

MICROPROCESSOR HOME SECURITY SYSTEM



INSTALLATION GUIDE

The system is useful for protection of small buildings - living places, shops, offices, store places etc. including up to 8 separate zones. It has built-in power supply and double-armoured siren, and inputs for security devices as well. The system Home 4 enables parallel connection of several keyboards, as well as sharing of the system between one or two users in one and the same time. It is possible to connect a dialer or PCB (PGM-expander for control of sound security technics transmitter) to the system.

1.System mounting:

The system mounting is done in the following steps:

- The system box is mounted in suitable place by screws on the wall through the bored on the backside holes.
- The keyboard(s) are mounted in the same way.
- All sensors are mounted in the preliminary chosen places.
- All cables from the sensors and the keyboard are lead to the central unit. Power supply cable is also provided.

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2.Wiring:

The secondary side of the circuit transformer is connected to AC output of the system.

Power supply to the sensors, keyboards and other devices are provided by outputs: +12V and GND.

Accident number 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 sensor must provide at least 0.6sec., opened status of the connectors in sabotage state.

Total power consumption of all sensors using system power must be less than 200mA.

Zones between 1 and 6 can be set: double-balanced ones, 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 6 tamper contacts are connected.

Zone 7 can be connected to one of the keyboards, as unbalanced zone.

Zone 8 is connected to the tamper keyboard buttons.

If the system is programmed, to be used by key-switch for arming and disarming, the key-switch is connected in zone 5 by resistor 1K.

The free (out of use) zones are connected to the Ground (GND) by resistor 1 K.

3. Programmable outputs:

The system has two outputs for controlling external devices: PGM1 and PGM2.

The outputs are with active zero up to 500mA.

Output PGM1 is activated when the siren is turned on. Output PGM2 is activated if any user is under protection or by the conditionally-lagging zone.

To the system can be connected PGM- expanders with 9 or 4 outputs.

The outputs come from transistors with opened collector (100mA/30V) and are useful for control of transmitters for security devices.

The logic of programmable outputs-setup is following:

- Expander with 9 outputs:
 - #1. A single output for armed system and 8 outputs for zones' status.
 - #2. 9 outputs for user settings.

- Expander with 4 outputs:
 - #1. Two outputs for arming first or second user area and two outputs for alarm in the first and second user area.
 - #2. Two outputs if first or second user is under protection, an output for alarm and an output for fire system at any user's area.

#3. Four outputs at user's order.

4. Reading system's memory for recorded irregular events:

Flashing of button "MEM" in disarmed mode indicates recorded irregular events. Reading a memory for recorded irregular events in system disarmed mode is done in the way as follows:

- press button MEM. It flashes permanently (indicating memory reading mode), as herewith the LED corresponding to the zones of the last registered irregular event lights on.

- consequent pressing of the button "ENT" enables report for the former recorded irregular events (up to 64 in number). After the last report, system automatically comes out of the memory reading mode and the flashing of button "MEM" stops.

- flashing of button "MEM" can be disabled pressing the button "CLR" during reading a record, when button "MEM" glows continuously.

5. Setup by means of “Creating” code (a code of code creator):

In a new (without any records in memory) system, either as after system initial parameters record, “creating” code is installed to be “3791”. The code must be changed by the code-creator.

5.1. System setup by button PRG:

Press button PRG. It begins flashing – setup mode is activated.

Enter “creating” code, whereupon follows a double-bleep indicating acceptance.

Press a button between “1” and “7”, under that button “PRG” begins flashing continuously.

5.1.1.If chosen button “1”, the setup of zones’ type is performed, as follows:

Press consecutively 7 buttons with numbers from “0” to “5”, corresponding to zones from 1 to 6, as follows:

“0” - a lagging zone ,

“1” – a conditionally-lagging zone,

“2” – a momentary zone,

“3” - a home zone,

“4” - 24- hours zone and

“5” - a fire zone.

Example:

To set the zones as follows:

Zone 1 – lagging zone

Zone 2 – conditionally-lagging zone

Zone 3 – momentary zone

Zone 4 – fire zone

Zone 5 – momentary zone

Zone 6 – 24-hours zone and

Zone 7 – lagging zone

Press consequently following buttons:

0 (zone 1 – lagging zone)

1 (zone 2 – conditionally-lagging zone)

2 (zone 3 – momentary zone)

5 (zone 4 – fire zone)

2 (zone 5 – momentary zone)

4 (zone 6 – 24-hours zone) and

0 (zone 7 – lagging zone)

After the last entered number the system gives a triple bleep of acceptance and automatically comes out of the setup mode. In the event of an error a long bleep is heard and the

record failed.

5.1.2. If button “2” is pressed setup of new “creating” code is performed:

- enter “creating” code of four digits by the keyboard buttons between 0 and 9, then follows a double bleep of acceptance.

- for new code recording, it is necessary to type it once again. The record is followed by a double bleep again. In the event of an error a long bleep is heard and the record failed:

- the system automatically quits “creating” code setup mode.

- “creating” code can only be changed, but not removed.

5.1.3. If button 3 is pressed setup of system time intervals is available:

This is realized under the consequent entering of 3 numbers of 3 digits with the following value:

- first number of 3 digits (from 001 to 255) - a time for entering.

- the second number of 3 digits (from 001 to 255) - a time for quit and

- the third number (from 001 to 031) - a time for a siren signaling.

After all the system automatically comes out of time intervals setup mode.

5.1.4. A record of program “bits” for the system is done by pressing button “4” as follows:

Alternative pressing of a button from “1” to “8” is followed by lighting on/off of any LED from “1” to “8”. Indication of these LEDs means following:

“1” dark/flashing (bit “Bal” = 0/1) - unstable/balancing zones

“2” dark/flashing (bit “Eol” = 0/1) - without/with resistor at the end of line (circuit)

“3” dark/flashing (bit “Home” = 0/1) - without/with automatically enabling of home mode

“4” dark/flashing (bit “Dialer” = 0/1) - without/with using phone dialer

“5” dark/flashing (bit “Pgm2m” = 0/1) - PGM2: security devices/activated by the conditionally-lagging zone

“6” dark/flashing (bit “Switch” = 0/1) - without/with keyswitch for arming and disarming

“7” dark/flashing (bit “AltKey” = 0/1) – mo-

mentary status/alternative key-switching

“8” dark/flashing (bit “Zone8T” = 0/1) – zone 8 as trouble/tamper

5.1.5. If button “5” is pressed, record of zones for the first user area is available:

Alternative, pressing of button from “1” to “8” follows by flashing of LED between 1 and 8 (corresponding to zones between 1 and 8). When corresponding LED flashes, the zone is connected to first user area, but dark LEDs corresponding zones are connected to second user area. Connection of all zones to the area of the second user is incorrect and forbidden.

Two users can be connected to the system. Every user has 8 access codes and only one Master code. If only the zone 8 (keyboard tamper) is used by the second user, the system can be armed and disarmed by all 16 access codes. The green LED Mode flashes, but not permanently if the system is in armed mode. To quit this mode press, once more button PRG or other functional button.

5.1.6. If button “6” is pressed zones test

mode is enabled:

In this mode button “PRG” is dark, but LED “Mode” is flashing. Activation of any zone is followed by a short bleep coming from the siren – useful for test of the sensors good working order (by the system creator). To quit this mode, in armed system state, press a functional button or at 30 seconds system automatically quits.

5.1.7. If button 7 is pressed setup of zones of “bell” sound type is enabled:

Pressing of button 7 connects all zones to the “bell”, and the pressing of button 8 enables/disables the “bell” sound. Glowing of the relevant zone (position) indicates connected (activated) “bell”.

Every user can activate and inactivate the “bell ” as well.

5.2. Programming by using button “BYP”:

Press button “BYP”. It flashes permanently, as herewith disabled zones (if any exist) flash as well. Enter a “creating” code, whereupon follows a double bleep of acceptance. Using

buttons from 1 to 8 the corresponding zones between “1” and “8” can be alternative activated and inactivated, as the areas, which corresponding diode glows, are disabled (by-passed).

Pressing a button 0 disables sound of “bell” type, but pressing of the button “9” enables it. To quit the mode press button BYP or any other functional button. Flashing of button “BYP” indicates the presence of disabled (by-passed) zone. In disarmed mode disabled (by-passed) zones are automatically activated.

6. Programming by basic (“Master”) access code:

If the system is new (without any setup records) as well after the initial setup record the basic Master access code for the first user is “1234”, and for the second user - “5678”.

Setup of a new access code is done as follows:

- press button “PRG”, it flashes (setup mode).
- enter the basic Master access code of the corresponding user.

- the green LED “Mode” flashes (setup of access code).

- choose number (position) for the access code between “1” and “8”, as under chosen number (positions) “1” a new basic Master code will be set.

- the LED “PRG” flashes continuously (a number, position has been chosen), herewith a LED corresponding to the chosen positions lights on.

- enter four digits access code using buttons from “0” to “9”. A double bleep of acceptance is heard.

- to record the new code it is necessary to reenter the code . A double bleep of acceptance is heard again.

In case of error a long bleep is heard and the record failed.

- system automatically comes out (quits) the access codes setup mode.

- removing (erasing) an existing code is done by entering basic Master code of the chosen positions (from “2” to “8”).

- the basic Master code (of positions “1”) can only be change.

7. Initial record of system parameters:

Recording of default parameters is done in system product, but in need can be done during installation as follows:

- switch off the battery and the electric circuit power supply.
- connect (in short) one with other cables “Z1” and “PGM2”.
- turn on power supply.

Through several seconds a double bleep is heard and system is installed in the initial position. Herewith in the energy-independent system memory are recorded following parameters:

Time for arming = 20 sec.

Time for disarming = 60 sec.

Time of signaling by the siren = 2 min.

Zone 1 and zone 7 are recorded as lagging zones.

Zone 2 is recorded as a conditionally-lagging zone.

Zone 3, zone 4, zone 5 and zone 7 are recorded as home zones.

Zone 6 is recorded as 24-hours zone.

Following setup bits are attached:

bit "Bal" = 1 - balanced zones,

bit "Eol" = 1 - with a resistor at the end of line (circuit),

bit "Home" = 1 - with automatically activation of home security mode.

All zones are attached to first user area.

"Bell" sound is attached.

The "creative" system setup code is "3791".

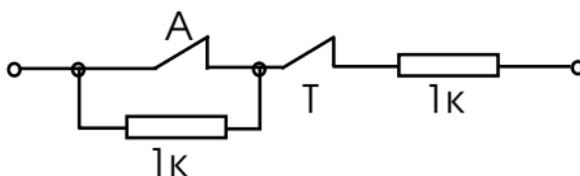
The basic Master access code for the first user is "1234".

The basic Master access code for the second user is "5678".

All zones are inactivated (by-passed).

8. Zones wiring:

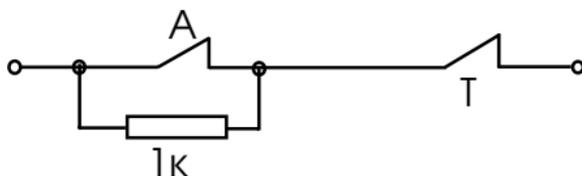
1. Double-balanced zone:



If $< 300 \text{ Ohm}$ or $> 8 \text{ k}$ - sabotage

If $> 1 \text{ k} 5$ and $< 8 \text{ k}$ - alarm

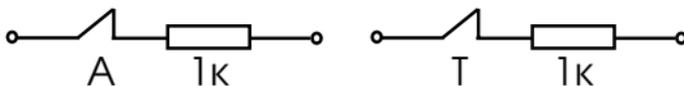
2. Balanced without final resistor:



If $> 8 \text{ k}$ - sabotage

If $> 1 \text{ k} 5$ and $< 8 \text{ k}$ - alarm

3. Unbalanced with final resistor:



If $< 300 \text{ Ohm}$ - sabotage

If $> 1 \text{ k} 5$ - alarm

4. Without final balanced resistors:



If $> 1 \text{ k} 5$ - alarm.