Central Panel «KODOS A-20»-BASED FIRE AND BURGLAR ALARM SYSTEM
Programming and Setting Guide

CONTENTS

Graphical symbols applied in the document:

NOTE

ATTENTION!

The present document contains the information necessary for setting and using the technical capabilities of the fire and burglar alarm control and indicating equipment Central Panel KODOS A-20 (hereinafter referred to as *device*) and the connected devices included into the fire and burglar alarm address system (hereinafter referred to as *System*).

1 Initial Data

Proceed to setup the System only after all its equipment is assembled and connected. The essence of the setup procedure is to program the operation modes of the device and all its peripherals so that they comply with the fire and burglar security requirements in the facility. The programming and setting of the system shall be done by the *Administrator.*

> *To setup the System the administrator needs the following **information**:*
>
> * *data on system components and their allocation in the facility;*
> * *data tables listing the System setting parameters: "Address unit inquiry order", "Correspondence of zone and channel numbers to ordinal numbers in inquiry list and connection terminal numbers", "Status of zones and channels". The data tables are composed when the System is being assembled (see document **Central Panel KODOS A-20-BASED FIRE AND BURGLAR ALARM SYSTEM Installation Guide**).*

1.1 DEVICE APPEARANCE

Appearance of the device is shown in Figure 1.

The plugged-in device is in **standby mode**, the screen (2) displays information on System status, for example:

```
 Armed zones    :71
 Failure in zone:54
 Zone:  07   normal
2005.06.22    20:53
```
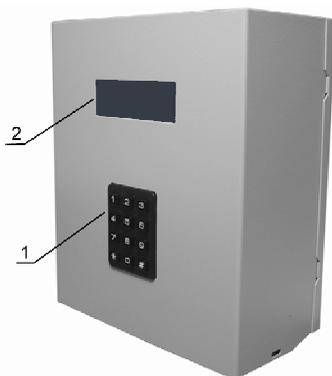
1 – keyboard; 2 – screen.
Figure 1

In line one	– total number of active channels and armed zones at the moment;
in line two	– system status messages;
in line three	– status messages on zones (channels) with "Control" parameter set on;
in line four	– current date (year.month.day) and current time (hour:minute).

When in *standby mode* the device controls the System without human intervention.

In standby mode the information on the device screen is displayed without lighting. The device screen is lightened in the standby mode when an alarm event or System failure message appears.

The user monitors the information on the device screen and controls the System following the messages displayed.

The keyboard (1) is used to input information. When a key is pressed a dim beep, which confirms the pressing, must be heard.

The keyboard features:

- number keys **0**, **1**, and **9** are used to input commands;
- key **#** is used to finish the input of the information typed;
- key ***** is used to return to the previous screen or to clear input fields.

When in standby mode press any key on the keyboard to turn it into *dialog mode*. The dialog mode is used to set, program, and control the System by inputting commands from the keyboard.

1.2 GETTING STARTED

The access to the controls and settings of the device is protected by a password.

> *When supplying the device the manufacturer presets only the Administrator's password: **1111**.*
>
> *The Administrator is recommended to use **preset password (1111)** to make the initial setup of the System.*

To input the password, press any key while the device is in standby mode. The screen will light up, displaying the following inquiry:

```
            Password:▓
```

The blinking symbol "▓" on the device screen shows that the System is waiting for the User to enter data.

Input the password from the keyboard and press the ⌗ key.

Password symbols are displayed as asterisks on the device screen:

```
            Password:****
```

If the password is incorrect or when ＊ is pressed the device returns to standby mode.

If the password is correct the screen displays *main menu*:

```
1.Off alarm
2.Zones and channels
3.Events
4.Sections    [#]↓
```

```
5.Setting   [#]↑
```

Symbols [#]↓ in the bottom line of the screen show that the menu has a continuation, which can be displayed by pressing the ⌗ key.

To return to the previous page of the menu, press the ⌗ key.

To exit the menu and switch to standby mode, press the ＊ key.

To select any of the menu option press the respective number key. Each menu option contains either a command to be executed by the System or a new menu (*submenu*), or dialog boxes for the input/output of information.

The System is controlled by consequent selection of menu options and submenus from the keyboard. This sequence of selections is called menu *command* and is in short designated as follows:

№.Name of menu item ⇨ №.Name of submenu item

When the ⁂ *key is pressed in the main menu, or when there are no User commands within 1.5 minutes the device switches to standby mode.*

2 System Setting

The procedure of Administrator's further actions for setting the System is given below.

2.1 AUTOMATIC SEARCH OF ADDRESS UNITS

Address units (AUs or units) are connected to the device through the ***address line*** (two-wire connection line). The address units have hardware addresses (addresses) for identification in the System. The hardware address of a unit is a five-digit decimal number.

To automatically search address units connected to the system and define their hardware addresses, enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 2.Block search

The system performs:
- line serviceability check;
- check by user of correspondence of hardware addresses identified by the System specified in data table "Order of address units inquiry" (the table is filled in when the System is assembled, see section 1).

As the search takes some time, the screen displays a message:

```
            Wait!
```

If no new AUs are found, the device screen displays a message:

```
        New blocks
        not found!
```

When ***new*** AUs are found their numbers are displayed, for example:

```
New blocks found:

00038   00039   00596
                [#]-next
```

Press any key (except for the ⌗ key) to view the list of *all* connected AUs, for example:

```
      Blocks found:

00008   00019   00038
                [#]-next
```

Press the ⌗ key to view the next elements of the lists. If the list has no continuation the ⌗ key is not functional.

Press the ✳ key to enter menu "1.Address units".

> *If the hardware address of any of the units was not defined automatically, perform the following operations:*
>
> *1. Check the line for breaks in the vicinity of the undefined unit.*
> *2. Check if the unit-to-line connection has the right polarity.*
> *3. Check the functionality of the unit (for example, by connecting it to any working part of the line).*
> *4. Input the address of the unit using the following menu command:*
>
> **5.Setting ⇨ 1.Address blocks ⇨ 3.Inquiry order ⇨**
> **⇨ 2.Change list** *(see section 2.2)*

Write down the addresses of automatically defined units and, if necessary, correct the data table "Order of address units inquiry".

> *It is also recommended to automatically search for address units when new units are added to the address line (see section 3.2).*

2.2 GENERATING INQUIRY LIST

After the System identifies the connected units input their hardware addresses to the *inquiry list*. The inquiry list defines the sequence of the address units inquiring by the System. If the unit is not in the inquiry list, the System will not monitor its status.

> *The address code input panel KODOS AKP must not be the last in the inquiry list!*

To generate the inquiry list enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 3.Inquiry order ⇨

⇨ 2.Change list

The device screen will show the following Inquiry:

```
   Current number
 address block:01
  Block address:▉
```

Input the address of the unit that will be the first in the inquiry list and press the #️⃣ key. To cancel the mistyped number, press the *️⃣ key (before the #️⃣ key is pressed).

The device will then suggest entering the address of the next unit number in the list.

The following errors may occur when entering the "Unit Address"*:*

▪ If you entered the address of an unconnected unit, or a wrong unit address, then after you press the #️⃣ key, the screen will display the message on not finding the unit with the entered address, for example:

```
Block address: 00053
  Not found! [1]A06
[2]A07 [3]A08 [4]A09
[5]AKP [6]A68 [7]A78
```

Press a key **1** to **7** that corresponds to the unit type if you intend to con-nect the unit with this address later.

> *On the device screen the types of address units are designated as follows:*
> *A06 – "KODOS A-06/2"; A07 – "KODOS A-07/4"; A08 – "KODOS A-08", "KODOS A-08/24", "KODOS A-08/220", "KODOS A-08/220A"; A09 - "KODOS A-09"; ACP – "KODOS ACP"; A68 – "KODOS A-06/8"; A78 – "KODOS A-07/8".*

Press any other key (except for keys **1** , **7**), if you really have entered a wrong address. The system will make a new inquiry of hardware address of the unit with current ordinal number of inquiry.

▪ If you entered an address that already exists in the inquiry list, the screen will display a message specifying the number of the address unit with the same address, for example:

```
Block address: 00038
has number 01
```

Press any key to return to the "Unit Address:" field.

Press the ✱ key with an empty "Unit Address:" field to finish generating the inquiry list and enter menu "3.Inquiry order".

> *The device program does not allow editing the inquiry list (except for cases, described in section 3.1 and section 3.2). The existing list is replaced with a new one. The old list will then be deleted.*

The generated address unit inquiry list may be viewed on the device screen (see section 4.1).

2.3 GENERATING ADDITIONAL INQUIRY LIST

> *The actions described in the following subsection shall only be carried out in case the System uses the **"KODOS R-03-3"** uninterruptible power supply units.*

The additional inquiry list is needed to monitor the status of the "KODOS R-03-3" uninterruptible power supply units.

The additional inquiry list must be generated after the generation of the *main* inquiry list (see section 2.2).

Enter the following command from the main menu of the device:

5.Setting ⇨ 1.Address blocks ⇨ 4.R-03 ⇨
⇨ 2.Change list

The screen of the device will display the following inquiry:

```
 Number P-03:01
Block address:▓
```

Enter the unit address that will be the first in the additional inquiry list and press the [#] key. To cancel the mistyped number, press the [*] key (before the [#] key is pressed).

The device will then submit to enter the address of the next unit. The list may contain up to 10 unit addresses.

If the unit with the entered address does not exist or a wrong address is entered, the device will display an error message after the [#] key is pressed:

```
        Entered impossible
          block address!
```

Press any key. The System will make a new inquiry for the entry of the hardware address of a unit with a current number in the inquiry list.

Press the [*] key when the "Unit Address:" entry field is empty to finish the generation of the additional inquiry list and enter the "4. R-03" menu.

> *To avoid conflicts of hardware, false triggering in the System, please, adhere to the following rules:*
>
> *1. The additional inquiry list must include only "KODOS A-07/4" address units built into "KODOS R-03-3" power supply units .*
>
> *2. Prior to the generation of an additional inquiry list make sure to include the addresses of "KODOS A-07/4" units built into "KODOS R-03-3" power supply in the main inquiry list. When altering the main list also make the relevant changes to the inquiry list for "KODOS R-03-3" units .*
>
> *3. For "KODOS A-07/4" address units built into "KODOS R-03-3" power supply units , only the "guard" and "autoarming" parameters can be set (see section 2.5).*

The addresses of units included in the additional inquiry list can be viewed from the screen of the device (see section 4.2).

2.4 SETTING ZONES AND CHANNELS NUMBER

After generating the main inquiry list (see section 2.2) the System will automatically calculate total number of *zones* and *channels* (N_{total}) controlled by the address units. The communication between address units and control zones and channels is provided through *alarm loops*.

Zone means a room or its part under control being in coverage of security (fire) detector, which signal is transmitted to the corresponding address unit connected to the device.

Alarm loop *(loop)* – connection lines from detectors and executive units to the corresponding address unit.

Control *channel* means a loop connecting an executive device (light indicators, sound detectors, smoke removal, etc.) to the relevant address unit connected to the device.

The total number of zones and channels is made up of the number of zones (channels) connected to individual AUs:

- Two per each "KODOS A-06/2", "KODOS A-08", "KODOS A-08/24", "KODOS A-08/220, "KODOS A-08/220A", "KODOS A-09" unit;
- Four per each "KODOS A-07/4" unit ;
- Eight per each "KODOS A-06/8", "KODOS A-07/8" unit.

> *Maximum allowed number of zones and channels is:*
> $N_{total} = 200.$

On the basis of data table *"Correspondence of zone and channel numbers to ordinal numbers in inquiry list and connection terminal numbers"* (the table must be filled in when assembling the System, see section 1), define the *actual number of zones and channels* connected to the System.

To view and, if necessary, change the value of N_{total}, enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 1.Number zones, chans

The screen of the device will display the number of zones and channels N_{total}, defined by the System (for example, "83") and the next inquiry:

```
Old value: 83
New value: ▓
```

Enter a new number of zones and channels if you want to change the value of N_{total}, and press the # key.

To cancel the entered value, press the * key (before the # key is pressed).

The device will control only zones and channels numbered from *one* to the *set number*.

The entry of a value lower than N_{total}, may be useful in the following situations:

- when you need to check the functioning of several AUs, placed in the top of the inquiry list;
- when adding the addresses of new units that are actually not connected to the address line in the bottom of the inquiry list (e.g. when the System is expanded).

> *During regular operation of the System, the **entered** number of zones and channels must match the zones and channels number **calculated** by the System automatically.*

2.5 CONFIGURING ZONES AND CHANNELS

Then, referring to the data table *"Status of Zones and Channels"* (the table must be filled in during the assembly of the System, see section 1) adjust the parameters of each zone (channel).

To configure zones (channels) from the main menu of the device enter the following command:

2.Zones and channels ⇨ 3.Zone/chan config

The screen of the device will display an inquiry:

```
Zone/chan number:
        ▓
```

Enter the number of a zone (channel) of interest and press the #️ key.

The screen of the device will display the list of *parameters* of the selected zone (channel):

- For zones of **"KODOS A-06/2"** and **"KODOS A-06/8"** address units :

```
1. Armed zone     x      4. Autoarming    x
2. Control zone   x
3. Delayed alarm  00
Zone:12  0- next #-↓     Zone:12  0- next #-↑
```

- For zones of **"KODOS A-07/4"** and **"KODOS A-07/8"** address units :

```
1. Armed zone     x      4. Delayed alarm 00
2. Inversion             5. Delayed arm.  00
3. Control zone   x      6. Autoarming    x
Zone:01  0- next #-↓     Zone:01 0- next #-↑
```

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- For zones of address **"KODOS A-09"** unit :

```
1. Armed zone      x
2. Inversion       x
3. Control zone    x
Zone:31  0- next
```

- For channels of **"KODOS A-08"**, **"KODOS A-08/24"**, **"KODOS A-08/220"**, and **"KODOS A-08/220A"** address units :

```
1. Channel is active x        4. Operation time  00
2. Channel control   x
3. Delayed alarm     00
Zone:13  0- next #-↓          Zone:13  0- next #-↑
```

To switch to the next page of the list of parameters of the selected zone (channel) and back press the 🔲# key.

Press the 🔲0 key to proceed to setting the parameters of the next zone (channel) in the numerical order. This allows configuring several zones (channels) at once.

To finish configuring the zones (channels) (saving the set parameters), press the 🔲* key, the screen will return to the "2.Zones and channels" menu.

Description and values of *parameters* of adjusted zones (channels) are given below.

"Armed zone" Parameter

Selection of this item in the list of parameters of the zone sets the mark on the device screen on or off :
- the *"armed zone"* value is marked by the "x" symbol. If detectors trigger in the armed zone, the System will issue an alarm signal and display a relevant message in line two of the device screen in standby mode;
- the *"disarmed zone"* value is marked by setting off (absence) of the symbol.

"Inversion" Parameter

Selection of this item in the list of parameters of the zone sets on or off the mark on the device screen:
- The *"zone detector normally closed (inverse)"* value is marked by the "x" symbol. The System will deem the connected detector in normal status if it conducts electricity and in triggered status if it breaks the circuit;
- The *"zone detector normally open"* value is marked by absence of the symbol. The System will deem the connected detector in normal status if it doesn't conduct electricity and in triggered status if it closes the circuit.

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Since "KODOS A-06/2" and "KODOS A-06/8" address units can have only normally open detectors connected, the "Inversion" parameter is not included in the zone parameter list for these units.

"Control" Parameter

The selection of this item in the zone parameter list sets the "x" symbol on the device screen on or off .

- the "***zone control on"*** value is marked with the "x" symbol. Information on the status of the zone ("Normal", "Short-circuit", "Rupture") will be displayed in line three of the screen in standby mode. If the control of several zones is on, the messages on the status of these zones will follow one another one second apart.

- the "zone control off" value is marked with no symbol.

In case a problem occurs in a zone set to control (even if the zone is disarmed) an alarm symbol will be issued, and a relevant message will appear in line two of the screen if turned to standby mode. Such work procedure is useful in the daytime, when access control zones (e.g. door reed switches) must be turned off guard, however the System keeps monitoring all attempts to remove or spoil address units and detectors.

"Delayed arm." Parameter

The "**Delayed arm.**" parameter sets a delay time for a armed zone.

This parameter is useful when a device is inside the guarded rooms and the user who has set it on guard needs to leave it without causing the alarm to come off.

To set the delay time, select this item in the zone parameter list. The device screen will display an inquiry:

```
Time in seconds
Old value:00
New value:▓
(0- turn off)
```

Enter the value of delayed setting time between 0 and 255 seconds and press the `#` key. The device will return to the zone parameter list.

Pressing the `#` key, when the "New Value" input field is empty, is equal to entering "0" (setting off the parameter of delayed setting).

There is no need to set the delayed setting time if the device uses a setting switch located outside the guarded rooms.

"Autoarming" Parameter

By selecting this item in the zone parameter list, you put the "x" symbol on or off the device screen:

- the *"Autoarming On"* value is marked with the "x" symbol. This zone is will be automatically armed instantly after alarm is given out for it;
- the *"Autoarming Off"* value is marked with the absence of symbol. This zone will be disarmed until set on guard by the User (see document *Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide*).

Autoarming may be set on only for a zone with the "Armed Zone " parameter turned on.

The "Autoarming" parameter is not provided for zones of "KODOS A-09" unit since the alarm of the MFD (manual fire detectors) connected to "KODOS A-09" units is initiated and cancelled only mechanically.

"Delayed alarm" Parameter

"**Delayed alarm**" parameter may be assigned to either a zone or a channel.

For armed zones (connected to "KODOS A-07/4" and "KODOS A-07/8" units) the parameter sets the delay time between triggering the detector and switching on the alarm signal. This delay may be useful when the device is inside the guarded rooms, and the User has to come in, without causing the alarm to go off. The User is supposed to "set the alarm off" within the time set (see document *Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide*)

There is no need to set delayed triggering for armed zones if the device uses a setting switch located outside the guarded rooms.

For fire zones (connected to "KODOS A-06/2" and "KODOS A-06/8" units), the parameter is used to prevent triggering due to short-term electromagnetic interference.

The first triggering of the device starts a timer. Meanwhile the event is registered in the event log (see section 4.7) as "Possible Fire in Zone", but no

messages appear on the device screen. If a repeated triggering is registered in the zone after the time has expired, the System gives out an detectors signal making an entry to the event log as: "Fire in Zone". If the zone is in "Normal" status after the delayed triggering time has expired, the alarm signal is not given out.

> *For fire zones the delayed triggering time must be not less than 10 seconds.*

For channels (connected to "KODOS A-08", "KODOS A-08/24", "KODOS A-08/220" and "KODOS A-08/220A" units), the parameter sets a delay time before switching the channel on in case of emergency. This delay is useful, for example, when the operation of the *executive device* connected to this channel may cause harm to humans. The personnel are supposed to leave the rooms within the specified time.

By setting different time of delayed triggering for individual control channels, you can make a sequence of switching the devices on in case of emergency. This allows the User to generate a chain of actions automatically performed by the System. For example, to send an alarm message to the fire department, switch on the horn and indicator panel "Everyone Leave Room", turn off input and exhaust ventilation, and switch on smoke removal devices.

To set the delayed triggering time, select this item in the zone parameter list. The device screen will display an inquiry:

```
Time in seconds
Old value:00
New value:█
(0- turn off)
```

Enter the delay time value from 0 to 255 seconds and press the [#] key. The device will return to the zone parameter list.

Pressing the [#] key, when the "New value" input field is empty, is equal to entering "0" (setting off the parameter of delayed triggering).

"Channel Active" Parameter

By selecting this item in the zone parameter list, you set the "x" symbol on or off the device screen:

- the **"Channel Active"** status is marked with the "x" symbol. An executive device connected to this control will automatically come on as certain events happen (see section 2.11);
- the **"Channel Inactive"** status is marked with the absence of symbol. The executive device of this channel may only be switched on by the User (see

document *Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide"*).

"Channel Control" Parameter

By selecting this item in the zone parameter list, you set the "x" symbol on or off the device screen:

- the *"Channel Control On*" status is marked with the "x" symbol. The system will display the information on the status of the channel ("On", "Off") in line three when in standby mode;
- the *"Channel Control Off*" status is marked with the absence of symbol.

"Operation Time" Parameter

"**Operation Time**" Parameter sets the operation time of an executive device after switching on its control channel.

To set operation time of the executive device select this item in the channel parameter list. The device screen will display an inquiry:

```
Time in seconds
Old value:00
New value:▓
(0- steadily)
```

Enter time value between 0 and 255 seconds and press the ⌗ key. The device will return to channel parameter list.

Pressing the ⌗ key when the "New Value" input field is empty is equal to entering "0" (continuous operation of the executive device after switching on the channel). The executive device of the channel can only be switched off by the User (see document *Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide*).

2.6 SETTING INDICATION MODULES

If the device uses one or more "KODOS MI-50" indication modules, a procedure of their identification in the System must be carried out. Adjusting indication modules is telling the system which particular indication module is to monitor the status of zones (channels) within the set number range.

To generate a correlation between numbers of zones (channels) and indication modules, select the following command from the main menu:

5.Setting ⇨ 6.Indication modules

The device screen will display an inquiry:

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```
     Enter address 1
   indication module
          ▓
      Zones:01 - 50
```

*The procedure of setting an indication module hardware address is described in the document "**KODOS MI-50" Indication Module. Operation Guide"**.*

Enter the hardware address of the indication module (a number from 1 to 127) that will monitor the status of zones (channels) within the range of numbers specified in the last line of the device screen. Each indication module can indicate the status of up to 50 zones.

Press the **#** key to save the set correlation and proceed to setting the *next indication module* (according to ordinal numbers).

Press the **0** key if none of the indication modules is to be related to the current zone number range.

Pressing the **#** key, when the indication module address input field is empty, is equal to entering "0".

Press the ***** key to turn to the next zone (channel) number range.

Generation of correlation between number ranges of zones (channels) and indication modules is finished automatically when either module list or zone list is exhausted. The device will return to menu "5.Settings".

When generating new correlation between zones (channels) and indication modules the correlation established earlier is canceled.

2.7 CONNECTING TO COMPUTER

If the device operates as a member of computer-controlled System, it must be identified.

*The details of a computer-controlled system operation are given in the document **KODOS System Setting Program (Configurator). Operation Guide**.*

To set the device address, enter the following command from the main menu of the device:

5.Setting ⇨ 4.Panel address

The device screen will display an inquiry:

```
Panel address :01
  New address:▓

   Flash-V3.74
```

Enter the address of the device (any number from 0 to 255) and press the ⌗ key. Keep in mind that the addresses of various devices in one System must not repeat.

2.8 SETTING SOUND ALARM DURATION

In case of an alarm event in a armed zone the System gives out the basic alarm signal "Horn 1".

To set the duration of the alarm signal from the main menu of the device, enter the command:

5.Setting ⇨ 2.Siren length

The device screen will display an inquiry:

```
Time in minutes
 Old value:10
 New value:▓
(0- steadily)
```

Enter alarm signal duration (from 1 to 29 minutes), press the ⌗ key.

Press the **0** key to set continuous alarm signal, which may be stopped by "canceling the alarm" (see document ***Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide***).

The selected duration of the alarm signal applies to all the horns connected to the System.

*When an detector is triggered the signal is **continuous**, whereas a rupture or short circuit in the line or loop causes an **intermittent** sound. The duration of the alarm signal equals to the preset value in both cases.*

*The set alarm sound duration value does not apply to a version of the program using outputs **"-ALRM"** and **"+ALRM"** to transmit the alarm signal to CMP (centralized monitoring panel).*

2.9 ADDITIONAL ALARM ZONES

Some zones may be set to give out the "Horn 2" signal when an alarm event occurs. This allows the User to separate, for example, fire and burglar alarms. Such separation allows the armed zones to be controlled in the "silent alarm" mode, when the System only displays a message on the screen, but makes no audible signal as the alarm event occurs.

To generate the list of additional alarm zones enter the following command from the main menu:

5.Setting ⇨ 5.Add. alarm zones ⇨ 2.Change list

The device screen will display an inquiry:

```
 Add. alarm zones
Zone :▓
```

Enter the number of the zone you need to add to the additional alarm zone list or remove from it (for example, "1") and press the # key.

The System will ask for an action:

```
 Add. alarm zones
     Zone :1

[0]- Exclude [#]-Add
```

Press the respective key:

| # | – add a zone to the additional alarm zone list; |

| 0 | – disarm a zone from the additional alarm zone list. |

The device will suggest to the User to operate with the next zone in the number-order list.

Press the * key to return to zone number inquiry (saving the changes you have made).

To return to menu "5.Additional alarm zones" press the * key again.

The additional alarm zone list may be viewed from the device screen (see section 4.3).

2.10 GENERATING SECTIONS

Section means a group of zones and channels allocated among the total number of zones and channels of the System. The zones grouped in a section can be set on and off guard simultaneously. Besides, the channels related to the section may be switched on and off simultaneously with setting the zones of the same section arm/disarm. For example, when armed zones at the end of a working day you can also turn off the lights in the rooms.

> *The zones controlled by **fire detectors** and **manual fire detectors** (MFD), cannot be set on/off guard **in sections**. The fire detectors are supposed to be always on! If necessary, each of the zones may **individually** be disarmed and then armed (see document **Fire And Burglar Alarm System Based on Central Panel KODOS A-20. User Guide**).*

The available number of sections in the System is – 255 (they are numbered from 1 to 255).

For further work, the System Administrator is recommended to write down the **"Correlation between zones (channels) and sections"**. Any of the 255 sections may be assigned to any of the 200 zones (any channel). Same zone (same channel) may be included in several sections; this allows to generate same zones of responsibility for different Users. It is useful when employees work in shifts (see section 2.12).

To create a section, enter the following command from the main menu:

4.Sections ⇨ 2.Add/Exlude

The device screen will display an inquiry:

```
Section number:▓
```

Enter the number of the section created (for example, "1") and press the 　#　 key.

The following inquiry will appear:

```
         Section 01
         Zone :▓
```

Enter the number of the zone (channel) required (for example, "5") and press the 　#　 key.

The System will ask for an action:

```
        Section 01
        Zone:5

[0]- Exclude [#]-Add
```

Press the respective key:

 # – to add a zone (channel) to the section;

 0 – to remove a zone (channel) from the section.

The device will suggest to the User to switch to the next zone (channel) in the order-number list. This allows the User to quickly add or remove a batch of zones and channels from the section.

Press the * key to return to the inquiry of the zone number (saving the changes you have made).

To return to menu "4.Sections" press * again.

The contents of any section may be viewed from the device screen (see section 4.4).

2.11 CREATING GROUPS OF ZONES AND CHANNELS

Uniting zones and channels into groups allows the User to automatically switch on all the channels of the group if alarm events occur in the zones of the group. For example, this may be switching on smoke removal system when fire detectors go on.

The available number of groups is 98 (they are numbered from 1 to 98).

The maximum number of zones in a group is 8.

The maximum number of channels in a group is 4.

For further work, the System Administrator is recommended to compose **"Correlation between Zones (Channels) and Groups"**. Any of the 98 groups may be assigned to any of the 200 zones (any channel). One zone (channel) may be included in several groups. In the "Group Type" column, make sure to specify the minimum number of zones in a group where channels of the group will be switched on as alarm events occur.

If a group includes a MFD-controlled zone number (a zone of "KODOS A-09" address unit), it is recommended to set the "Group Type" value equal to 1. This will allow the automatic switching on of the channels of the group if at least one of the detectors in the zone is triggered.

To *generate* groups, enter the following command from the main menu:

- to add a **zone** to a group
> **2.Zones and channels ⇨ 5.Zone groups ⇨ 2.Set zones**

- to add a **channel** to a group
> **2.Zones and channels ⇨ 5.Zone groups ⇨ 3.Set channels**

The screen will display an inquiry:

```
        Group number: ▓
```

Enter the number of the generated group and press the [#] key.

The screen will show the inquiry of the number of the first zone or channel "assigned":

```
 Enter number                          Enter number
   1 zone:▓            or             1 channel:▓
```

> ⚠ *The program of the device does not allow the editing of the list of zones (channels) of the group. The existing list may only be replaced by a new list. In this case, the old list will be deleted. You can cancel generating the new list by pressing the [*] key (before you enter the number of the first zone).*

Enter the zone (channel) number and press the [#] key; the device will suggest to the User to enter the next zone (channel) of the number-order list. This allows the User to quickly add a batch of zones (channels) to the group.

Press the [*] key to finish generating the group; the screen will return to submenu "5.Zone groups".

The generation of a list of zones (channels) of a group will complete automatically when the last (8-th) zone or (4-th) channel is entered.

To *set the type* of group, enter the following command from the main menu:

> **2.Zones and channels ⇨ 5.Zone groups ⇨ 4.Type**

The screen will show the following inquiry:

```
    Group number:▓
```

Enter the number of the necessary group and press the #️ key.

The screen will show the following inquiry:

```
    Zones in op.:02
    New value:▓
```

> *The manufacturer presets "Group type" equal to two for all the groups of the System. This value triggers the group channels if detectors in two or more zones go off.*

Enter a new value in accordance with the filled-in table B.2, and press the #️ key. The device will turn on the channels of the group if detectors in the specified or greater number of the group's zones come off.

To cancel the input, press the *️ key (until you press the #️ key).

To return to submenu "5.Zone groups", press *️ again.

The contents of any section may be viewed from the device screen (see section 4.5).

2.12 ASSIGNING USERS

The System makes it possible to assign each User the authority to control the System.

The number of Users (security personnel, duty persons, guards) can be up to 256.

The priorities in the system are distributed as follows:
- the highest priority is with the System Administrator. He has the right to control all the devices and access to all the settings of the System. The System can only have one Administrator.
- the rest of the Users have equal priorities. The User's rights are detailed in document ***Fire and Burglar Alarm System Based on Central Panel KODOS A-20. User Guide***.

For further work, the System Administrator is recommended to compose ***"Correlation between System Users, Passwords, and Card Codes"***.

While filling in this table the Administrator must:

▪ assign a *number* to each User to be identified in the System. The number must match the number of the section the User is responsible for. A User may work with a zone (channel) only if the zone (channel) is included in the section of this User (see section 2.10). If necessary, one User may be assigned several sections; for this he should be issued with several passwords and cards;

> *System Administrator is designated as User number "0".*

▪ assign each User a password for operating with the device menu. The password is a combination of four digits: from 0000 to 9999;

▪ assign each User a card code if the device uses card readers for setting on/off guard. The card bears an individual hexadecimal code: from 00000000 to FFFFFFFF.

> *Each User may be assigned either a **password**, or a **card code**, or both.*

To assign (change) User's password and (or) card code, enter the following command from the main menu:

5.Setting ⇨ 3.Passwords ⇨ 1.Enter user

The screen will show an inquiry:

```
               User:▓
```

Enter User's ordinal number (for example, "1") and press the 　#　 key.

The following inquiry will appear:

```
               User:01
             Password:▓
```

Enter a four digit password and press the 　#　 key to assign the entered password to the User.

Press the 　*　 key to skip the password entry or cancel the entered password (before the 　#　 key is pressed).

After you press the 　#　 or 　*　 key the device screen will display an inquiry:

```
        User:01
      Card code:▓
```

Enter a card code in one of the following ways:

- insert the card into the connected card reader;

- enter the card code from the device keyboard and press the # key.

When entered from the keyboard a hexadecimal card code has the following correlation:

Card code value	Device key combination	Card code value	Device key combination	Card code value	Device key combination
0	0 and 0	6	6	C	0 and 3
1	1	7	7	D	0 and 4
2	2	8	8	E	0 and 5
3	3	9	9	F	0 and 6
4	4	A	0 and 1		
5	5	B	0 and 2		

Press the * key to cancel the card code input; the device screen will return to submenu "3.Passwords".

After entering the card code (for example, "00000AB4") the System will ask for action:

```
   Card 00000AB4

   [#]-Save
   [*]-Exit
```

Press the respective key:

      #   – to confirm the card code for the current User;

      *   – to cancel the entered card code and return to submenu "3.Passwords".

If the entered password (card code) is already assigned to another User, the following error message is displayed:

28

```
    Password exists!
```

or

```
    Card 00000AB4
       exists!
```

Press any key of the device; the screen will return to submenu "3.Passwords*"*.

> *It is recommended that the preset Administrator's password (1111) (User number "0") be changed before starting the operation of the System.*

> *If the Administrator's password was lost, the System Administrator can restore the access to the settings in the following way:*
>
> *1. If the device is a member of a computer-controlled System, the new value of the Administrator's password may be entered by the device control program (see document KODOS Software. A-20 Board Control Module. Operation Guide).*
>
> *2. If the device works autonomously without connection to computer, address the Manufacturer.*

The full list of passwords and codes assigned in the System can be viewed from the device screen (see section 4.6).

If necessary, the access of any User to the System control can be denied (see section 5.2); also all the passwords assigned before can be deleted (see section 5.3).

2.13 SETTING CURRENT TIME

The device contains a built-in real time clock and records the time of events in the System (detectors triggering, Users' actions, etc.).

Current date and time must be set in the following cases:

▪ when commissioning the System;
▪ when updating the device program (see section 2.14);
▪ when transferring to winter (summer) time, etc.

To change current date and time, enter the following command from the main menu:

5.Setting ⇨ 7.Set clock

The System will suggest to the User to make changes:

```
2005.06.08   10:49
[1]-↑ [2]-↓ Year
[0]- Month
[*]-Escape [#]-Enter
```

Press:

- the **0** key to switch between the set parameters. The set parameter is displayed in line two of the device screen (year, month, day, hours or minutes respectively);

- the **1** key to increase the value of the set parameter;

- the **2** key to decrease the value of the set parameter;

- the **#** key to save the changes and return to menu "5.Setting".

- the ***** key to cancel the changes and return to menu "5.Setting".

2.14 UPDATING THE DEVICE PROGRAM

The device program is constantly improved by the Manufacturer. It is possible to update the program from the computer without disassembling the device. To make such an update, contact the Manufacturer, receive the password for the operation, and the updated program of the device, and updating manual.

The device program can also be updated in the Manufacturer's facility (*see document **Central Panel KODOS A-20-Based Fire and Burglar Alarm System. Assembly Guide***).

> *After the device program is updated the System settings need to be restored. Prior to updating, make sure that the settings are recorded in relevant tables and the event log (see section 4.7) does not contain any important unaccounted information.*

3 Changing the System Configuration

If necessary, the configuration of the System can be changed. If a new address unit is added to the System, or if a failed address unit is replaced, the System settings need to be changed.

> *After the changes are made correct the "Address Unit Inquiry Order" data table.*

3.1 REPLACING A UNIT IN THE INQUIRY LIST

In case an address unit is failed it must be replaced and changes to the System settings must be made.

> *The type of the new address unit must **match** the type of the replaced address unit.*

To define the new unit in the System, enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 3.Inquiry order ⇨
⇨ 3.Block change

The device screen will display an inquiry:

```
    Current number
  address block:▓
```

Enter the ordinal number of the replaced AU (for example, "25") and press the ⌗ key.

The following inquiry will appear on the screen:

```
    Current number
  address block:25
  Block address:▓
```

Enter hardware address of the new unit and press the ⌗ key;

The device screen will return to submenu "3.Inquiry order".

The following errors may occur when filling in the Unit Address field:

▪ if the address of an unconnected unit, or a wrong unit address was entered , then after the ⌗ key is pressed the screen will display the following message:

```
    No block
```

Press any key to return to the "Unit Address:" field.

▪ If you address that already exists in the inquiry list was entered, the screen will display a message featuring the number of the address unit with the same address, for example:

```
Block address: 00038
has number:01
```

Press any key to return to the "Unit Address:" field.

Press the ✱ key with an empty "Unit Address:" field (empty "Unit Address ordinal number:" field) to cancel unit replacement and return to submenu "3.Inquiry order"*.*

3.2 ADDING A NEW UNIT TO THE INQUIRY LIST

If the System is expanded, the new address unit may be added to the bottom of the *existing inquiry list*.

After an address unit is connected to the System it is recommended to auto-matically define its address (see section 2.1).

To add a new address unit to the inquiry list, enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 3.Inquiry order ⇨
⇨4.Add block

The device screen will display an inquiry:

```
Block address:▓
```

Enter the hardware address of the new unit and press the # key; the device screen will return to submenu "3.Inquiry order".

The following errors may occur when filling in the "Unit Address" field:

▪ If you entered the address of an unconnected unit, or a wrong unit address, then after the # key is pressed the screen will display the message on not finding the unit with the entered address, for example:

```
Block address: 00053
 Not found! [1]A06
[2]A07 [3]A08 [4]A09
[5]AKP [6]A68 [7]A78
```

Press a key from 1 to 7 , which corresponds to the unit type if the unit with this address is to be connected later .

On the device screen the types of address units are designated as follows:

A06 – "KODOS A-06/2"; A07 – "KODOS A-07/4"; A08 – "KODOS A-08", "KODOS A-08/24", "KODOS A-08/220", "KODOS A-08/220A"; A09 - "KODOS A-09"; ACP – "KODOS ACP"; A68 – "KODOS A-06/8"; A78 – "KODOS A-07/8".

Press any other key (except for the keys **1**, **7**) if a wrong address was entered . The System will make a new inquiry for the hardware address of the unit with the current ordinal number of inquiry.

▪ If an address already existing in the inquiry list was entered, the screen displays a message specifying the number of the unit with the same address, for example:

```
Block address: 18093
has number:21
```

Press any key to return to the "Unit Address:" field.

Press the ***** key with an empty "Unit Address:" field to finish generating the inquiry list and enter menu "3.Inquiry order".

If an address unit "KODOS A-07/4" built in the uninterruptible power supply unit was added to the System, the changes to the additional inquiry list should also be made (see section 2.3).

After a new address unit has been defined by the System changes should be made in the following settings of the System considering the new controlled zones and control channels added to the System:

- *set a new value for the number of System zones and channels (see section 2.4);*
- *adjust the Parameters of zones (channels) of the new unit (see section 2.5);*
- *create a new correlation between indication modules and numbers of zones (channels), if Indication modules are connected to the device (see section 2.6);*
- *make changes in the additional alarm zone list (see section 2.9);*
- *make changes in the contents of the System sections (see section 2.10);*
- *generate new groups of zones and channels (see section 2.11).*

4 Viewing System Settings

4.1 VIEWING THE INQUIRY LIST

To view the generated inquiry list, enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 3.Inquiry order ⇨
⇨ 1.View list

The device screen will show the list of address units inquiry, for example:

```
N  Addr Type Ver Zone
01 08960 A08 1.0  01
02 00001 A06 ***  03
03 00394 A07 1.0  05
```

where each line contains:

N	–	AU ordinal number in the inquiry list;
Addr	–	unit hardware address;
Type	–	AU type;
Ver	–	version of the AU program;
Zone	–	ordinal number in the inquiry list of the first zone (channel) for the unit.

> *If symbols "***" appear instead of the number of version of AU program when viewing the inquiry list, it is recommended that the unit be replaced.*

Press the 〔#〕 key to view next elements of the list.

If the unit addresses have not been entered yet (the list is empty), the device screen will display a message:

```
   Units not defined!
```

Press the 〔*〕 key to enter submenu "3.Inquiry order".

4.2. VIEWING THE ADDITIONAL INQUIRY LIST

To view the additional inquiry list for "KODOS A-07/4" and "KODOS A-07/8" address units built in the "KODOS R-03-3" uninterruptible power supply units enter the following command from the main menu:

5.Setting ⇨ 1.Address blocks ⇨ 4.R-03 ⇨
⇨ 1.View list

The device screen will display the list of address units included in the additional inquiry list, for example:

```
N  Addr  Type   Zone
01 01792
02 01557
03 00566    [#]-next
```

Press the [#] key to view the next elements of the list.

If the addresses of "KODOS R-03-3" units have not been entered yet (the list is empty), then the screen will display the following message:

```
    Blocks not defined!
```

Press the [*] key to enter submenu "4. R-03".

4.3. VIEWING ADDITIONAL ALARM ZONE LIST

To view additional alarm zone list, enter the following command from the main menu:

5.Setting ⇨ 5.Add. alarm zones ⇨ 1.View list

The device screen will display the list of zone numbers where the "Horn 2" signal will sound in case of alarm, for example:

```
      Zone viewing

31  32  34  52  53
          [#]-stop
```

If a zone number is not in the list, the "Horn 1" signal will sound for that zone.

If the list contains more than five elements the device will automatically continue showing the list at three-second intervals.

Press any number key to speed up the show.

Press the #️ key to stop (and then resume) automatic show.

Press the *️ key to enter submenu "5.Additional alarm zones".

4.4 VIEWING A SECTION

To view the numbers of zones (channels) that belong to a section enter the following command from the main menu of the device:

4.Sections ⇨ 1.View section

The device screen will display an inquiry:

```
Section number:▓
```

Enter the number of a section required (for example, "2") and press the #️ key.

The device screen will show the numbers of all zones (channels) that belong to the selected section, for example:

```
        Section 02

01  05  07  08  13
          [#]-stop
```

If the number of the zone (channel) is not in the list, then the zone (channel) does not belong to the selected section.

If more than five zones and channels belong to the section, then the device will automatically continue showing the list at three-second intervals.

Press any number key to speed up the show.

Press the #️ key to stop (and then resume) automatic show.

Press the *️ key to enter menu "4.Sections".

4.5 VIEWING GROUPS

To view the numbers of zones (channels) that belong to a group, enter the following command from the main menu of the device:

2.Zones and channels ⇨ 5.Zone groups ⇨ 1.Viewing config

The device screen will display an inquiry:

```
Group number:▓
```

Enter the number of the required group (for example, "5") and press the #️ key.

The device screen will show the numbers of all zones (channels) that belong to the selected group, for example:

```
Zones  05 group
08   02   04   03
07   01
 0- next #- chans
```

Press the #️ key to view the numbers of all the channels that belong to the selected group:

```
Chans 05 group

11   12
 0- next #- zone
```

Press the #️ key to return to the screen showing the numbers of zones (channels) that belong to the selected group.

Press the **0** key to quickly move to the next group according to numbers.

Press the ***** key to finish viewing the list of numbers of group zones (channels); the screen will return to submenu "5.Zone groups".

4.6 VIEWING PASSWORDS AND CARD CODES

To view the list of user passwords and card codes assigned in the System, enter the following command from the main menu:

- to view the password list

5.Setting ⇨ 3.Passwords ⇨ 3.Password viewing

- to view the card code list

5.Setting ⇨ 3.Passwords ⇨ 4.Card viewing

The device screen will display the list of passwords (card codes), for example:

```
00  -1111
01  -5869
02  -
03  -3107        [#]↓
```

or

```
00 -111100FF
01 -
02 -586900FF
03 -00000AB4      [#]↓
```

Press the ![#] key to view the rest of the list.

Press the ![*] key to return to submenu "3.Passwords".

> *Empty position against a User number means that there is no password (card code) assigned to the User.*

4.7 EVENT LOG

The System keeps an event log (archive). The device records the last 7,500 events in the System and allows the User to view the information about them on the screen. The list of archived events is detailed in Table A.1 (see Appendix A).

To view the events registered by the System, enter the following command from the main menu:

3.Events

The screen will display a record about the last event in the System, for example:

```
 10.25 13:42    0229
System change
User:00
          [0]-↑ [#]-↓
```

The first line of the screen displays: date (for example, "10.25" – October 25) and time ("13:42" – 13 hours 42 minutes) of the event, along with its number in the log ("0229"). The second line specifies the type of event ("System change"). For events initiated by a User in line three the device displays the User number ("00" – Administrator).

> *For an event with an incorrect date storage format (caused, for example, by RAM failure due to inner battery discharge) only event number is shown.*

Press the ![#] key to view the previous entry of the event log.

Press the **0** key to view the next entry of the event log.

Press the ***** key to return to main menu.

If necessary you can delete all the entries from the event log (see section 5.4).

# 5 Deleting System Settings

5.1 CLEARING SETTINGS

If necessary the Administrator can delete the following device settings:
- Previously generated groups of zones and channels (see section 2.11);
- Previously generated sections of zones and channels (see section 2.10);
- Previously generated list of additional alarm zones (see section 2.9);
- Previously generated correlation of indication modules and zone (channel) numbers (see section 2.6);
- Previously generated additional inquiry list (see section 2.3);
- Previously made settings of zones (channels) parameters (see section 2.5);
- Previously set value of alarm signal duration(see section 2.8). after the settings are cleared the System returns to preset value of duration of alarm signal "Horn 1", "Horn 2", equal to 10 minutes;
- The preset device address (see section 2.7). As the settings are cleared the device restores the preset value of control panel address at one.

To clear *all* the abovementioned settings, enter the following command from the main menu:

5.Setting ⇨ 8.Clear ⇨ 2.Clear setting

The device screen will display an inquiry:

```
 Are you sure ?
[#]-Yes [*]-No
```
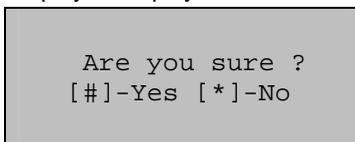
Press the respective key:

– delete the arming;

* – cancel deleting arming.

The screen will return to submenu "8.Clear".

5.2 DELETING A USER

To deny the access of a specified User to the control of the System, enter command from the main menu:

5.Setting ⇨ 3.Passwords ⇨ 2.Delete user

The screen will show an inquiry:

```
            User:▓
```

Enter the number of User, whose password and card code number you want to delete, and press the **#** key. The screen will return to submenu "3.Passwords".
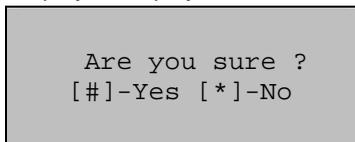
> *The Password of the Administrator (User number 0) cannot be removed, it can only be changed (see section 2.12).*

5.3 CLEARING PASSWORDS

To delete passwords and card codes of *all* Users (except for the Administrator password), enter the following command from the main menu:

5.Setting ⇨ 8.Clear ⇨ 3.Clear password

The device screen will display an inquiry:

```
       Are you sure ?
       [#]-Yes [*]-No
```

Press the respective key:

– delete all passwords and card codes;

* – cancel deleting passwords and cards.

The screen will return to submenu "8.Clear".

5.4 CLEARING THE EVENT LOG

To clear all the entries in the event log, enter the following command from the main menu:

5.Setting ⇨ 8.Clear ⇨ 1.Clear events

The device screen will display an inquiry:

```
   Are you sure ?
  [#]-Yes [*]-No
```

Press the respective key:

– delete all entries in the event log;

* – cancel deleting the entries in the event log.

The screen will return to submenu "8.Clear".

Annex A
List of System Events

Table A.1

On the device screen	Event in the System
AU auto operation:	autonomous operation of power unit (PSU) of the specified number
Ctrl channel on:	control channel of the specified number turned on
Control chan off:	control channel of the specified number turned off
Maybe fire zone:	fire alarm triggered in the specified zone with set alarm delay time
Maybe alarm zone:	Burglar alarm triggered in the specified zone with set alarm delay time
Zone restored:	restored connection with the unit, the specified zone returns to normal status
Restoring line	communication line restored after short circuit
Block opening:	body opening alarm open in AU of the specified number
PU acc. recharge:	battery of PSU with the specified number is being recharged
System change User:	changes to the System configuration; the number of the User who has made the changes is displayed
Line SC	short circuit in the line with address units (AUs)
Ctrl zone on:	zone set on control
Ctrl zone off:	zone set off control
Arming hours User:	setting current time; the number of the User who has set the clock is displayed
Failure in zone:	failure of AU with the specified zone number;
Block proc. Zone:	AU connection failure (AU connection line failure, unit failure); AU number and its zone numbers are displayed
Break zone :	loop breakdown in the zone with the specified number
Turning off PU:	disconnection of PSU with the specified number from the 220 V mains
Clearing events	all the entries removed from the event archive
Fire in zone:	fire alarm in the zone with the specified number
Zone is armed: User:	zone with the specified number set on guard; the number of user who has made the setting is displayed
Arm. section User:	section with the specified number set on guard; the number of user who has made the setting is displayed
Arm. by card User:	section with the specified number set on guard via card; the number of user who has made the setting is displayed
Passwd change:	new user added to the System list or password changed; the number of user whose password was changed is displayed
Zone is disarmed: User:	zone with the specified number set off guard; the number of user who has made the setting is displayed
Alarm off User:	alarm status set off, horn turned off; the number of user who has made the setting is displayed
Disarm by card User:	section with the specified number set off guard via card; the number of user who has made the setting is displayed
Alarm in zone:	alarm in the zone with the specified number
Alarm informer:	MFA button pressed in the specified zone
User deleted:	user deleted from the System list; the number of user is displayed