numbers of sensor's activations in the zone and after which activations the zone will be discarded (ignored).

On every system's arming the counter is cleared in self.

*6.3.11. 2 - **Triger Timer** - enter a number whose value is betweeen 1 to 255 for the function **2 - Triger Zone**.*

*6.5. **Siren***

*6.5.1.2. **Duration** - siren sound term setup - from 1 to 255 sec.*

6.7.1.1. **Installer's code change** - change the installer's code by entering the new one twice and after doing the whole settings.

6.12.1. **Set Default** - in order to restore the default (factory) settings after pressing button ENTER enter the installer's code. The standart settings are recorded by the system and the programmed codes are kept.

7. FACTORY SETTINGS - all zones are by-passed according to the factory settings. The Master's code is **1234**. The installer's code is **3791**. The following permissions are set for codes from 1 to 16: arm, disarm, bypass,stay on.

System settings - automatic stay on, tamper alarm.

Entry time period A - 30 seconds

Exit time period A - 30 seconds

Zones - zones' type:

Zone 1 - Entry Delay

Zone 2 - Follows

Zone 3,4,5,6,8 - Instant

Zone 7 - 24-hours Burglar

Attributes - for the zones from 1 to 8 attributes are set:

Part A assign, Bypassing, Activation limit

"Chime" attribute is set for Zone 1, and "stay" attribute for zone 3.

Mapping - Keyboard 1 zone is mapped to zone 8

Line type - EOL balansed

Activations limit - 5

Siren sound Duration - 120 sec.

MICROPROCESSOR HOME SECURITY SYSTEM

HOME 6

Installation Guide and programming

The system is usefull for protection of small buildings - living places, shops, offices, store places etc. including up to 8 separate zones. It has built-in power supply, double-armoured siren, inputs for security devices, Bulgarian and English language interface, 8 programmable zones, 16 users codes, system clock, phone dialer and nonvolatile events memory. One station could be connected to up to four keyboards.

parameter is enabled by pressing button "**1**" - it is marked by symbol "√" on the display. The corresponding atributes is disabled by pressing button "**0**" - it is marked by symbol "**X**" on the display.

6.3.xx.3.1. **Part A/B Assign** - presents the zone's belonging to one of both (or to the both together) system parts.

6.3.xx.3.3. **Bypass** - allows zone's bypassing if enabled.

6.3.xx.3.4. **Stay** - if enabled the zone is domestic one.

6.3.xx.3.5. **Chime** - if the option is enabled on this zone activation a "bell" sound is generated through the keyboard.

6.3.xx.3.6. **Auto Ignore** - if enabled the numbers of activations by this zone is limited when the zone is active.

6.3.xx.3.10. **Fast Reaction** - if the option is enabled it allows detecting a short impulse at the zone input. Quick zone use decreases its noise-protection and is not recommended excepted the cases when sensors can't provide. Opened status of their contacts for 0,6 sec. on activation. This type of zone reacts to entry impulse > 40ms.

6.3.xx.3.11 **2 - Triger Zone** -This option allows programming of which zones will require two triggers before they activate. To cause an activation a two trigger zone must alarm twice within the 2 trigger time period, or 2 two trigger zones can alarm once each within the two trigger time period before the alarm is generated. If a two trigger zone is unsealed and remains unsealed for a period longer than the two trigger time period, an alarm will also be generated.

6.3.xx.4. **External zone mapping** - there is a zone in the keyboard the customer can use. In order to be used, the keyboard zone has to be mapped by one of the internal zones.
The buil-in system zone is used as keyboard one if there is selected internal (built-in) zone at this submenu.
If "keyboard1" is selected - the keyboard zone is used instead of the internal zone and all internal zone settings are kept.
Magnetic switches connection to this zone is suitable.

6.3.9. **Wiring type** - one of the possible ways for sensors connection is set. EOL - balanced use is recommended - allows alarm and sabotage detection (line interruption or cutting)

6.3.10. **Ignore limit** - enter a number whose value corresponds to the

armed even though there are opened zones.

After you enter the code press button FRC. On this forced arming the opened zones are discarded (ignored) till the moment of their restoration.

6.1.9. **Auto Stay** - if the option is enabled the system enters the "stay" automaticcally on condition that there is not "entry/exit zone" activation till the exit time period expiry.

6.1.10. **"Duress Digit"**

6.1.11. **Tamper alarm** - if the option is enabled alarm is generated in case zone's sabotage, independent of system's status.

6.2. **Entry/ Exit** - the terms for entry and exit are programmed at this submenu - from 1 to 255 seconds.

6.3. **Zones** - Zone's type, zones' attributes and zones' wiring type are programmed at this submenu.

6.3.xx.2. **Function (type)** - the following zones' types are supported by the system:

6.3.xx.2.2. **Entry delay** - if the zone is used as entry/ exit one.

6.3.xx.2.3. **Instant** - when the system is armed, on this kind of zone activation an alarm is generated.

6.3.xx.2.4. **Follow** - if this type of zone is activated during the entry time period alarm will not be generated. When the system is armed the zone's activation generates alarm immediately.

6.3.xx.2.5. **24-hours Burglar** - if activated it generates alarm immediately independent of system's security mode.

6.3.xx.2.6. **24-hours Fire** - on it's activation the system generates alarm immediately independent of system's mode. The sound produced by the built-in siren is teared. The special moment is that zone's normal (passive) status is possible when zone's sensors contacts are normal opened (sensors connected inside the zone).

6.3.xx.2.7. **Switch** - activation of this type of zone allows system's arming and zone's restoration allows system's disarming.

6.3.xx.2.8. **Switch Toggle** - activation of zone of this type allows system's arming and disarming by option. Impulse lock controls it. <u>Zone's activation when system is armed generates disarming.</u> <u>Zone's activation when system is disarmed generates arming.</u>

6.3.xx.3. **Atributes** - Zone's atributes setup. The corresponding

The system mounting is done in the following steps:

1/ The system box is mounted in suitable place by screws on the wall through the bored on the backside holes;

2/ The keyboard is mounted in the same way;

3/ All sensors are mounted in the preliminary chosen places;

4/ All cables from the sensors and the keyboard are lead to the central unit. Power supply cable is also provided.

2. Wiring

The secondary coil of the circuit transformer is connected to 'AC' input of the system. Power supply to the sensors, keyboards and other devices are provided by outputs: +12V and GND.

Accident numbers of standard security and fire sensors with normal closed alarm and sabotage registration contacts, with or without (for instance multi-connector type) 12V power supply, can be connected to each zone.

The sensors must provide at least 0,6 seconds opened status of the connectors in sabotage state.

Total power consumption of all sensors and security devices using system power must be less than 500 mA.

Zones between 1 and 8 can be set: double-balanced zones, balanced without resistor at the end of the line, with resistor only at the line (circuit) end and without balanced resistors-based on the fact that in zone 7 tamper contacts are connected. The free zones are programmed as unused.

Control panel wiring

To the keyboard

PGM1 PGM2 PGM3 Z1 GND Z2 Z3 GND Z4 Z5 GND Z6 Z7 GND Z8 +12V +12V B A GND GND

1
3A — 2
5A
3 — 5
4
6
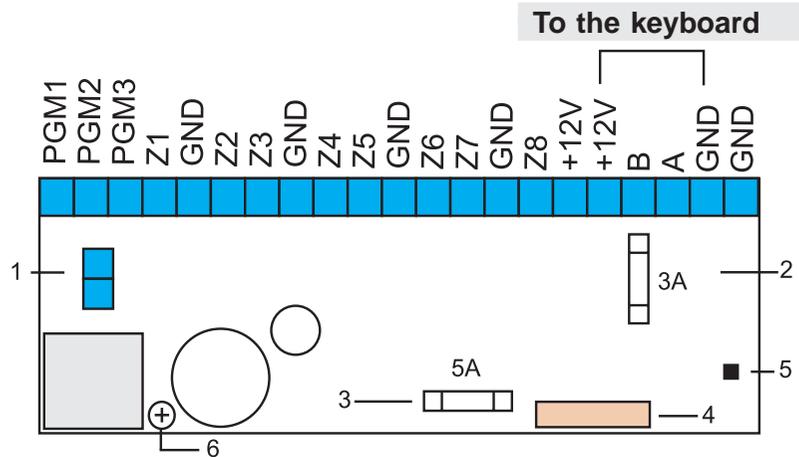
1- From transformer's secondary coil
2 - Power supply safety fuse to the peripheral devices and sensors
3 - Battery's power supply safety fuse
4 - self-protection button (tamper)
5 - Jumper - used for system's factory settings restoration
6 - Trimmer - Battery's charge voltage controlling trimmer (13,6/ 13,8V)

Keyboard wiring

Z8 - Additional zone for standard security sensors connection
* Special feature - the zone is normal closed

When you whant to connect to the station more than one keyboad, you have to address them by jumpers J1 and J2.

J1
J2 **Jumpers for keyboads**

Z8
+12V
B
A
GND
To the control panel

keyboard 1 - there is no connected jumper

keyboard 2 - upper jumper is connected

keyboard 3 - bottom jumper is connected

keyboard 4 - two jumpers are connected

ZONE INPUT   GND

NC

4
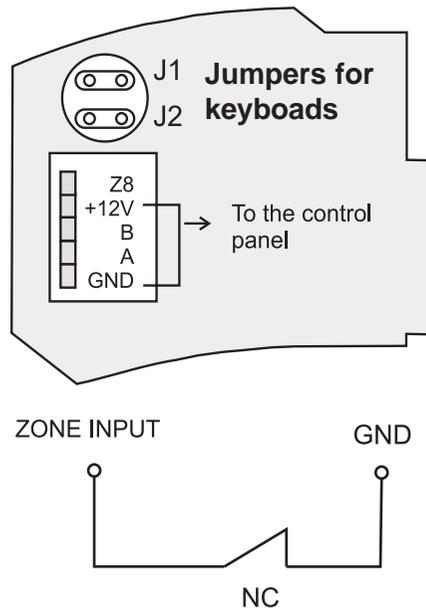
5.1.2.10. **Programming other code** - sets the code's permission to change the *other* codes.

5.1.2.11. **Set clock** - sets the code's permission to change system's date and hour.

5.17. **Master Code change** - you have to change the Master Code after the end of all code's programming. Enter the new Master Code twice. The Master Code is 1234 by default (factory settings).

6. SETTINGS - The whole system setup is done at this submenu. Only installer's code gives access to "settings" submenu.

SYSTEM SETTINGS - the system's settings are configured at this submenu.

The corresponding option is enabled by pressing button "**1**" - it is marked by symbol "√" on the display.

The corresponding option is disabled by pressing button "**0**" - it is marked by symbol "**X**" on the display.

6.1.1. **Partitions** - if the option's enabled the central unit divides into two independent parts.

6.1.2. **6-Digit code** - if the option is enabled - all consist of six dogits including the installer's code too. In case of four-digit codes setup passing into six-digit code generates two zeroes at the end of the code automatically. For instance if the code has been 1234 - the six-digit one will be 123400. The first four digits are valid when passing from six into 4-digit code.
To make it easier the central allows to be armed by pressing one button instead of code entering.

6.1.3. **Quick arm** - when the option is enabled the system is armed just by pressing **ENTER** button.

6.1.4. **Quick "Stay on"** - if the option is enabled the system turns "Stay on" on by pressing **STAY** button.
Three combinations (each consists of two buttons) are supported by the keyboard. If these combinations are enabled the following events are generated:

FRC + STAY - Panic
STAY + BYP - Medic
BYP + MENU - Fire

6.1.8. **Force arm** - if the option is enabled the systems allows to be

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*4.7.2/3.***Tone / Pulse Dialing** - choosing the type of the dialing

4.7.4. **Tone Duration** - a number is entered (from 1 to 255 sec) and this is the duration of the generated tone after the dialing a number

4.7.5. **Phone numbers** - the system support 8 phone numbers. The programming of the phone numbers is realized by buttons 0-9 and after that pressing button ENTER. The clearing is realized by pressing button CLEAR.

4.8. **SW version** - presents software version.

5. USERS - At this submenu the codes are programmed and their access permissions are set too. There are 16 users codes in the system. They are generally set as four or six-digit codes. For each you can enter a unique digit combination.

5.1.1. **Change code** - the code is entered and then the same code is confirmed. In order to erase a code disable it.

5.1.2. **Permissions** - by means of the arrows you move in the code's permissions list.

Pressing of button "**1**" enables the corresponding code's permission. This is marked by symbol "√" on the display.

Pressing of button "**0**" disables the corresponding code's permission. This is marked by symbol "**X**" on the display.

5.1.2.1. **Enable Code** - in order to use an already programmed code,it must be enabled.In order to erase a code - disable it.

5.1.2.2. **Arm** - sets the code's permission to arm the system.

5.1.2.3. **Disarm** - sets the code's permission to disarm the system.

5.1.2.4. **Bypass** - sets the code's permission to by-pass zones.

5.1.2.5. **Stay on** - sets the code's permission to turn the system's "Stay on" on.

5.1.2.6. **Event read** - sets the code's permission to review the system's events memory.

5.1.2.7. **Part A access** - sets the code's permission to give access to system's A part.

5.1.2.8. **Part B access** - sets the code's permission to give access to system's B part.

5.1.2.9. **Programming own code** - sets the code's permission to change the code of it is own.

Zones wiring

1.Normal opened zone

ZONE INPUT   GND

If resistor's value < 1,5K - alarm

NO
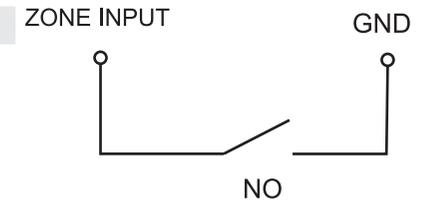
2.Normal closed zone

ZONE INPUT   GND

If resistor's value > 1,5K - alarm

NC
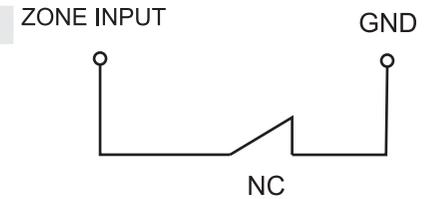
3.Unbalanced with "end-line" resistor (EOL)

ZONE INPUT   GND

If resistor's value > 1,5K - alarm
If resistor's value < 500 Ohm - sabotage

1K

NC
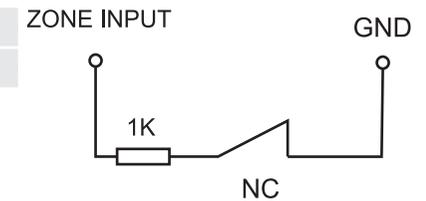
4.Balanced without "end-line" resistor (balanced)

ZONE INPUT   1K   GND

If resistor's value > 500 Ohm and < 8K - alarm
If resistor's value > 8K - sabotage

NC

TAMPER
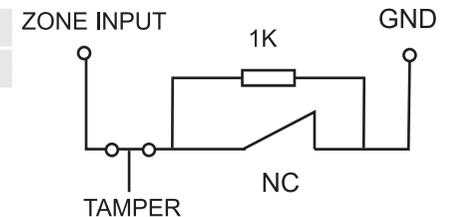
5.Double-balanced with "end-line" resistor

ZONE INPUT   1K   GND

If resistor's value > 1,5K and < 8K - alarm
If resistor's value < 500 Ohm or > 8K - sabotage

1K

TAMPER   NC

FRC

STAY

BYP
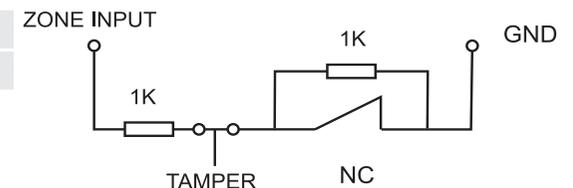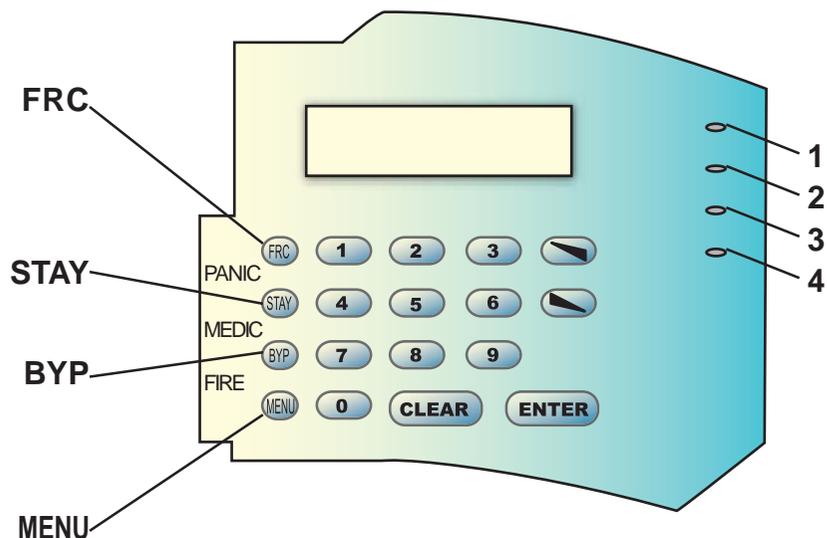
MENU

FRC - forced system arming
STAY - system's "Stay mode" is turned on
BYP - zones' by-passing
MENU - menu entry

1 - *Ready* - green. When it lights on, the systems is ready (can be armed).

2 - *Arm A* - red. When system's part A light on, it's in armed mode. When system's part A blinks - the system is in "Stay" mode.

3 - *Arm B* - red. When system's part B light on, it's in armed mode, and if part B blinks - the system is in "Stay" mode.

4 - *Trouble* - yellow. There are system's problems if it blinks (220V power loss or low battery).

Arrows - for forward/back moving within the menu structure.

CLEAR - returns to the previous menu structure or cancels the choice you have made.

ENTER - goes to the following menu structure or confirms the choice you have made.

When you enter the menu, the active submenu is shown on the first row of the display (the symbol ⏎ comes out in the right corner of the display). The next submenu is placed on the second row of the display.

**1. EVENTS MEMORY** - the system keeps 250 event log.

1.1. View events- the last event that has happened is presented on the display when you enter the menu . Using the arrows you can move in the file that consists of all events. The last event has number 250 - the following event will be erased from the system's memory.

2. BYPASS/ ENABLE ZONES

When a zone is by-passed - it is ignored (discarded) till the moment of system disarming.

Pressing of button "**1**" by-passes the corresponding zone. It is marked by "√" symbol on the display.

Pressing of button "**0**" cancels the corresponding zone by-pass. It is marked by "**X**" symbol on the display.

To confirm the settings press button **ENTER**.

3. VIEW TROUBLE - the submenu presents system problems - 220V power loss or low battery. If there are any problems the yellow LED blinks.

4. SERVICE

4.1. Language - choose the language at this submenu

4.2. Set clock - the date and hour are checked at this submenu. The digits are as follows - day, month, year ... hour, minutes. when you enter a new hour, seconds are cleared.

4.4. Test zones - in this submenu you can verifythe right work of the zones. If the zone is active, it is writen "1" on the display, or if it is inactive there is "0" on the display. If there is TAMPER, on the display is shown "T". If one of the zones is turned out, the keyboard generate sound "bell".

4.6. Clock correction - in case of inexact clock work enter a number from 0 to 255 at this submenu. The recorded number can correct the clock work (speed up/ lagging) as one unit difference in the above mentioned number reflects in 0,35 seconds (speed-up or lagging) term for 24h.

When the clock lagges - a number from 0 to 125 is entered.

When the clock speeds - a number from 255 to 126 is entered.

4.7. Dialer - the adjustments and phone numbers are programmed

4.7.1.Enabled - to use the phone dialer it have to be enabled

```
                                                    7.  √Panic Output
                                                    8.  √Medic Output
                                                    9.  √Fire Output
                                                    10  √Fast Reaction
                                                    11  √2-Triger Zone
                            4. Ex.Zone Mapping → 1.  √Internal
                                                    2.  Keyboard 1
                                                    3.  Keyboard 2
                                                    4.  Keyboard 3
          2.  Zone 2                                5.  Keyboard 4
          3.  -------
          8.  Zone 8/ 16
          9.  Wiring Type  → 1.  √Simple NO
                              2.  Simple NC
                              3.  EOL
                              4.  Balanced
          10 Ignore Limit     5.  EOL Balanced
          11 2-Triger Timer
4.  PGMs
5.  Siren  → 1.  Activated by
             2.  Duration  → 1.  <Enter Value>
6.  Keyboards
7.  Ch.Installer code → 1. Enter New Code → 2. Confirm New Code
8.  Zone Expander
9.  PGM Expander
10  Configurator
11  Set Default  → 1. Enter code
```

3. Programmable outputs

The central unit has three outputs for external devices control: "PGM1", "PGM2" and "PGM3". The outputs are with active zero up to 500mA. "PGM1" output is activated when the siren is turned on. Output "PGM2" is activated, if the system is in "Arm" mode.

Restoratig factory settings

Turn the power supply and battery supply off and wait 20 sec. to discharge the capacitors. Then place jumper 1, turn the power supply on and in 3 or 4 seconds the system's factory settings are restored. After removing the jumper the system enters its normal mode work.

System programming order:

In order to avoid mistakes and lapse the following steps for system programming are recommended:

I/ Install the system's modules (keyboard, sensors etc.)

II/ Enter "settings" submenu by the installer's code (3791) and programme the settings of yours in the next order:

1. Programme the system's settings (described in p. 6.1);
2. Programme the system's timeperiods (p. 6.2);
3. Programme the system's zones (zone type, attributes, mapping). The free zones are programmed as unused zones. Set the wiring type (sensor's connection type in the zone) and set "ignore limit" value (p. 6.3.1);
4. Programme the siren timeduration (p. 4.3);
5. After the execution of the above mentioned steps, change the installer's code (p. 1.1.2);
6. Leave the menu and enter by the master code again (1234);
7. Programme the user's codes and set their permissions;
8. Set the system date and hour (p. 5.1.2.11);
9. Change the master code (p. 5.1.17);

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- **1 Events Memory**
  - 1. View Events
  - 2. Delete All

- **2 Bypass Zones**
  - 1. √ "Zone 1"
  - 2. √ "Zone 2"
  - 3. ---------
  - 8. √ "Zone 8 /16"

- **3 View Trouble**

- **4 Service**
  - 1. Language
    - 1. √English
    - 2. Bulgarian
  - 2. Set Clock
  - 3. Test Siren
  - 4. Test Zones
  - 5. Test PGMs
  - 6. Clock Corr.
  - 7. Dialer
    - 1. Enabled
    - 2. Tone Dialing
    - 3. Pulse Dialing
    - 4. Tone Duration
    - 5. Phone Number
      - 1. Phone Number 1
      - ... .
      - 8. Phone Number 8
  - 8. SW version
    - 1. H6.x

- **5 Users**
  - 1. Code 01
    - 1. Change Code
      - 1. Enter New Code → Confirm New Code 2.
    - 2. Permissions
      - 1. √Enable Code
      - 2. √Arm
      - 3. √Disarm
      - 4. √Bypass
      - 5. √Stay On
      - 6. √Event Read
      - 7. √Part A Access
      - 8. √Part B Access
      - 9. √Prg Own Code
      - 10. √Prg Other Code
      - 11. √Set Clock
  - 2. Code 02
  - 3. ------
  - 16 Code 16
  - 17 Ch.Master Code
    - 1. Enter New Code → 2. Confirm New Code

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- **6. Settings**
  - 1. System
    - 1. √Partitions
    - 2. √6-Digit Code
    - 3. √Quick Arm
    - 4. √Quick Stay
    - 5. √Panic
    - 6. √Medic
    - 7. √Fire
    - 8. √Force Arm
    - 9. √Auto Stay
    - 10. √Duress Digit
    - 12. √Tamper Alarm
  - 2. Entry/ Exit
    - 1. Entry Delay A
    - 2. Exit Delay A
    - 3. Entry Delay B
    - 4. Exit Delay B
  - 3. Zones
    - 1. Zone 01
      - 1. Name
      - 2. Function
        - 1. √Unused
        - 2. Entry Delay
        - 3. Instant
        - 4. Follow
        - 5. 24h. Burglar
        - 6. 24h. Fire
        - 7. Switch
        - 8. Switch Toggle
      - 3. Attributes
        - 1. √Part A Assign
        - 2. √Part B Assign
        - 3. √Bypass
        - 4. √Stay
        - 5. √Chime
        - 6. √Auto Ignore

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