams for the specific connection of an input for control of the control unit or part of it.

Note: The external source enabling command must be given as impulse by using a device of the same level or higher installed inside the control unit housing and connected to an appropriately programmed line.
8.5 Connection of the transponder

Main diagram for transponder connection.

NOTE: The use of CP8/TRS mod. transponders is not certificated by IMQ-SISTEMI DI SICUREZZA.
Diagram of addresses programming for the CP8/TR transponders.

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<th>INPUT no.21 and 22</th>
<th>INPUT no.23 and 24</th>
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<th>INPUT no.27 and 28</th>
<th>INPUT no.29 and 30</th>
<th>INPUT no.31 and 32</th>
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<th>INPUT no.37 and 38</th>
<th>INPUT no.39 and 40</th>
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<th>INPUT no.45 and 46</th>
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<td><img src="image15.png" alt="Diagram" /></td>
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<thead>
<tr>
<th>INPUT no.49 and 50</th>
<th>INPUT no.51 and 52</th>
<th>INPUT no.53 and 54</th>
<th>INPUT no.55 and 56</th>
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<td><img src="image19.png" alt="Diagram" /></td>
<td><img src="image20.png" alt="Diagram" /></td>
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<tr>
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<th>INPUT no.59 and 60</th>
<th>INPUT no.61 and 62</th>
<th>INPUT no.63 and 64</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image21.png" alt="Diagram" /></td>
<td><img src="image22.png" alt="Diagram" /></td>
<td><img src="image23.png" alt="Diagram" /></td>
<td><img src="image24.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INPUT no.65 and 66</th>
<th>INPUT no.67 and 68</th>
<th>INPUT no.69 and 70</th>
<th>INPUT no.71 and 72</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image25.png" alt="Diagram" /></td>
<td><img src="image26.png" alt="Diagram" /></td>
<td><img src="image27.png" alt="Diagram" /></td>
<td><img src="image28.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INPUT no.73 and 74</th>
<th>INPUT no.75 and 76</th>
<th>INPUT no.77 and 78</th>
<th>INPUT no.79 and 80</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image29.png" alt="Diagram" /></td>
<td><img src="image30.png" alt="Diagram" /></td>
<td><img src="image31.png" alt="Diagram" /></td>
<td><img src="image32.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**KEY**

<table>
<thead>
<tr>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image33.png" alt="ON" /></td>
<td><img src="image34.png" alt="OFF" /></td>
</tr>
</tbody>
</table>

14 - ET8/480, ET8/480S and ET8/480PT - TECHNICAL MANUAL
Diagram of addresses programming for the CP8/TR8 AND CP8/TR8B transponders.
Connection of transponders mod. TR9000, TR9000S and DF9000.

NOTE: The use of TR9000 and TR9000S transponders is not certificated by IMQ-SISTEMI DI SICUREZZA.
Diagram of TR9000, TR9000S transponders and DF9000 sensor’s addresses programming.

**KEY**

**RELATIONSHIP BETWEEN CP8/TR30’S S1 JUMPER’S STATUS AND INPUTS NUMBERING OF CONNECTED TRANSPONDERS**

**PINS POSITION FOR ADDRESS SELECTION**

- **ON**
- **OFF**

Input no. 46

Input no. 78

S1 OPEN

S1 CLOSED
8.6 Connection of optical-acoustic warning devices

Connection of self-powered sirens to the control unit's terminal board.

The auxiliary outputs are programmable with MFT functions, the first sixteen are located on the master board of the control unit, the rest can be used by means of connection to the transponders installed in serial line. The MFT-type outputs corresponding to the transponders installed in serial but not equipped with electronic output, will not be available, for example CP8/TRS and TR9000S.

For MFT outputs programming and DEFAULT configurations, consult the specific programming section in the technical manual.
8.8 Connection of a printer

8.9 Connection of a repeater for mimic
8.10 Control devices

Main connections of a system divided up into four zones with the keyboard of the ET8/480 control unit used as supervision.

Note:

From the connection of a second keyboard up to the wiring of the maximum number of control points, it is advisable to use an auxiliary mains supply box in order to increase the autonomy of the system.
Connection of a NADIR keyboard

Connection of AURORA keyboard

WARNING: KEYBOARD AURORA/ASC DOES NOT HAVE THE READER CONNECTION OPTION
Connection of a ZENITH Key point

Connection of the reader to the keyboard of the ET8/480 control unit.

Connection of the 2000 model I6 or I7-type readers

Connection of the 2000 model I6 or I7-type readers

ATTENTION: THE CONNECTION FOR THE READERS IS NOT AVAILABLE IN THE ET8/480S CONTROL UNITS

NOTE: CONNECT THE BLACK 0,75 mm² WIRE TO TERMINAL 6 AND THE RED 0,75 mm² WIRE TO TERMINAL 5
8.11 Built-in telephone dialler

The control unit is equipped with a multi-protocol digital dialler for calls to alarm-reception centres, for example the security firms, thereby also permitting Remote Service/Assistance sessions with the installing company albeit with different timings. The most interesting aspect is represented by the possibility of installing an optional voice synthesis card for registration and voice synthesis message listening, model SK/VOICE, by means of which two messages can be sent to up to 12 telephone network subscribers.

Connection of the SK/VOICE card.
Telephone connection example.

**ATTENTION:** THE TELEPHONE INTERFACE OF THE CONTROL UNIT IS NOT DESIGNED FOR CALLS USING ISDN PROTOCOL. IN THE EVENT THAT THIS TYPE OF COMMUNICATION IS PRESENT AT THE TIME OF INSTALLING THE CONTROL UNIT, IT IS NECESSARY TO MAKE THE CONNECTION BRANCHING OFF FROM PLUG No. 1. THE ISDN EQUIPMENT (E.G., NT1PLUS) EQUIPPED WITH REMOTE POWER SUPPLY, IN THE EVENT THE NT1PLUS DEVICE IS INSTALLED WITH THE CONTROL UNIT ALREADY OPERATIVE, IT IS NECESSARY TO MOVE THE TELEPHONE CONNECTIONS TO PLUG No. 1. THE DIALLER OF THE CONTROL UNIT MUST BE PROGRAMMED FOR DTMF IMPULSES.

NOTE: PTN filter is no certificated from IMQ-SISTEMI DI SICUREZZA.

Example of direct programming from PC

**NOTE:** CP8/SER2 MUST BE CONNECTED TO THE SERIAL PORT OF PC

**CONNECTOR FOR CP8/SER2 CABLE INSERTING, PC CONFIGURATING**

**WABL0034/UK BROWSER OR WINASSIST PROGRAM**

**RING SENSITIVITY FOR REMOTE SERVICE OPERATION**

**OPEN - SENS, REDUCED CLOSED - SENS, NORMAL**

**INCOMING TELEPHONE LINE**

**CONNECT TO AN EFFICIENT EARTH**

**TNV CIRCUIT**

**PTN INTERFERENCE SUPRESSION FILTER**

**BEFORE TELEPHONE LINE**

**AFTER TO TELEP. FUSES**

**TELEP. LINE**

**TO EARTH**

**CHECKING EARTH WIRE**
9. CONTROL DEVICE DISPLAYS

9.1 Front keyboard of ET8/480 model control unit

View of the keyboard built into the front of the ET8/48 keyboard. The ET8/48S only has remote keyboards and the ET8/480PT control unit is equipped with NADIR keyboard mounted on internal door.

9.2 Nadir keyboard

View of NADIR control keyboard
View of the AURORA control keyboard

AURORA KEYBOARD. MUST BE USED ONLY FOR CONTROL FUNCTIONS AS IT IS NOT PROVIDED WITH LCD DISPLAY. PART-SET KEYS AND SYSTEM AND ALARM WARNING LIGHTS ARE THE ONLY AVAILABLE INDICATIONS.

View of ZENITH Key point

DISPLAY WARNING LIGHT DENOTING OPERATING STATUS OF CONTROL UNIT
SENSITIVE AREA FOR THE RECOGNITION OF THE M4 KEY

ENABLING KEYS OF THE PART-SET AND DISPLAY LAYOUTS OF THE ENABLEMENT STATUS OF THE CONTROL UNIT OR OF THE ASSOCIATED ZONE
10. GENERAL RESET

10.1 Reset operations

The ET8/480 control unit comes equipped with factory-set programming entitled DEFAULT which enables a minimum of functions so as to be able to conclude the required programming operations. Should it become necessary to cancel the programmings carried out, it is possible to return to the DEFAULT settings by operating in the following manner:

- A = Open the housing of the control unit.
- B = Reset the tamper alarm.
- C = Isolate the sirens and the other alarm warning devices.
- D = Press the red RESET button positioned beside the microprocessor and keep held down.
- E = Press the key and keep held down for 5 seconds; on the ET8/480S it is necessary to press the SPEC button.
- F = Release the RESET button and keep the front panel button pressed down (SPEC in the case of the ET8/480S) for another 5 seconds, when keys and lighten press in sequence keys and after which the following wording will appear on the display:

```
VISIBLE CODES
OK = YES    STOP = NO
```

By pressing the key the various user codes will be visible in programmation and maintenance fase by pressing no codes visualization will be possible during programming or maintenance. Only the user will be able to change his own code without displaying it.

**NOTE:** To change code's visibility, it is necessary to re-set the default condition.

The following message will appear:

```
PERIPHERAL App.
OK TO CARRY OUT
```

- G = By pressing the key, the recognition procedure of the connected peripherals is activated: key boards, key point, transponder with the memorisation of the respective recognition codes.

**ATTENTION:** Never press key when installing mod. ET8/480 and ET8/480PT control units as it causes the keyboard's response slakening. Make sure you only press key.

After pressing key the following wording will appear:

```
Peripheral App.
Operation underway
```

At the end, the customary wording will appear:

```
Sa01/01/00 04:03
```

- H = Once the reset phase has been completed, re-activate the alarm signalling devices and start the programming operations.
11. USER INTERFACE

11.1 General introduction

When control unit is started for the first time give enabling system status. Keyboards interested to the programmation, automatically go out to "TIMEOUT" operative status, after 15 second from the last pressed key or given command.

"USER NUMBER" is the two digit (from 01 to 32) identification number of the user in access to command keyboard, the user number must be followed by a 6 digit personal code which allow the full recognition from the control unit.

"PROMPT" or "WELCOME MESSAGE" is defined the standard visualization with system in rest and no anomalies. The second line can be customized with the installer name, for example:

```
VE25/01/03  20:45
ACME SECURITY
```

11.2 Led visualization

Command devices LED warning lights defined as system and area terminals.
11.3 User and installer log-in

The log-in operations enable the identification and authentication of the operator and allow access to the user interface structures assigned to modify the security of the system.

Three types of log-in exist:

<table>
<thead>
<tr>
<th>STANDARD LOG-IN</th>
<th>MAXIMUM SECURITY LOG-IN</th>
<th>MINOR MAINTENANCE LOG-IN (MUM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access for giving the control unit general or zone-based enabling or disabling commands.</td>
<td>Access for giving the control unit general or zone-based enabling or disabling commands with MAXIMUM SECURITY importance used as impediment of the extinguishing function for users lacking this specific login attribute.</td>
<td>The user can access the various minor maintenance menus which do not expressly request the intervention of the installer; access to the functions permitted in configuration mode are indicated with the lettering MUM (minor user maintenance).</td>
</tr>
</tbody>
</table>

11.4 User and installer identification

From "prompt" type in the two-figure identification number of the user (00 = INSTALLER, 01 - 32 = USER).

On pressing the first key, the key will light up.

On pressing the second key (if the user number is accepted), the key will start to blink indicating that the authentication procedures are pending (on keyboards with LCDs, the user number will be translated by the control unit into the user name).

11.5 Authentication

In this phase the six figures of the codes and any modifiers ( or ) are input, followed by the key.

11.6 Modifiers

The key requires the log-in for configuration.

The key requires the log-in for maximum security.

Following the successful outcome of identification and authentication, in relation to the type of log-in requested and concerning the configuration of the user, the system will take the user interface to the following status:

<table>
<thead>
<tr>
<th>PRE-ENABLING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>“Standard” mode</strong></td>
</tr>
<tr>
<td>Enabling of the zone and/or of the sections associated with the user code with the possibility to choose the sections to be kept disabled, within 3 seconds of the command being given, disabling is complete.</td>
</tr>
</tbody>
</table>

The EURO-type command cannot be utilised with operations carried out on the I6 and I7-type remote readers.
12. PROGRAMMING

So as to be able to fully programme the control unit and achieve the desired functions, it is necessary to access specific menus which make it possible to specify in detail the automatic and/or manual operations which will be carried out during the management of the system by the end users.

“Only the installer has complete access to the configuration menus, the users may possibly be able to manage the menus defined as “MINOR USER MAINTENANCE, MUM.”

12.1 Conventions

In order to be able to start the journey towards the complete configuration of the control unit, it is necessary to memorise the following actions:

- In all the configuration sub-menus, the key allows the user to return to the previous menu until they exit the configuration menu entirely, while by means of the key the user can access the next menu down.
- The modification phase of a parameter can be concluded in two ways: by using the key without implementing the changes or by using the key in order to confirm the modifications (an acoustic signal will indicate the modification implemented).
- The menu items identified by the lettering MUM are also accessible by users who are authorised to carry out minor maintenance.
- The programming identified by the lettering DEFAULT constitutes the value pre-set by the manufacturer.
- The modification modes of the configuration values are several, at the start of a sequence of commands which requires a different editing mode, the related operating sequence will be summarised in images.

12.2 Display and editing modes

The illustrations below depict the key sequences, called MODE x, used in order to input or change the values of the individual menus or change the choices displayed.

**Mode A**

Used for inputting individual values of a numeric nature (range 0-255).

**Mode B**

Used for modifying the options.
**Mode C**
Used for inputting the individual values of a numeric nature (range 0-65535)

**Mode D**
Used for inputting telephone numbers and code number.

**Mode F**
Mode used for the self-learning of the PIT proximity keys to be associated with the various users (one key per user).

**Mode G**
Used for inputting the sectors S1 - S4 associated with a zone managed by individual user.
**Mode H**

Used for modifying the messages

- **EXIT WITHOUT MEMORISING**
  - Icon

- **USE THE KEYS FOR EDITING THE MESSAGE WITH KEY/LETTER CORRESPONDENCE DISPLAYED IDENTICAL TO THE FUNCTION USED IN CELLULAR TELEPHONE**
  - Icons

- **START EDITING AND END WITH MEMORISING OF THE MESSAGE**
  - Icon

- **KEYS FOR MOVING THE FLASHING CURSOR RIGHT OR LEFT**
  - Icons

- **KEYS FOR CHANGING THE CHARACTER UNDER THE CURSOR**
  - Icons

**USE OF KEYS S1, S2, S3, S4**

- **S1**
  - FOR CHANGING OVER THE CHARACTER FROM LOWER TO UPPER CASE

- **S2**
  - FOR INSERTING THE DECIMAL POINT

- **S3**
  - FOR CANCELING THE CHARACTER UNDER THE CURSOR AND MOVING IT LEFT

- **S4**
  - FOR INSERTING A SPACE UNDER THE CURSOR AND MOVING IT RIGHT

**Mode I**

Used for changing the hexadecimal codes

- **EXIT WITHOUT MEMORISING**
  - Icon

- **KEY FOR INCREASING THE NUMBER DISPLAYED**
  - Icon

- **KEYS FOR SCROLLING THE FLASHING CURSOR RIGHT AND LEFT**
  - Icons

- **START AND END OF MEMORISATION WITH ACOUSTIC CONFIRMATION SIGNAL**
  - Icon

- **KEY FOR DECREASING THE NUMBER DISPLAYED**
  - Icon

**Mode J**

Used for changing the date displayed and the time of the internal clock and for scrolling through the various menus.

- **START OF THE MODIFICATION OF THE VALUE SET AND END OF OPERATION WITH MEMORISING CONFIRMED BY ACOUSTIC SIGNAL**
  - Icon

- **KEY FOR INCREASING THE NUMBER DISPLAYED**
  - Icon

- **EXIT WITHOUT MEMORISING**
  - Icon

- **KEY FOR DECREASING THE NUMBER DISPLAYED**
  - Icon
13. CONFIGURATION MENU

List of the principal configuration menus of the control unit:

The ET8/480 control unit is structured in order to enable access to two programming menus denominated: ACTIONS and CONFIGURATION

In the following table, the sub-menus available are listed:

<table>
<thead>
<tr>
<th>Key 1</th>
<th>ACTIONS MENU</th>
<th>Key 2</th>
<th>CONFIGURATION MENU</th>
<th>Key 3</th>
<th>OUTPUTS DISABLING MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMORY READING</td>
<td>CLOCK**</td>
<td>OVERTIME REQUEST*</td>
<td>INPUTS OUTPUTS**</td>
<td>INTERNAL DIALER</td>
<td></td>
</tr>
<tr>
<td>DAY - TEMP. TYPE</td>
<td>USERS**</td>
<td>REMOTE ASSISTANCE</td>
<td>SYSTEM OPTIONS**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONITOR INPUTS</td>
<td>VOICE TELEPHONE NUMBER**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: * = menu access only by user code  * = menu access by MUM attribute

Given the importance of the two menus, we will start with an explanation of the sub-menus relating to the CONFIGURATION menu and subsequently the commands available in the ACTIONS menu will be described. In the afore-mentioned menus, the INSTALLER LOG-IN is accessed by pressing [1] and the keys 1 for ACTIONS, 2 for CONFIGURATION and 3 for INPUTS DISABLING. In this display stage, the Firmware version loaded in the internal memory of the control unit is also indicated.

14. ACCESS CODE

14.1 Programming code

<table>
<thead>
<tr>
<th>PROGRAMMING</th>
<th>INSTALLER LOG-IN</th>
<th>DEFAULT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>888888</td>
<td></td>
</tr>
</tbody>
</table>

14.2 User codes

User code examples:

<table>
<thead>
<tr>
<th>USER NUMBER</th>
<th>LOG-IN START</th>
<th>DEFAULT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01</td>
<td>111111</td>
</tr>
<tr>
<td>2</td>
<td>02</td>
<td>222222</td>
</tr>
<tr>
<td>3</td>
<td>03</td>
<td>333333</td>
</tr>
<tr>
<td>4</td>
<td>04</td>
<td>444444</td>
</tr>
<tr>
<td>5</td>
<td>05</td>
<td>555555</td>
</tr>
<tr>
<td>6</td>
<td>06</td>
<td>666666</td>
</tr>
<tr>
<td>7</td>
<td>07</td>
<td>777777</td>
</tr>
<tr>
<td>8</td>
<td>08</td>
<td>888888</td>
</tr>
<tr>
<td>9</td>
<td>09</td>
<td>999999</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>000000</td>
</tr>
</tbody>
</table>

EXAMPLES OF OTHERS USER CODES

<table>
<thead>
<tr>
<th>USER NUMBER</th>
<th>LOG-IN START</th>
<th>DEFAULT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>11</td>
<td>111111</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>111111</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>000000</td>
</tr>
<tr>
<td>32</td>
<td>32</td>
<td>222222</td>
</tr>
</tbody>
</table>
15. RELEASE UPDATE

Programming step which permits the up-dating of the programme version without having to carry out the inconvenient replacement of the EPROM memory. For such purposes, it is necessary to avail of a portable lap-top PC with the specific browser WABL0032/CD or with WINASSIST programme correctly installed and operated.

In order to complete the operation successfully, it is necessary to follow the indications below:

A= Avail of either a portable lap-top or a fixed PC in case the operation were taking place in a laboratory.
B= Find the file with "BIN" extension containing the controlunit’s programme’s new version. The most updated version can be requested for free to the manufacturer and be sent by e-mail.
C= Activate the browser and select "Control unit release update" in the action menu.

D= Read carefully the message visualized.

Press Yes to procede and have below’s.

The three main icons stand for:

- Serial communications port choise.
- Opening of file to be downloaded in the control panel’s memory.
- Activation of firmware downloading procedure.
Select icon first to check the correct parameter of the communication port.

Pay maximum attention to the communication port visualization. Writing must be clean and free from strange characters, that may cause incorrect initialization. Choose a different port to clean the writing and then go back to COM port. If the writings appear clear press key.

Select icon for file loading. The following window will be displayed:

In case it were not visualized, use key many times to enter the directory indicated by:
- C:\Programs\ELMO\ET480v1L in case of WABL0032/CD programme
- C:\WINAS\BROWSERS\ET480v1 in case of WINASSIST programme

Select the specific Bin file for the control unit and press APRI.

Connect CP8/SER2 cable to connect PC and control unit, enter programming through MODO COMANDO, press the 2 key and one of the arrow key up to the "CONFIGURAZIONE OPZIONI SISTEMA" menu. Press key and downwards arrow key to enter "Aggiorna release" menu last press key as indicated below.
Go back to PC and select icon to start the communication with control unit. Find below the request of confirmation that appears in order to proceed with the indication of firmware’s diversity. Press "SI" key to move on.

Communication’s activation and download can be observed on the coloured bar. A first reset is carried out when the bar is half way. You are requested to press OK to proceed with the second part.

Wait up until the procedure of control unit automatic reset is complete. Disconnect CP8SER2 cable and exit the update procedure. Check control unit functionality with new firmware.

**WARNING:**
- *.BIN configuration file can be sent by e-mail and therefore there is no need to replace the EPROM.
- Upgrade needed before using the file with control units featured by a previous firmware version. The browser will give instruction’s to the technician if upgrade had not been made.
- Control unit’s programming configuration reading needed before its use with different class control units such as ET8/48 and ET8/48S.
- Save the configuration in the PC and convert it by means of the browser. Update the control unit with the new program and then make the default reset.
- The upgraded control unit’s configuration cannot be downloaded through direct connection because it is not compatible with the new firmware.
- The browser is able to convert the old configuration to a format compatible with version 2.0. Select Action Menu Conversion File 1.x -> 2.0.
- After the conversion, connect to the browser. At last download the control unit’s configuration for system management.
Example of conversion of a configuration relative to a release previous to 2.x. Select Conversion File 1.x -> 2.x.

Open the folder containing the previous version configuration and select it. Press open and save with a new name in the version 2.x folder.

The program will convert the file to a format compatible with the control unit’s current version, only by selecting OK.

At the end of the operation, indications useful to the following programming activities will be displayed.
In this chapter are concentrated the main control unit orders. NADIR keyboard’s use enables the visualization of the various control unit's programming menu, some of them enable the user to some maintenance activities; with AURORA keyboard is allowed the only command by user code digitation. For others orders consult the user manual.

**NOTE:** When control unit is supplied for the first time gives enabling system status. Keyboards interested to the programming, automatically go out from "TIMEOUT" operative status after 15 seconds from the last pressed key or given command. "PROMPT" or "WELCOME MESSAGE" is defined as standard visualization with idle system in rest and no anomalies. The second line can be customized with the installer name, for example:

**VE05/01/01  20:45**
**ACME ET8/480 1.0**

### 16.1 Disabling from keyboard

![Diagram of disabling from keyboard]

**STOP**

**USER NUMBER**

![Code field with user code]

**USER CODE**

![Section lights attributed to user unit]

**ACOUSTIC CONFIRMATION**

**CHECK STATUS OF FAULTS**

**FAST BLINKING FOR PRE-ENABLELING TIME (5 SEC) USEFUL FOR ALTERING SECTION ENABLEMENT STATUS**

**SLOW BLINKING INDICATES EXIT TIME FOR LEAVING PROTECTED ROOMS**

**SECTION LIGHTS ASSIGNED TO USER LIT TO INDICATE AREA OR CONTROL UNIT ENABLED**

**ACOUSTIC CONFIRMATION**

**WARNING SOUND**

### 16.2 Enabling from keyboard

![Diagram of enabling from keyboard]

**STOP**

**USER NUMBER**

![Code field with user code]

**USER CODE**

![Section lights attributed to user unit]

**ACOUSTIC CONFIRMATION**

**CHECK STATUS OF FAULTS**

**FAST BLINKING FOR PRE-ENABLELING TIME (5 SEC) USEFUL FOR ALTERING SECTION ENABLEMENT STATUS**

**SLOW BLINKING INDICATES EXIT TIME FOR LEAVING PROTECTED ROOMS**

**SECTION LIGHTS ASSIGNED TO USER LIT TO INDICATE AREA OR CONTROL UNIT ENABLED**

**ACOUSTIC CONFIRMATION**

**WARNING SOUND**

### 16.3 Disabling through electronic key

![Diagram of disabling through electronic key]

**PLACE KEY AGAINST SENSITIVE AREA FOR CORRECT READING**

**WAIT A MOMENT FOR THE SECTION LIGHTS TO GO OFF**

**ACOUSTIC CONFIRMATION**
16.4 Enabling through electronic key

16.5 Enabling in MAXIMUM SECURITY mode.

16.6 Disabling the system in MAXIMUM SECURITY mode via keyboard

User non authorized to "MAXIMUM SECURITY" mode
Non permitted action
17. PROGRAMMING TABLES

17.1 Programming entry, COMMAND MODE

**INSTALLER LOGIN**

- INSTALLER
- 0 0
- INSTALLER CODE DEFAULT: 888888
- OK
- ACUSTIC CONFIRMATION

**USER LOGIN**

- USER NUMBER
- n n
- USER CODE
- OK
- ACUSTIC CONFIRMATION

Release 2.5
1.A 2.0dt 3.8yp

**PRESS 1**
TO ENTER THE ACTION MENU

**PRESS 2**
TO ENTER THE SETUP MENU

**PRESS 3**
TO ENTER THE INPUT DISABLING MENU

**NAVIGATION**
- ACTION MENU
- READ LOG
- TEMP., DAY-TYPE
- REMOTE SERVICE
- MONITOR INPUTS
- OVERTIME REQUEST

**USE KEYS**
- TO DISPLAY ENABLING / DISABLING ZONE
- TO LOG THE CHOICE MADE END GET OUT THE COMMAND MODE

**AVAILABLE ONLY WITH THE USER CODE**

**VISIBLE ONLY WITH THE USER CODE**

- CLOCKS
- USERS
- ZONES / OUTPUTS
- SYSTEM OPTIONS
- VOICE TEL. NUM.
- INTERNAL DIALLER
- REP. CODE / VOICE
- MULTIFUNC. TIMER
- MFT SETUP
- AREA
- KEYPADS
- EVENT RECORDING
- WEEKLY PROGRAMM.
- EXCEPTION SETUP
- CEI 7895-6 PARAM.
17.2 ACTIONS menu

INPUT IN COMANDE MODE (PROGRAMMING MODE)

NAVIGATION
DISPLAY HOUR AND DATE

CHANGE DEFINITION
WORKING DAY, HOLIDAY, PART-DAY A, PART-DAY B, NOT DEFINED
CONFIRM
EXIT WITHOUT CONFIRM

TO EXECUTE
TO CANCEL

NAVIGATION
MESSAGES: NORMAL LINE, ALARM LINE, TAMPER LINE, SHORT CIRCUIT LINE

IT IS NECESSARY THAT AT LEAST ONE PROGRAMME IS ACTIVE, ACCESS RIGHTS NEEDED (ASSOCIATED AREAS AND SECTORS) REQUEST IT WITHIN PROGRAMMED TIME INTERVAL.

NAVIGATION
+ 1 HOUR
SAVING
TO EXIT

RELEASE 2.X
1.Ac. 2.Set. 3.Byp.
17.3 SETUP menu

- Release 2.x

- INPUT IN COMANDE MODE
  (PROGRAMMING MODE)

- NOTE:
  ON SIDE OF THE VARIOUS MENU
  IS PLACED A LETTER CORRESPONDING
  TO VISUALIZATION AND EDITING MODE.
  FOR DETAILS IS NECESSARY TO LOOK
  THE BEGINNING OF PROGRAMMATION
  CHAPTER IN THIS MANUAL.

- DAYS OF THE WEEK
  01 = MONDAY - 57 = SUNDAY

- CLOCK SETUP
  - Hour
  - Minutes
  - Day
  - Month
  - Year
  - Day of the Week

- USERS SETUP
  - To change the users codes
  - To use code in keyboard, minor
    maintenance (MUM), maximum security.
  - To enable mode (normal, special, euro)
  - To change the zones associated to the user
  - To change the zones presented to the user
  - To associate, enable a M4 proximity key to the user
  - To program the user name

- SETUP MENU
  - ZONES / OUTPUTS
  - Z.--- Opt. 1
  - Z.--- Opt. 2
  - Z.--- Max al. num
  - Z.--- A... Group
  - Z.--- Event def.
  - Z.--- AND with
  - Z.--- Delay
  - Z.--- Zone name

- Z.--- Opt. 1
  - Program the maximum alarms number
  - Managed from xx input
  - Program the input to pertinent area
  - Program the event generated from xx input
  - Program the inputs in and function
  - (require also the programmation in the option 1 menu)
  - Program the pre-alarm time for xx input
  - (require also the programmation in the option 2 menu)
  - Edit the name of xx input

- Z.--- Opt. 2
  - Associate the output to MFT, group from MFT1 to MFT8
  - Associate the output to MFT, group from MFT9 to MFT16
  - Edit the xx output name associated to xx MFT

- NOT ACCEPTED CONFIGURATION FROM IMO-SECURITY SYSTEMS:
  - Self-disabling input, disabling tamper.
  - Unbalanced input (the level of performance decline at 1st)
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FOR REMOTE ASSISTANCE ENABLING (1 = ENABLED)
FUNCTION NON ACCEPTED FROM IMQ SECURITY SYSTEMS

TO EDIT DISPLAYED MESSAGE
FROM LCD DISPLAY IN QUIET CONDITION

TO PROGRAMME A DIFFERENT PROGRAMMING
ACCESS CODE

PROGRAMMING FOR KEYBOARDS TAMPER CONTROL,
MAX SEC, DISAB, AFTER ONE ALARM CONDITION, PERIOD, CALL, TIMER RECHARGE,
BLOCK TELEP, DIALLER AT DISAB., SILENC, BUZZER IN EXIT TIME,

GENERAL ALARM TIME PROGRAMMING
IN STEPS OF 10 SECONDS

TAMPER ALARM TIME PROGRAMMING
IN STEPS OF 10 SECONDS

PROGRAMMING OF DISABLING ALLOWS TIME FROM
MAX SEC. AFTER AN ALARM CONDITION IN STEPS OF 30 MINUTES

WAIT TIME PROGRAMMING
IN STEPS OF 1 MINUTE

PERIODIC DIGITAL CALLING TIME PROGRAMMING
OF TELEPHONE DIALLER IN STEPS OF 30 MINUTES

DAY TYPE DEFINITION MANAGED FROM
TIME PROGRAMMER,
DEFAULT:
FROM MONDAY TO FRIDAY = WEEKDAY
SATURDAY = SEMI-HOLIDAY TYPE A
SUNDAY = HOLIDAY

MOMENT PROGRAMMATION FOR THE
AUTOMATIC CROSSING TO THE GREENWICH
MEAN TIME.

TO PROGRAMME BEFORE EVERY USE

MOMENT PROGRAMMATION FOR THE
AUTOMATIC CROSSING TO THE BRITISH
SUMMER TIME

TO PROGRAMME BEFORE EVERY USE

PROGRAMMING OF MAXIMUM ASKED HOURS AS
OVERTIME. 0 = NO OVERTIME
TEMPORAL WINDOW PREVIOUSLY PROGRAMMED
EVENTS WITHIN WHICH IS POSSIBLE TO REQUIRE
THE OVERTIME

PROTOCOL TO USE FOR THE CONNECTION WITH CP8/SER2,
000000 DIRECT 000001 CEH 795-6 CICAL 000002 CEH 795-6 GUARDIAN

PROCEDURE FOR FIRMWARE UPDATING
SEE SPECIFIC CHAPTER IN THE COMPLETE MANUAL
TELEPHONE LINE ACCESS PROGRAMMING

KEYS LI = FUNCTION (KEY UNLI = FUNCTION WITHIN BRACKET)
1 = FROM AN INTERNAL OF A TELEPHONE EXCHANGE (DIRECT ACCESS)
2 = DTMF FROM TELEPHONE EXCHANGE (DECADIC)
3 = CONTROL OF FREE TELEPHONE EXCHANGE (NO CONTROL)
4 = CONTROL OF FREE URBAN LINE (NO CONTROL)
5 = DTMF IN URBAN LINE (DECADIC)
6 = ANSWERING SERVICE FUNCTION (NO ANSWERING SERVICE FUNCTION)

ACCESS NUMBER PROGRAMMING TO URBAN LINE
MUST BE ACTIVATED IN THE PREVIOUS MENU

IDENTIFICATION NUMBER PROGRAMMING
TO ACCESS TO THE REMOTE SERVICE

RECALL NUMBER PROGRAMMING
FOR REMOTE SERVICE CONNECTION

NECESSARY RING NUMBER PROGRAMMING
FOR AUTOMATIC ANSWER TO A REMOTE SERVICE CALL (0 = NO ANSWER)

OPERATIVE MODES PROGRAMMING
FOR COMMUNICATIONS WITH SURVEILLANCE INSTITUTES
KEYS LIT = ACTIVE FUNCTION
1 = DIGITAL COMMUNICATION
2 = VOICE COMMUNICATION, ONLY WITH SK/SINT BOARD
3 = DOUBLE REPORTING (UNLIT SINGLE REPORTING)
FROM 4 TO 8 = NOT USED

PROGRAMMING OF THE PROTOCOL USED
IN THE DIGITAL COMMUNICATION.
000 = FAST FORMAT DTMF (RX99)
001 = ELMO. PC
002 = SLOW FORMAT 3/1
003 = SLOW FORMAT 3/2
004 = SLOW FORMAT 4/1
005 = SLOW FORMAT 4/2
006 = HEX ADEMCO ID-CONTACT
007 = DEC ADEMCO ID-CONTACT
FROM 008 TO 255 = NOT USED

IDENTIFICATION NUMBER PROGRAMMING
FOR THE CALLING DEVICE RECOGNITION
FROM SURVEILLANCE INSTITUTE

TELEPHONE NUMBERS PROGRAMMING FOR DIGITAL TRANSMISSIONS TO SURVEILLANCE INSTITUTE
IN DOUBLE MODE BOTH WILL BE CALLED
IN SINGLE REPORTING MODE WILL BE CALLED ONLY
THE FIRST THAT ANSWERS AND CONFIRMS THE CALL
VOICE TRANSMISSION LENGTH PROGRAMMING,
VALID FOR THE TWO RECORDABLE MESSAGES IN SK/SINT BOARD.
PROGRAMMABLE FROM 001 TO 090 SECONDS

RECALLING PROGRAMMING AT EVERY SUBSCRIBERS NUMBER
PROGRAMMED FOR VOICE TRANSMISSIONS
FROM 001 TO 005

MESSAGES PROGRAMMING IN SK/SINT BOARD
DO NOT USE BOARD'S COMMAND WITHOUT HAVING
PREVIOUSLY ACTIVATED THIS MENU.

PHASES FOR THE CHANNEL 1 MESSAGE RECORDING

FOR RECORDING THE MESSAGE OF CHANNEL 2 SWITCH OK ON CH2
FOR LISTENING AGAIN CHANNEL 1 THE REC/PLAY SWITCH ON PLAY, CH1/CH2
ON CH1 AND PRESS START
FOR LISTENING AGAIN CHANNEL 2 MOVE CH1/CH2 SWITCH
ON CH1 AND PRESS START
AT THE END LEAVE THE SWITCHES IN THE INDICATED POSITIONS
PRESS

NOTE: THE USE OF TELEPHONE DIALLER WITH 2 MESSAGES
MUST BE PROVIDED FOR THE TRANSMISSION OF AN ALARM MESSAGE
AND A MESSAGE DEDICATED TO THE SERVICE (MAINS FAULT AND
BATTERY FAULT). CEI 79.2 ED. 93 PAR. 3.12.02

PROGRAMMING OF REPORT CODE RELATIVE
TO THE EVENT SELECTED FOR THE DIGITAL
TRANSMISSION TOWARD THE SURVEILLANCE INSTITUTE
(CONSULT THE COMPLETE PROGRAMMING MANUAL)

PROGRAMMING OF REPORT CODE RELATIVE
TO THE EVENT SELECTED FOR THE VOICE
TRANSMISSION TOWARD A MAXIMUM OF 12 TELEPHONE
SUBSCRIBERS SUBDIVIDED IN 2 GROUPS, ACT. VOICE 1 AND ACT. VOICE 2.
(CONSULT THE COMPLETE PROGRAMMING MANUAL)

EXAMPLE OF INTRUSION ALARM EVENT'S
PROGRAMMING (+ALARM RELAY)
WITH MESSAGE (RECORDED ON CH1)
TRANSMISSION TO THE FIRST 3 TELEPHONE
NUMBERS PROGRAMMED THROUGH VOICE

EXAMPLE OF TAMPER ALARM EVENT'S
PROGRAMMING (+TAMPER RELAY)
WITH MESSAGE (RECORDED ON CH1)
TRANSMISSION TO THE FIRST 3 TELEPHONE
NUMBERS PROGRAMMED THROUGH VOICE
MFT TYPE PROGRAMMING TO USE
000 = TOGGLE EVENTS PROVOKE THE ASSOCIATED
OUTPUT'S STATUS CHANGE (STEP BY STEP FUNCT.)
001 = NON RECHARGEABLE TIMER
002 = RECHARGEABLE TIMER
003 = NON RECHARGEABLE TIMER
004 = RECHARGEABLE TIMER
MFT WITH
MFT WITH
MFT WITH
MFT WITH
POSITIVE LOGIC
NEGATIVE LOGIC
001 OR 002 PREVIOUSLY PROGRAMMED,
1 SECOND STEPS FROM 1 TO 5039 SECONDS

PROGRAMMING TO DIRECT EVENTS TO THE DESIRED
FUNCTION OF THE MFT TO BE USED,
PREVIOUSLY PROGRAMMED.
(SEE THE COMPLETE PROGRAMMING MANUAL)

EXAMPLE FOR AREA 1 ENABLING
SIGNALLING
204 EVENT (AREA1 DISABLING)
LIKE MFT 9 RESET

PROGRAMMINGS TO DIRECT
LIKE SET THE S1, S2, S3, S4 GROUPS
ENABLING STATUS
PROGRAMMED AS BELONGING
TO AREA 1,
212, 213, 214, 215 EVENTS

PROGRAMMING OF MAXIMUM DISABLING INPUTS NUMBER
FOR SINGLE AREA
DEFAULT 079

PROGRAMMING OF EXIT TIME IN SECONDS
TO THE DISPLAYED AREA.
PROGRAMMING FROM 001 TO 255 SECONDS
(DEFAULT 010 SECONDS)

EDITING OF NAME USED TO IDENTIFY DISPLAYED
AREA,
MENU FOR THE SPECIFIC ADDRESS IDENTIFICATION OF EACH SINGLE INSTALLED KEYBOARD
MAX. NUMBER 25 - IN PRACTICE UP TO 12

EXAMPLE OF CONTROL UNIT WITH REMOTE KEYBOARD INSTALLED WITH 001 ADDRESS

MENU FOR INSTALLED KEYBOARD TYPE
SPECIFY
23 TYPE FOR LCD KEYBOARD
21 TYPE FOR LED KEYBOARD
22 TYPE FOR KEYPOINT EMBEDDED

KEYBOARD ASSIGNED AREAS PROGRAMMING
KEY 1 LIT = AREA 1 ACCESS
(DEFAULT)

ASSIGNED AREAS IN VISUALIZATION TO KEYBOARD
000 = SYSTEM KEYBOARD, DISPLAY THE 4 AREAS
001 = AREA 1 KEYBOARD
002 = AREA 2 KEYBOARD
003 = AREA 3 KEYBOARD
004 = AREA 4 KEYBOARD

DEFAULT 001 = AREA 1 KEYBOARD

PROGRAMMING OF THE EVENTS TO SEND TO PRINTER SUBDIVIDED IN GROUPS OF 16

1 VALUE IN THE SECOND LINE MEANS SENDING TO THE PRINTER

EVENTS PROGRAMMING OF THE EVENTS TO SAVE IN THE LOG DIVIDED IN GROUPS OF 16

1 VALUE IN THE SECOND LINE MEANS LOG RECORDING

(EVENTS TABLE IS PART OF THE COMPLETE PROGRAMMING MANUAL)
17.4 BYPASSED ZONE menu

Input enabling/disabling activity is always memorized in the control panel’s log. 🔄 key flashing in the keyboards indicate 1 or more inputs disabled.

Refer to the complete programming manual included in the attached CD for programming details. The CD also contains WABL0032/CD LIGHT programming software required for fast programming by PC in direct connection with control unit through CP8/SER2 optional cable.
WARNING: The time indication on the display refers to the clock initialization with BATT jumper open as per control panel default. The normal operation is granted by the BATT jumper's closure for Nichel Cadmio battery insertion to permit the clock functioning even in case of mains failure.

Keep into account that Nichel Cadmio battery has a life of 10 years over which the functioning cannot be granted. See to its replacement at any ELMO's technical service point in order to avoid incorrect visualizations and functioning.

19. WARNINGS FOR ELIMINATION

The control unit's elimination must apply to the municipal provisions in force and should be brought to an authorized dump for electronic products elimination. Ask information to the Town Hall Office for street cleaning.

Warnings for eventual battery presence
The control unit's correct operation status requires the connection to a back up battery and that the system included some auxiliary power supply boxes also provided with back up batteries.

The battery replaced must be brought to a dump authorized for batteries elimination because the material used for battery is highly poisonous and polluting.
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