UniPOS Ltd

FIRE CONTROL PANEL

FS 6000



INSTRUCTION FOR CONTROL, SETUP AND PROGRAMMING

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1. INTRODUCTION

1.1 Main features

The addressable fire control panels FS6000, produced by UniPOS Ltd are modern, high reliable, multifunctional and versatile devices, providing unexpected potential in the design, installation and operation of addressable fire alarm systems.

Some of the control panel main features and possibilities are:

* precisely locating the activated fire detector's address (number of the line and number of the fire detector);

* displaying a 14 character message for each of the fire detectors, containing exact information on detector's location in the protected area. Example: Floor 1, Ap.5, Meeting hall, Storage room 3 and so on. Message programming method is described in the following instruction;

* adjusting the operating modes and the parameters of all units integrated in the fire alarm system via build in keypad;

* menu driven dialogue boxes for easy operation;

* LCD for visualization of system checkup and setup modes;

* LEDs indication and text information for early warning of a break down or extreme conditions;

* energy independent archive memory saving the event type, date and time, allowing for detailed analysis of the actions of the authorized personnel and possible problems in the fire protection of the area.

* user oriented text messages allowing for a total control of the site protected.

* system expansion and modification (our goal is discontinuous improvement of the fire alarm equipment features), no additional cabling necessary.

* compatibility with random installation design, within the range of fire control panels resources.

All these are executed via fire control panel's keypad and after a detailed examination of the instructions set herewith.

1.2 Terms and definitions used in the design and operation of fire alarm systems, based on Fire Control Panel FS6000.

In the process of designing and operating addressable fire alarm systems the user meets number of terms, which are not typical or vary from the standard ones, used for conventional systems. The text below clarifies the definitions of all units integrated in the FS6000 system, their modes of operation, physical and logical configuration possibilities and all events, analyzed and indicated by the fire control panels FS6000.

1.2.1 Physical configuration of the system

ADDRESSABLE FIRE DETECTOR – a unit with unique number within the range of the fire alarm system, designed for early warning of a fire condition and able to exchange data with Fire Control Panel FS6000. Further on these units will be referred as *addressable detectors* or only *detectors*. In our Production List the following addressable detectors are included:

- 6110 addressable fixed temperature heat detector
- 6120 addressable rate of rise heat detector
- 6130 addressable optical smoke detector
- 6140 addressable optical flame detector
- 6150 addressable manual call point

ADDRESSABLE ADAPTER - a unit with unique number within the range of the fire alarm system, provided for an interface between addressable fire control panel FS6000 type and conventional fire detectors (for example 2000 Series of UniPOS Ltd). Addressable adapters are intended for fire protection of large areas, where more fire detectors, not necessarily addressable, are mounted (corridors, storage rooms, large halls). Further on these units will be referred as *addressable adapters* or *adapters*. In our Production List the following adapters are included:

6201 – addressable adapter

SHORT CIRCUIT ISOLATOR – a unit without unique number within the range of the fire alarm system. It cuts off (isolates) short circuited wire segments , keeping active

the rest of the wiring. Further on these units will be referred as *isolators*. Our Production List includes the following isolators:

6202 – short circuit isolator

FIRE ALARM LINE – addressable detectors, isolators, addressable adapters and conventional fire detectors, physically connected by the means of two-wire connection. In such configuration one end of the two wire connection only is connected to the fire control panel. The fire alarm line is intended for supplying power from the fire control panel to all integrated units and for communication between them. Further on the fire alarm line will be referred as *line* only. The basic configuration of FS6000 Fire Control Panel consists of 4 lines, expandable up to 16 lines. To each line maximum 127 addressable points can be connected (fire detectors or adapters). The addresses of the integrated units start from number 1 and increase consecutively to the maximum number. For example, where 20 fire detectors are integrated with a line, their numbers are from 1 to 20. The sequence of connection of the detectors is not of importance, but their addresses shall be in the gap of 1 to 20.

FIRE ALARM LOOP – addressable fire detectors, isolators, addressable adapters and conventional fire detectors, physically connected by the means of a two-wire connection. In such configuration both ends of the two-wire connection are connected to the fire control panel. Essentially, this is two fire alarm lines united in a loop. The advantage of Loop configuration is in the fact, that a break in the loop does not effect the serviceability of the system due to power supply to both ends. Connection of two fire alarm lines in a loop is strictly regulated. Lines 1 and 2, 3 and 4, 5 and 6 and so on can be united in a loop. Any other loop configuration – for example Line 1 and Line 3 – would lead to improper performance of the system and error signal. Configuring two lines in a loop is related to program and device adjustments. Programming is explained in the pages further on. Details on device adjustments can be found in FS6000 Manual Instruction. Fire alarm loop supplies power from the control panel to the integrated devices and is also a communication environment for all these. Further on the fire alarm loop will be referred as loop only. Fire control panel's basic configuration consists of 2 loops; maximum number of loops - 8. To each loop 127 addressable points can be assigned. The addresses of the integrated devices shall start from 1 and shall increase to the maximum number consecutively. For example, if 20 fire detectors are assigned to a loop, their numbers shall be from 1 to 20. The sequence of fire detectors assignment to the loop is not of importance, but their addresses should be in the interval 1 - 20.

LINEAR MODULE – a device capable to drive 4 fire alarm lines (or 2 loops) and is designed to be build in the FS6000 Fire Control Panel. Fire control panel's basic configuration consists of 1 linear module; maximum number of linear modules - 4. A random combination of lines or loops can be arranged within the fire control panel, provided that the requirements for loop configuration are observed. An exemplary configuration with 1 linear module can be 1 loop and 2 lines (line 1 and 2 are united in loop 1, line 3 and 4 are configures as lines).

OPEN COLLECTOR OUTPUTS – open collector outputs, electrical parameters 30V/0.3A; provided for external devices control. Fire control panel FS6000 has 8 open collector outputs.

RELAY OUTPUTS – relay non-potential switching outputs, electrical parameters 250V/8A; provided for external devices control. Fire control panel FS6000 has 10 relay outputs.

CONTROLLABLE OUTPUTS – relay potential outputs (30V), which allow for monitoring of the serviceability of the connecting wires between the control panel and the external devices. End of Line Module is required. FS 6000 has 2 controllable outputs.

1.2.2 Logical configuration of the system

ADDRESS (ADDRESSABLE POINT) – the unique number of each addressable fire detector or adapter within the fire alarm system. The address consists clear information on unit's physical allocation on the territory of the protected site. A 14 character text message is assigned to each address and this message is displayed on the LCD when an event has been recorded. Example – FLOOR 1, FLAT 5, CONFERENCE HALL, STOREROOM 3 and so on. The address is generated from fire detector's number and the number of the fire alarm line, to which the detector has been integrated (example – Line 1 Fire detector 127).

ZONE – a random group of addresses within the addressable fire alarm system, logically united. It is important to make a difference between the physical term ZONE, used in conventional fire alarm systems, where terms ZONE and LINE have equal meaning, and between the logical term ZONE used in addressable fire alarm systems. In the addressable fire alarm systems *zone* stands for addressable points, logically united. Their allocation within the protected site and the numbers of the fire alarm lines they have been integrated in are not of importance. For example, fire detectors from Line 1 and from Line 16 can be united in one zone. In fire control panels FS 6000 the zones define the combination of outputs, which will react when specified events occur. For example if fire detector 3 has been assigned to Zone 7 and has registered fire condition stage I, the open collector outputs, relay outputs and controllable outputs, programmed during setup procedure of Zone 7 to react upon fire condition stage I, will be activated. Zone setup for the different conditions is user-defined. Fire control panels FS6000 are able to operate 32 zones maximum.

OUTPUTS FOR FIRE CONDITION STAGE I - a random combination of open collector outputs, relay outputs and controllable outputs, activated upon registering Fire condition stage I. The user can define the combinations of outputs for each zone.

OUTPUTS FOR FIRE CONDITION STAGE II – a random combination of open collector outputs, relay outputs and controllable outputs, activated upon registering Fire condition stage II. The user can define the combinations of outputs for each zone.

OUTPUTS FOR FAULT CONDITION – a random combination of open collector outputs, relay outputs and controllable outputs, activated upon registering Fault condition of the system. The user can define one combination of outputs only.

1.2.3 Events and their indication

1.2.3.1 Events definitions

FIRE CONDITION STAGE I – a fire detector has been activated and the time for fire condition stage I has not expired yet. The phase is 2 minutes long. This event is indicated by the common and local light indicators, sound signaling and a text message displayed on the LCD.

FIRE CONDITION STAGE II – a fire detector has been activated, the time for fire condition stage I has expired, but the time for fire condition stage II has not expired yet. The phase is 5 minutes long. This event is indicated by the common and local light indicators, sound signaling and a text message displayed on the LCD.

INSPECTION TIME – INSPECTION button has been pressed during the phase Fire condition stage I. As a result the local sounder is deactivated and the period of fire condition stage I is prolonged with as much time as it has been programmed in zone parameters. Inspection time for each zone is user-defined. This event is indicated by light indicators.

FAULT IN A FIRE DETECTOR – an incorrect response from the detector during the process of communication with the fire control panel. The fault state is active until the fault is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

SHORT CIRCUIT IN A LINE – a current value higher than short circuit current limits, defined in the parameters, has been registered in the line. The limit values are user-defined. This state is active until the fault is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

OPEN LINE – a current value lower than open line current limits, defined in the parameters has been registered in the line. Limit values are user-defined. This state is active until the fault is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

SHORT CIRCUIT IN A LOOP – a current value higher than short circuit current limits, defined in the parameters, has been registered in the loop. Limit values are userdefined. This state is active until the fault in the loop is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

OPEN LOOP – a current value lower than open loop current limits, defined in the parameters, has been registered in the loop. Limit values are user-defined. This state is active until the fault in the loop is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

BREAK IN A LOOP – a break in the loop integrity (a break in the wires in one point). It does not affect the serviceability of the system due to the two-ends power supply. This state is active until the fault in the loop is eliminated. This event is indicated by local light indicators, sound signaling and a text message on the LCD.

SHORT CIRCUIT IN A CONTROLLABLE OUTPUT – a current value higher than short circuit current limits, defined in the parameters, has been registered in the output.

Limit values are user-defined. This state is active until the fault in the controllable output is eliminated. This event is indicated by local light indicators and sound signaling.

OPEN LINE IN A CONTROLLABLE OUTPUT - a current value lower than open line current limits, defined in the parameters, has been registered in the output. Limit values are user-defined. This state is active until the fault in the controllable output is eliminated. This event is indicated by local light indicators and sound signaling.

LINE SWITCHED OFF – switched off mode has been included in line's parameters; number of the line is equal or smaller to the number of lines in the fire control panel. This event is indicated by local light signaling. The state is active until the cause for it drops off.

ZONE SWITCHED OFF – switched off mode has been included in the zone's parameters and fire detectors have been logically assigned to this zone. This event is indicated by local light signaling. The state is active until the cause for it drops off.

FIRE DETECTOR SWITCHED OFF - in the parameters of the fire detector switched off mode has been included. The detector's number is smaller or equal to the total number of fire detectors integrated in the line. This event is indicated by local light signaling. The state is active until the cause for it drops off.

DROP IN BACKUP BATTERY POWER SUPPLY - a drop in the backup battery power supply has been registered. This event is indicated by local light signaling. This state is active until the backup battery supply is restored.

DROP IN MAINS SUPPLY – mains power supply failure has been registered. This event is indicated by local light signaling. The state is active until the power supply is restored.

SYSTEM OPERATION – the fire control panel executes an internal operation – recording new parameters in the energy independent memory, completing a cycle of integrated addressable units scanning when switching from Duty Mode to Service Mode, initial setting of the addressable units after power supply or after switching from Service Mode to Duty Mode and similar. This state is displayed on the LCD with a text message – SYSTEM OPERATION PLEASE WAIT – thus the user shall allow for a completion of the current operation before proceeding with his work with FS6000.

INCORRECT SETUP - errors in parameters and modes of operation have been registered – for example *Number of lines 0*, or a loss of information in the energy independent memory. This event is indicated by a text message on the LCD. In such case the Test Mode shall be started and the necessary corrections shall be made.

1.2.3.2 Indication of events

Layout of FS6000 front panel can be found on Fig.1 and detailed description of events indications can be found in Table 1.



- 1 Fault 220V indicator
- 2 Common fault indicator (break in a line)
- 3 Backup batteries fault indicator
- 4 Common fault indicator
- 5 Separate indicators for fault condition in controllable output lines
- 6 Test mode keypad
- 7 Common indicator for fire condition stage I
- 8 Push button indicating "day/night"
- 9 Common indicator for fire condition stage II
- 10 RESET button
- 11 Check indicator
- 12 Check button
- 13 LCD (4x20)
- 14 Separate indicators for a fault condition in a zone
- 15 Separate indicators for a fire condition in a zone

Fig. 1. FS6000 Front Panel

Table 1. Indication of registered events

EVENT	INDICATION
Fire condition stage 1	Common indicator for fire condition stage 1 flashes in red (LED 7). Local indicators for a fire condition of all zones where fire detectors have been activated flash in red (LEDs 15). The local sounder produces a two - tonal signal. A text message of the activated fire detector is displayed on the LCD. All open collector outputs, relay outputs and controllable outputs are activated, according zone adjustments.
Fire condition stage 2	Common indicators for fire condition stage 1 and 2 flash in red (LED 7 and 9). Local indicators for a fire condition of all zones, where fire detectors have been activated, flash in red (LEDs 15). The local sounder produces a two - tonal signal. A text message of the activated fire detector is displayed on the LCD. All open collector outputs, relay outputs and controllable outputs are activated, according zone adjustments.
Inspection time	Common indicator for fire condition stage 1 flashes in red (LED 7). Local indicators for a fire condition of all zones where fire detectors have been activated flash in red (LEDs 15). The Check indicator illuminates in steady green light (LED 11). The local sounder is switched off. A text message of the activated fire detector is displayed on the LCD. All open collector outputs, relay outputs and controllable outputs are activated, according zone adjustments.
Fault in a fire detector	Local indicator for Fault in a zone, to which the fire detector has been assigned, flashes in yellow (LEDs 14). The local sounder produces one-tonal discontinuous signal. A text message of the fault detector is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.
Short circuit in a line	Local indicators for fault in a zone flash in yellow, indicating fault condition in all zones, to which fire detectors in a line have been assigned (LEDs 14). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a line is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.
Open line	Local indicators for fault in a zone flash in yellow, indicating fault condition in all zones, to which fire detectors in a line have been assigned (LEDs 14). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a line is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.

Short circuit in a loop	Local indicators for fault in a zone flash in yellow, indication fault condition in all zones, to which fire detectors in a loop have been assigned (LEDs 14). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a loop is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.
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EVENT	INDICATION	
Open loop	Local indicators for fault in a zone flash in yellow, indicating fault condition in all zones, to which fire detectors in a line have been assigned (LEDs 14). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a loop is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.	
Вгеак іп а юор	The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a loop is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.	
Short circuit in a controllable output	The corresponding local indicator for short circuit in a controllable output flashes in yellow (LEDs 5). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a loop is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.	
Open controllable output	The corresponding local indicator for an open controllable output flashes in yellow (LEDs 5). The local sounder produces one-tonal discontinuous signal. A text message for a Fault in a loop is displayed on the LCD. Depending on the adjustment, Common fault outputs are activated.	
Line switched off	The local indicators for a fault in a zone flash in steady yellow light, indicating fault condition in all zones, to which fire detectors in a line have been assigned (LEDs 14).	
Zone switched off	The local indicator for a fault in a line is illuminated in steady yellow light (LEDs 14).	
Fire detector switched off	The local indicator for a fault in a zone is illuminated in steady yellow light, indicating fault condition in each zone to which the fire detector has been logically assigned. (LEDs 14)	
Backup battery failed	The indicator for loss/reduced powers supply illuminates in steady yellow light (LED 4). Depending on the adjustment, Common fault outputs are activated.	
Loss of main power supply	The indicator for loss of mains powers supply illuminates in steady yellow light (LED 1). Depending on the adjustment, Common fault outputs are activated.	
System operation	A text message appears on the LCD to indicate the event.	
Adjustment incorrect	A text message appears on the LCD to indicate the event.	

1.2.4 Parameters and modes of operation of devices included into the FS6000 System.

1.2.4.1 FS6000's parameters

NUMBER OF LINES – the parameter defines number of lines which the fire control panel monitors. The number shall be smaller or equal to the maximum number of the physical lines. For example at 3 Linear Modules (i.e. 12 physical lines) 1 to 12 lines can be defined.

NETWORK ADDRESS – the parameters defines the network address of the fire control panel provided for communication with a dispatch post.

PASSWORD – the parameter defines a password for access to Setup mode.

LANGUAGE – the parameter defines language for all messages and dialogue boxes, which appear on the LCD. Selection between Bulgarian, English and Russian is available. The default language is Bulgarian.

1.2.4.2 Modes of operation of FS6000

DUTY MODE – the fire control panel monitors the status of all integrated units and processes the registered events as per the programmed modes and parameters.

DAY MODE/NIGHT MODE – two aspects of the DUTY MODE. The choice between DAY MODE or NIGHT MODE depends on the presence of 24 hours security on site. In DAY MODE the sequence of Fire condition stage I and Fire condition stage II is being followed; in NIGHT MODE the fire control panel directly enters Fire condition stage II. The transition between the two is made via the button DAY/NIGHT on the front panel and is indicated by a LED indicator.

SERVICE MODE – the fire control panel terminates the site protection and gives access to all setup and test procedures of the fire alarm system.

REMOTE MODE – communication to the fire control panel is provided via built-in RS232 interface or via internal modem (optional). The communication abilities of the fire control panel allow for setting up a Dispatcher Control Point, remote checking up of the settings, entering new parameters and modes of operation. To take advantage of these features, the user shall have the special UniPOS software and IBM-compatible PC. During operation in REMOTE MODE a message appears on the LCD display and the fire control panel can not be controlled via the built-in keyboard.

1.2.4.3 Line parameters

LINE ON/OFF – the parameter indicates whether the fire control panel monitors the fire detectors in the selected line.

LOOP/LINE – the parameter sets the physical configuration of a selected line. The selected option is valid only if the microswitch LO/LI is in the correct position.

NUMBER OF FIRE DETECTORS – the parameter indicates the number of fire detectors integrated in a selected line.

SHORT CIRCUIT – the parameter sets the current threshold in a line, above which a short circuit is detected.

OPEN LINE – the parameter sets the current threshold in a line, under which OPEN LINE is registered.

The definitions given above apply to both line and loop. Where two lines are configured in a loop (using the parameter LOOP/LINE), their parameters and the parameters of the fire detectors in these lines shall be completely equal. To facilitate the users, this can be done automatically by the fire control panel, provided that fire alarm lines have been configured in a loop. The valid parameters will be the parameters of the

line, that has smaller number and the parameters of the fire detectors, integrated to this line. For example, if Line 3 and Line 4 are united in a loop, the user shall fix the settings of Line 3 and its detectors only. The program will automatically save the same parameters for Line and its detectors.

1.2.4.4 Zone parameters

ZONE ON/OFF – the parameter indicates that the status of the fire detectors, logically integrated to the selected zone, is monitored.

INSPECTION TIME – press the button to set the time, that prolongs the phase of Fire condition stage I for the selected zone.

OPEN COLLECTORS UPON FIRE CONDITION STAGE I – the parameter sets the open collector outputs, that shall be activated upon Fire condition stage I in the selected zone.

RELAY OUTPUTS UPON FIRE CONDITION STAGE I – the parameter sets the relay outputs, that shall be activated upon Fire condition stage I in the selected zone.

CONTROLLABLE OUTPUTS UPON FIRE CONDITION STAGE I – the parameter sets the controllable outputs, that shall be activated upon Fire condition stage I in the selected zone.

OPEN COLLECTORS UPON FIRE CONDITION STAGE II – the parameter sets the open collector outputs, that shall be activated upon Fire condition stage II in the selected zone.

RELAY OUTPUTS UPON FIRE CONDITION STAGE II – the parameter sets the relay outputs, that shall be activated upon Fire condition stage II in the selected zone.

CONTROLLABLE OUTPUTS UPON FIRE CONDITION STAGE II – the parameter sets the controllable outputs, that shall be activated upon Fire condition stage II in the selected zone.

1.2.4.5 Fire detector (adapter) parameters

 $\ensuremath{\text{ON/OFF}}$ – the parameter indicates whether the status of the fire detector is monitored.

FAST/NORMAL - the parameter indicates how the event "Fire condition" will be processed. When the fire detector is in NORMAL mode, phase Fire condition stage I shall expire, before phase Fire condition stage II is entered. In FAST mode Fire condition stage II in entered directly.

ZONE - the parameter indicates the zone, where the selected fire detector is logically integrated.

MESSAGE - 14 symbol message, that visualizes event on the LCD display.

1.2.4.6 Parameters of Controllable outputs

ON/OFF – the parameter indicates whether the good working condition of the line (the connecting wires) between the fire control panel and the executive device is monitored.

SHORT CIRCUIT - the parameter sets the threshold of the current in the line of the controllable output, above which a short circuit is registered.

OPEN LINE – the parameter sets the current threshold , under which is registered OPEN LINE in controllable output.

2. DIALOGUES AND MENUS

2.1. Modes of operation

The fire control panels operate in three modes: duty mode, service mode and remote mode.

In Duty Mode the message SYSTEM ARMED and current date and time are displayed on the LCD display:

< SYSTEM ARMED > 10:22:36 Monday 01 December 1997

In Service Mode a list of service modes appears on the screen and the user shall make a choice:

1. DUTY MODE 2.SETUP MODE 3.TEST MODE 4.SYSTEM INFORMATION

Within 20 seconds the user shall make his choice; otherwise the fire control panel automatically restores Duty Mode.

In remote Mode the following message appears on the display:



In Remote Mode the fire control panel can not be controlled from the built-in keypad.

2.2. Messages and displays in Duty Mode

In Duty Mode messages appear on the LCD display to indicate a registered event. Additional information can be obtained from the LED indications.

FIRE CONDITION STAGE I:

< DUTY MODE > FIRE 1 ALARM tt:tt LINE LL SENSOR SSS $\uparrow\downarrow$ (text)

The symbols mean:

tt:tt is the remaining time to the next phase, in seconds.

LL is the number of the line (01 to 16), where the event is registered SSS is the number of the fire detector (001 to 127), that is activated

(text) is a 14-symbol message, assigned to a fire detector; it gives information on detector's location within the limits of the protected site.

Further on you can find instructions on message programming.

Examples for such messages:

FLOOR 1 AP. 5, MEETING HALL, STORE 3 etc.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Messages for FIRE CONDITION STAGE II

< SYSTEM ARMED > FIRE 2 ALARM tt:tt LINE LL SENSOR SSS (text) ↑↓

The symbols mean:

tt:tt is the remaining time to the next phase, in seconds.

LL is the number of the line (01 to 16), where the event is registered SSS is the number of the fire detector (001 to 127), that is activated

(text) is a 14-symbol message, assigned to a fire detector; it gives information on detector's location within the limits of the protected site.

Further on you can find instructions on message programming.

Examples for such messages:

FLOOR 1 AP. 5, MEETING HALL, STORE 3 etc.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for **FIRE DETECTOR FAULT**.



The symbols mean:

LL is the number of the line (01 to 16), where the event is registered

SSS is the number of the fire detector (001 to 127), that is activated

(text) is a 14-symbol message, assigned to a fire detector; it gives information on detector's location within the limits of the protected site.

Further on you can find instructions on message programming.

Examples for such messages:

FLOOR 1 AP. 5, MEETING HALL, STORE 3 etc.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for SHORT CIRCUIT IN A LINE.

< SYSTEM ARMED > < SHORT CIRCUIT LINE > 15 LINE LL $\uparrow\downarrow$

The symbols mean:

LL is the number of the line (01 to 16), where the event is registered

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for **OPEN CIRCUIT LINE**.

< SYSTEM ARMED > < OPEN CIRCUIT LINE > LINE LL ↑↓

The symbols mean:

LL is the number of the line (01 to 16), where the event is registered

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for SHORT CIRCUIT IN A LOOP

< SYSTEM ARMED > < SHORT CIRCUIT LOOP> LOOP K ↑↓

The symbols mean:

K is the number of the loop (1 to 8), where the event is registered.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for **OPEN LOOP**.

	< SYSTEM ARMED >	
	< OPEN LOOP >	
	LOOP K ↑↓	
_		

The symbols mean:

K is the number of the loop (1 to 8), where the event is registered.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for **BROKEN LOOP**.



The symbols mean:

K is the number of the loop (1 to 8), where the event is registered.

The arrows \uparrow,\downarrow or $\uparrow\downarrow$ appear when more than one event is registered and prompt the user to use buttons \downarrow and/or \uparrow , to visualize in sequence all events on the LCD display.

Message for **SYSTEM OPERATION**.

SYSTEM OPERATION PLEASE WAIT

The message prompts the user to wait until the system operation is completed, before continuing his work with the control panel.

Message for **INCORRECT SETUP**.

CRITICAL ERROR

The message means, that the control panel has interrupted site protection. The Service mode shall be started and the system configuration errors shall be eliminated.

2.3. Main menu in Service mode

Press the button MODE and the fire control panel enters Service mode. The user shall select one of the modes displayed on the screen. If no selection is made within 20 seconds the fire control panel automatically restores Duty mode. The main screen in Service mode is

1.DUTY MODE 2.SETUP MODE 3.TEST MODE 4.SYSTEM INFORMATION

The cursor us positioned at the beginning of the line, over figure 1. Buttons \uparrow and \downarrow move the cursor vertically, button ENTER selects a particular service mode. The Service modes are:

DUTY MODE - restores the Duty mode.

SETUP MODE – the user is able to program all parameters of the fire control panel, as per the requirements of the site.

TEST MODE – a group of test procedures, very useful upon initial start and setup of the system.

SYSTEM INFORMATION – the user is able to perform a checkup, without any changes, of the current adjustments of the fire control panel, and to view the energy independent archive of events.

2.4 Setup mode

After the selection of Setup mode is made, the Service mode displays the following:



The cursor is positioned over the first figure of the line 00000. Buttons \leftarrow and \rightarrow той move it horizontally, buttons \uparrow and \downarrow change the selected figure. After the password is entered, press ENTER and if the password is correct, the fire control panel enters Setup mode. In case the password is incorrect, the display stays unchanged, and the cursor is still positioned over the first figure of XXXXX.

Press ENTER to display the options/functions in Setup mode. Here is an example:



Buttons \uparrow and \downarrow display the rest of the functions:



List of functions in Setup Mode (Main menu):

- 1. SENSOR adjustment of all parameters connected to fire detectors.
- **2. ZONE** adjustment of all parameters connected to zones.
- 3. LINE adjustment of all parameters connected to line.
- 4. MOut adjustment of all parameters connected to controllable outputs.
- 5. FIRE CONTROL PANEL adjustment of all parameters connected to the panel.
- 6. FAULT OUTPUTS adjustment of fault outputs parameters.
- 7. REAL TIME CLOCK adjustment of real time clock.
- 8. DEFAULT PARAMETERS default parameters entry.
- **9. DELETE ARCHIVE** deletion of energy independent archive of events.

When the list of Setup mode is displayed, the cursor is positioned at the first line, over the number of the function. Press ENTER to display the submenu of the particular function or to confirm its execution.

To exit Setup mode press ESC.

2.4.1 SENSOR

Pres ENTER to display the screen for address selection (number of line and number of fire detector):



LL is the number of the line (01 to 16), SSS is the number of the fire detector (001 to 127). The cursor is positioned over the left figure of the parameter LL. Buttons \leftarrow and \rightarrow move the cursor horizontally, buttons \uparrow and \downarrow change the selected figure. When the desired address is set, press ENTER to move to the group of submenus to adjust the parameters of the selected fire detector. If the parameters LL and SSS have been entered out of the allowed limits, the screen does not change and the cursor stays over the first wrong figure of the wrong parameter. Here is an example:



Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for adjustment of fire detector parameters:

1. ON/OFF – to monitor or not the status of selected fire detectors

2. F/N (FAST/NORMAL) – sets direct or normal mode of operation of the fie detector. In F mode the fire detector enters Fire condition stage II without the time for Fire condition stage I is expired.

3. ZONE – sets the zone to which the fire detector has been logically assigned.

4. MSG (Message) – sets the 14-symbol text that is displayed on the LCD display in case of: Fire condition stage I, Fire condition stage II, Fault in sensor.

To visualize the list in Setup sensor mode, the cursor is positioned at the first line, over the number of the function. Press ENTER to display the submenu of a selected function or to confirm its execution.

Press ESC to exit the setup mode and to display the a screen for a new address.

2.4.1.1 ON/OFF

< SETUP MODE > SENSOR < > LINE LL SENSOR SSS 1.ON/OFF ON

The cursor is positioned at the beginning of the line over the figure 1. Press ENTER to move the cursor over ON/OFF parameter. Buttons \downarrow or \uparrow fix the desired state, then press ENTER to confirm or ESC to cancel the change. After the new value is saved, the

cursor is positioned again at the beginning of the line over the figure 1. Press ESC to move the cursor over the same place without any changes in parameters.

2.4.1.2 F/N (FAST/NORMAL)

ĺ	< SETUR	P MODE >	
	<	SENSOR	>
	LINE LL	SENSOR SSS	
l	2.F/N	NOT FAST	
1			

The cursor is positioned at the beginning of the line, over the figure 2. Press ENTER to position it over the parameter (FAST or NORMAL). Buttons \downarrow or \uparrow fix the desired state, then press ENTER to confirm or ESC to cancel the change. After the new value is saved, the cursor is positioned again over the figure 2. Press ESC to position the cursor over the same place without any changes in parameters.

2.4.1.3 ZONE



The cursor is positioned at the beginning of the line, over the figure 3. Press ENTER to position the cursor over the first figure of ZZ. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the selected figure. After the desired value is saved, the cursor is positioned again over the figure 3. Press ESC to position the cursor over the same place without any change of parameter. If the value is out of specified limits (01 to 32) the screen does not change, and the cursor is positioned over the first wrong figure.

2.4.1.4 MSG (MESSAGE)

< SETUR	P MODE >	
<	SENSOR	>
LINE LL	SENSOR SSS	
4.MSG	(text)	J

The cursor is positioned at the beginning of the line, over the figure 4. Press ENTER to position the cursor over the first symbol of the text field. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the selected symbol. After the desired text message is arranged press ENTER to confirm or ESC to cancel the change.

Press ESC to position the cursor over the same place without any change of parameter. If the value is out of specified limits (01 to 32) the screen does not change, and the cursor is positioned over the first wrong figure.

At a beginning of a function the cursor is pointed at the beginning of the line, over figure 4. Press ENTER to position the cursor over the first symbol of the text field. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the selected symbol. After the desired text message is arranged press ENTER to confirm or ESC to cancel the change. After the new

2.4.2 ZONE

Press ENTER to display the zone selection:



ZZ is the number of the zone (01 to 32). The cursor is positioned over the first figure of ZZ. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the selected figure. After the desired value is saved press ENTER to go to a group of submenus to adjust the parameters of the selected zone. If the value is out of specified limits (01 to 32) the screen does not change, and the cursor is positioned over the first wrong figure. Here is an example:



Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for zone adjustment:

1. ON/OFF – the status of the fire detectors logically assigned to a zone is monitored / not monitored.

2. INSPECTION TIME – sets the inspection period, valid in case of a Fire Condition Stage I and activated INSPECTION button. The period shall be in seconds.

3. OC1 (Open collectors 1) – defines the Open Collectors Outputs, that shall be activated in case of Fire Condition Stage I.

4. REL 1 (Relays 1) – defines the relay outputs, that shall be activated upon Fire Condition Stage I

5. MOut1 (Controllable Outputs 1) – defines the Controllable Outputs that shall be activated upon Fire condition Stage I.

6. OC2 (Open Collectors 2) – defines the Open Collectors Outputs that shall be activated upon Fire Condition Stage II.

7. REL 2 (Relays 2) – defines the relay outputs, that shall be activated upon Fire Condition Stage II.

8. MOut 2 (Controllable Outputs 2) – defines the controllable outputs that shall be activated upon Fire Condition Stage II.

When the list in Setup Mode/ Zone is displayed, the cursor is positioned at the first line, over the number of the function. Press ENTER to display a submenu of the selected function or to confirm and execute the function.

Press ESC to exit the adjustment of a selected zone and to generate a new choice.

2.4.2.1 ON/OFF



The cursor is positioned at the beginning of the line, over the figure 1. Press ENTER to position the cursor over the parameter ON/OFF. Buttons \uparrow and \downarrow fix the desired status, then press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the first line, figure 1. Press ESC to position the cursor over the same place without changes in the parameter.

2.4.2.2 INSPECTION TIME



ttt is the inspection time, in seconds. The cursor is positioned over the figure 2. Press ENTER to position the cursor over the first figure of ttt. Buttons \leftarrow and \rightarrow move the cursor horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been set, press ENTER to confirm or ESC to cancel the change. After the new value has been set, the cursor is positioned over the figure 2. Press ESC to position the cursor over the same place without changes in the parameter. If the value is out of the specified limits (000-255 sec), the screen stays unchanged and the cursor is positioned over the first wrong figure.

2.4.2.3 OC1 (Open collectors at Fire condition stage I)

< SETUP MO	DE >
3. OC1	12345678
	XXXXXXXX

1 – 8 display the Open Collector Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 3. Press ENTER to position the cursor over the first x symbol on the left. Buttons ← and → move it horizontally, buttons ↑ and ↓ change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 3. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.2.4 REL1 (Relay outputs at Fire condition stage I)



1 – 10 display the Relay Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 4. Press ENTER to position the cursor over the first x symbol on the left. Buttons ← and → move it horizontally, buttons ↑ and ↓ change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 4. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.2.5 M OUT1 (Controllable outputs at Fire condition stage I)



1 – 2 display the Controllable Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 5. Press ENTER to position the cursor over the first x symbol on the left. Buttons ← and → move it horizontally, buttons ↑ and ↓ change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 5. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.2.6 OC2 (Open Collectors at Fire condition stage II)

<pre>SETUP MC</pre>	DE >
ZONE ZZ	
6. OC2	12345678
	xxxxxxxx)

1 – 8 display the Open Collector Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 6. Press ENTER to position the cursor over the first x symbol on the left. Buttons ← and → move it horizontally, buttons ↑ and ↓ change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 6. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.2.7 REL 2 (Relay Outputs at Fire condition stage II)

< SETUP MODE >			
ZONE ZZ			
7. REL 2	12345678910		
	XXXXXXXXXXX		

1 – 10 display the Relay Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 7. Press ENTER to position the cursor over the first x symbol on the left. Buttons ← and → move it horizontally, buttons ↑ and ↓ change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 7. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.2.8 M OUT2 (Controllable outputs at Fire condition stage II)

< SETUP MODE > ZONE ZZ 8. M OUT2 12 XX

1-2 display the Controllable Outputs, x can be 0 – switched off, or 1 – switched on. The cursor is positioned over the figure 8. Press ENTER to position the cursor over the first x symbol on the left. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure to 0 or 1. After the desired value has been fixed press ENTER to confirm, or ESC to cancel the change. After the new value has been saved, the cursor is positioned over the figure 8. Press ESC to position the cursor over the same place, without any changes in the parameter.

2.4.3 LINE

Press ENTER to display the selection for LINE:

< SETUP MODE > < LINE LINE LL

LL is the number of the line (01 to 16). The cursor is positioned over the first figure of the parameter LL. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to proceed to a group of submenus for parameter adjustment of the selected line. If the parameter LL is out of the specified limits (01 to 16) the screen does not change and the cursor is positioned over the first wrong figure. Here is an example:

<pre>< SETUP MO</pre>	DE >		
< LINI	Ε	>	
LINE LL			
1.ON/OFF	ON		
)

Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for Line Setup:

1. ON/OFF – the status of the fire detectors, assigned to a line is monitored / not monitored. If a line is switched off, except he logical switch off, the voltage is hardware interrupted.

2. LOOP/LINE – sets the connection configuration for a line.

3. SENSORS NUMBER – sets the number of the fire detectors and adapters, assigned to the line.

4. SHORT CIRCUIT CURRENT – sets the current threshold above which SHORT CIRCUIT IN A LINE is detected.

5. OPEN LINE – sets the current threshold under which OPEN LINE is detected.

When the Line Setup list is displayed, the cursor is positioned on the first line, over the number of the function. Press ENTER to display the submenu of the selected function or a screen for confirmation and execution.

Press ESC to exit Line Setup and to display a new screen for line selection.

2.4.3.1 ON/OFF



The cursor is positioned at the beginning of the line, over the figure 1. Press ENTER to position it over ON/OFF. Use buttons \downarrow and \uparrow to fix the desired state, then press ENTER to confirm or ESC to cancel the change. After the new value has been saved the cursor is positioned on the beginning of the line over the figure 1. Press ESC to position the cursor over the same place without any changes.

2.4.3.2 LOOP/LINE

	=>)
< LINE	>
LINE LL	
2.LOOP/LINE	LOOP /

The cursor is positioned on the beginning of the line, over the figure 2. Press ENTER to position it over LOOP/LINE. Use buttons \downarrow and \uparrow to fix the desired state, then press ENTER to confirm or ESC to cancel the change. After the new value has been saved the cursor is positioned at the beginning of the line over the figure 2. Press ESC to position the cursor over the same place without any changes. If changes in this parameter shall be made, the state of LO/LI switch on the processor board shall be checked.

2.4.3.3 NUMBER OF FIRE DETECTORS

< SETUP MODE > < LINE LINE LL 3.SENSORS NUMBER nnn

nnn is the number of the fire detectors and adapters, assigned to the line.

The cursor is positioned on the beginning of the line, over the figure 3. Press ENTER to position it over nnn. Buttons \leftarrow and \rightarrow move it horizontally, buttons \downarrow and \uparrow change the figure, selected by the cursor. After the desired value has been fixed, press ENTER to confirm or ESC to cancel the change. The cursor is positioned at the beginning of the line over the figure 3. Press ESC to position the cursor over the same place without any changes. If the value is out of the defined limits (001 to 127), the screen does not change, and the cursor is positioned over the figure.

2.4.3.4 SHORT CIRCUIT CURRENT

< SETUF	P MODE >	
<	LINE	>
LINE LI	_	
4. SHRT	CIRCUIT	ccc mA

ccc is the threshold of the short circuit current in a line, in mA. The cursor is positioned on the beginning of the line, over the figure 4. Press ENTER to position it over ccc. Buttons \leftarrow and \rightarrow move it horizontally, buttons \downarrow and \uparrow change the figure, selected by the cursor. After the desired value has been fixed, press ENTER to confirm or ESC to cancel the change. The cursor is positioned at the beginning of the line over the figure 4. Press ESC to position the cursor over the same place without any changes. If the value is out of the defined limits (060 to 130 mA), the screen does not change, and the cursor is positioned over the first wrong figure.

2.4.3.5 OPEN LINE



ccc is the threshold of the short circuit current in a line., in mA. The cursor is positioned on the beginning of the line, over the figure 5. Press ENTER to position it over ccc. Buttons \leftarrow and \rightarrow move it horizontally, buttons \downarrow and \uparrow change the figure, selected by the cursor. After the desired value has been fixed, press ENTER to confirm or ESC to cancel the change. The cursor is positioned at the beginning of the line over the figure 5. Press ESC to position the cursor over the same place without any changes. If the value is out of the defined limits (001 to 015 mA), the screen does not change, and the cursor is positioned over the first wrong figure.

2.4.4 M OUT (Controllable output)

Press ENTER to display the screen for Controllable Output Selection:

< SETUP MODE > < M OUT> M OUT K K is the number of the controllable output (or 1 to 2). The cursor is positioned over the parameter K. Buttons \uparrow and \downarrow change the figure, selected by the cursor. After the desired value has been fixed, press ENTER to move to a group of submenus for the selected controllable output. If the K parameter is out of the specified limits (1-2), the screen stays unchanged and the cursor is positioned over K. Here is an example:

< SETUP MODE > < M OUT> MOUT K 1.ON/OFF ON

Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for Controllable output setup:

1. ON/OFF – the status of the selected controllable output is monitored/not monitored.

2. SHRT CIRCUIT – sets the line current threshold, above which SHORT CIRCUIT IN A CONTROLLABLE OUTPUT will be registered.

3. OPEN LINE – sets the line current threshold under which OPEN LINE OF A CONTROLLABLE OUTPUT will be registered.

Upon visualization of the List the cursor is positioned in the beginning of the first line, over the number of the function. Press ENTER to display a submenu of the selected function or to confirm or execute the function.

Press ESC to exit the setup mode and to display a screen for new selection of controllable output.

2.4.4.1 ON/OFF

< SETUP MODE > <M OUT> MOUT K 1.ON/OFF ON

The cursor is positioned on the beginning of the line, over the figure 1. Press ENTER to position it over ON/OFF. Buttons \downarrow and \uparrow fix the desired state. Then press ENTER to confirm or ESC to cancel the change. After the new value has been saved the cursor shall move to the beginning of the line, over the figure 1. Press ESC to position the cursor over the same place without any changes.

2.4.4.2 SHORT CIRCUIT CURRENT

< SETUP MODE > <M OUT> M OUT K 2. SHRT CIRCUIT ccc mA

ccc is the threshold of the short circuit current in the controllable output line, in mA. The cursor is positioned on the beginning of the line, over the figure 2. Press ENTER to position it over ccc. Buttons \leftarrow and \rightarrow move it horizontally, buttons \downarrow and \uparrow change the

figure, selected by the cursor. After the desired value has been fixed, press ENTER to confirm or ESC to cancel the change. The cursor is positioned at the beginning of the line over the figure 2. Press ESC to position the cursor over the same place without any changes. If the value is out of the defined limits (060 to 130 mA), the screen does not change, and the cursor is positioned over the first wrong figure.

2.4.4.3 OPEN LINE

< SETUP MODE > <M OUT> M OUT K 3.OPEN LINE ccc mA

ccc is the threshold of the short circuit current in the controllable output line, in mA. The cursor is positioned on the beginning of the line, over the figure 3. Press ENTER to position it over ccc. Buttons \leftarrow and \rightarrow move it horizontally, buttons \downarrow and \uparrow change the figure, selected by the cursor. After the desired value has been fixed, press ENTER to confirm or ESC to cancel the change. The cursor is positioned at the beginning of the line over the figure 3. Press ESC to position the cursor over the same place without any changes. If the value is out of the defined limits (001 to 015 mA), the screen does not change, and the cursor is positioned over the figure.

2.4.5 FIRE CONTROL PANEL

Press ENTER to activate a group of sub screens for fire control panel parameters adjustment. Here is an example:



Buttons \uparrow and \downarrow display the rest of the functions: List of functions for fire control panel adjustment:

1. NUMBER OF LINES – sets the number of the lines, that shall be monitored by the fire control panel

2. NETWORK ADDRESS - sets the fire control panel network address used for communication with the Dispatcher Control Point (DP software).

3. PASSWORD – changes the access password for SETUP MODE.

4. LANGUAGE – sets the language of the dialogue menus and text messages. The default language is Bulgarian. Other language options are English and Russian language.

2.4.5.1 NUMBER OF LINES

```
< SETUP MODE >
< PANEL >
1.NUMBER OF LINES LL
```

LL is the number of the lines, that are monitored by the fire control panel. The cursor is positioned over figure 1. Press ENTER to position the cursor over the first figure of LL parameter. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 1. Press ESC to position the cursor over the same place without any changes. If the parameter LL is out of the specified limits (01 to 16) the screen does not change and the cursor is positioned over the first wrong figure.

2.4.5.2 NETWORK ADDRESS

NNNN is the fire control panel network address. The cursor is positioned over figure 2. Press ENTER to position the cursor over the first figure of the NNNN parameter. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 2. Press ESC to position the cursor over the same place without any changes. All values between 0000 – 9999 are valid.

2.4.5.3 PASSWORD



PPPPP is the access password for SETUP MODE.

The cursor is positioned over figure 3. Press ENTER to position the cursor over the first figure of the PPPPP parameter. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 3. Press ESC to position the cursor over the same place without any changes. If the value is out of the specified limits (00000 to 65535) the screen does not change and the cursor is positioned over the first wrong figure.

2.4.5.4 LANGUAGE

<	SETUP MODE PANEL	> >	
4	LANGUAGE	ENGLISH)

The current language is initially displayed. The cursor is positioned over figure 4. Press ENTER to position the cursor over the first figure of the parameter. Select the language using buttons \uparrow and \downarrow ; press ENTER to confirm or ESC to cancel the change. After the language is selected, the cursor is positioned over the figure 4, and the text is displayed in

the specified language. Press ESC to position the cursor over the same place, without any changes.

2.4.6. FAULT OUTPUTS

Press ENTER to activate a group of sub screens for FAULT OUTPUTS SETUP. Here is an example:



Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for fault outputs setup:

1. OCF (OPEN COLLECTORS FOR FAULT CONDITION) – sets the open collectors outputs that shall be activated upon COMMON FAULT CONDITION.

2. RELF (RELAY OUTPUTS FOR FAULT CONDITION) - sets the relay outputs that shall be activated upon COMMON FAULT CONDITION.

3. MOUTF (CONTROLLABLE OUTPUTS FOR FAULT CONDITION) - sets the controllable outputs that shall be activated upon COMMON FAULT CONDITION.

2.4.6.1 OCF (OPEN COLLECTORS FOR FAULT CONDITION)

< SETUP MODE > <FAULT OUTPUTS> 1. OCF 12345678 xxxxxxxx

Figures **1-8** display the corresponding Open Collector Outputs, **x** alternatively change to 0/off or 1/on. The cursor is positioned over figure 1. Press ENTER to position the cursor over the first left parameter **x**. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure (0 or 1) selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 1. Press ESC to position the cursor over the same place without any changes.

2.4.6.2 RELF (RELAY OUTPUTS FOR FAULT CONDITION)

< SETUP MODE > <FAULT OUTPUTS> 2. RELF 12345678910 xxxxxxxxx

Figures 1- 10 display the corresponding Relay Outputs, **x** alternatively change to 0/off or 1/on. The cursor is positioned over figure 2. Press ENTER to position the cursor over the first left parameter **x**. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the

figure (0 or 1) selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 2. Press ESC to position the cursor over the same place without any changes.

2.4.6.3 M OUTF (CONTROLLABLE OUTPUTS FOR FAULT CONDITION)



Figures **1** and **2** display the corresponding Controllable Outputs, **x** alternatively change to 0/off or 1/on. The cursor is positioned over figure 3. Press ENTER to position the cursor over the first left parameter **x**. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure (0 or 1) selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 3. Press ESC to position the cursor over the same place without any changes.

2.4.7 REAL TIME CLOCK

Press ENTER to activate a group of sub screens for real time clock adjustment. An example follows:



Buttons \uparrow and \downarrow display the rest of the functions:

List of functions for real clock adjustment:

- **1. DATE** sets the date.
- **2. DAY** sets a day of the week
- **3. TIME** sets the real time

4. STOP CLOCK – the user can stop the real time clock if the fire control panel will not operate for a month or more.

5. CALLIBRATE CLOCK- the user can correct the clock in case of fast/slow run.

2.4.7.1 DATE



DD is the current date, MM is the current month and YY is the current year. The cursor is positioned over figure 1. Press ENTER to position the cursor over the first figure of DD parameter. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure

selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 1. Press ESC to position the cursor over the same place without any changes. If a wrong date has been entered, the display does not change and the cursor is positioned over the first wrong figure.

2.4.7.2 DAY



DDD is a day of the week. The cursor is positioned over figure 2. Press ENTER to position the cursor over the first figure of DDD parameter. Use buttons \uparrow and \downarrow to fix the desired date; then press ENTER to confirm or ESC to cancel. After the new entry has been saved, the cursor is positioned over the figure 2. Press ENTER to position the cursor over the same place without any changes.

2.4.7.3 TIME



HH is the current hour, MM are the minutes. The cursor is positioned over figure 3. Press ENTER to position the cursor over the first figure of HH parameter. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to confirm or ESC to cancel the change. Then the cursor is positioned over the figure 3. Press ESC to position the cursor over the same place without any changes. If wrong time (for example hour 27) has been entered, the screen does not change and the cursor is positioned over the first wrong figure.

2.4.7.4 STOP CLOCK

< SETUP MODE > < REAL TIME CLOCK > 4. STOP CLOCK

The cursor is positioned at the beginning of the line, over figure 4. Press ENTER to display the function for confirmation/cancellation:

< REAL TIME CLOCK > < STOP CLOCK > ENTER - CONFIRM ESCAPE - CANCEL Press ENTER to stop the real time clock; ESC shall cancel the function and the previous screen shall appear.

2.4.7.5 CLOCK CALLIBRATION



They display the current information on the real time clock correction – speed up with ttt sec/month, no correction (works properly) or slow down with ttt sec/month. To fix the desired value use buttons \uparrow and \downarrow ; depending on the reached value the text message may alter. Values change each 5 seconds, from 0 to 155 seconds in both directions – slow down to speed up and vice versa. After the desired correction is made, press ENTER to save it, or ESC to exit and move to the previous menu, without any changes (if the function is selected once again, the previous value will appear).

2.4.8 DEFAULT PARAMETERS

The function DEFAULT PARAMETERS is provided to simplify the setup procedures of the fire control panel, when setting up is done via the built in keypad. The algorithm shall be as follows:

Setting up the fire control panels parameters:
 Number of fire alarm lines
 Network address
 Password
 Language

Setting up the parameters Number of fire detectors in a line for all lines with number smaller or equal to the total number, entered in Number of fire alarm lines. ■ The function **Default parameters** is executed.

After the above specified actions are completed, the configuration of the fire control panel shall be:

Fire control panel parameters:

No alterations

Fire alarm lines parameters:

The fire alarm lines with number smaller or equal to the total number, entered in **Number of fire alarm lines**, are active ("on"); all the rest are not active ("off"). All lines are configured as **Line**. The Open Line Current of all lines is fixed at 9mA, the Short Circuit Current of all lines is 120 mA.

Fire detectors parameters:

All fire detectors, assigned to fire alarm lines with number smaller or equal to the parameter **Number of fire alarm lines**, and having an address smaller or equal to the parameter **Number of fire detectors in a line**, are active ("on"); all the rest are not active ("off"). For all fire detectors the parameter **Normal/Fast** is set to Normal. All fire detectors are logically assigned to Zone 1.

Controllable Outputs parameters:

All controllable outputs are on. Open Line Current of all controllable outputs is set to 5mA, Short Circuit Current is set to 120 mA.

Zone parameters:

The Inspection Time for all zones is set to 120 seconds. The outputs for Fire Condition Stage I and II for all zones are deactivated.

Fault Condition Outputs:

Fault Condition Outputs are deactivated.

EXAMPLE:

Fire Control Panel FS6000 is to operate with 4 fire alarm lines. Line 1 and Line 2 are configured as Line. Line 3 and Line 4 are united in Loop 2. Line 1 includes 7 fire detectors, Line 3 includes 3 fire detectors, Loop 2 includes 10 fire detectors. The Setup shall be done according the following order:

■ Fire Control Parameters Setup

Number of fire alarm lines	
Network address	
Password	

4 for example 00001 for example 11111 Language

English

■ Set the parameter **Number of fire detectors in a line** for Lines 1 - 4

Number of fire detectors in Line 1	7 fire detectors
Number of fire detectors in Line 2	3 fire detectors
Number of fire detectors in Line 3	10 fire detectors
Number of fire detectors in Line 4	10 fire detectors

- The function **Default Parameters** is executed. After the execution the parameters stay unchanged. Lines 1 4 are on, lines 5-16 are off. All lines are configured as Line. Fire detectors 1-7, Line 1 are on; fire detectors 1-3, Line 2 are on; fire detectors 1-10, Lines 3 and 4 are on. The rest of the detectors are off. All fire detectors are logically assigned to Zone 1.
- The parameters Loop/Line of lines 3 and 4 are to be setup as Loop. The switch on the processor board shall be moved to position "Loop" (see the Instruction Manual of FS6000). After the adjustment is completed, any changed in the fire detectors parameters can be made only for the fire detectors, included in Line 3. The software will make the same changes in the fire detectors parameters included in Line 4, as soon as you exit TEST MODE.
- The rest of the parameters shall be adjusted according specific requirements of the system.

NOTE:

The addresses of the fire detectors, included in a Line or Loop, shall be within the range of the values, entered in **Number of fire detectors in a line** for the corresponding line or loop. For example, if the parameter **Number of fire detectors in a line** is 20, it means, that the fire detectors can have addresses from 1 to 20. Fire detectors with addresses over 20 will not be monitored by the fire control panel. The detectors can be included in random order, but their addresses must be within the range of 1-20. Some of the detectors may be missing and may be switched off, in order to be excluded from monitoring. In this case the zone indicators for fault condition will light up, in continuous yellow light, to indicate that there are fire detectors switched off.

Activation of the function **Default Parameters** will display the following screen:

< SETUP MODE>
<pre><default parameters<="" pre=""></default></pre>
ENTER – CONFIRM
ESCAPE - CANCEL

Press ENTER to confirm the adjustment of the parameters or ESC to cancel and go back to the previous screen.

2.4.9 ARCHIVE CLEAR

The function allows the user to delete information from the energy independent archive of events. Press ENTER to display



Press ENTER to confirm or ESC to cancel the function and to go back to the previous menu.

2.5. TEST MODE

Enter the TEST MODE to activate a group of sub screens for test procedures. Here is an example of two test functions:



List of Test Functions (Main menu):

1. SENSOR TEST – the user is able to analyze the serviceability of each fire detector and the reaction of the system upon various conditions of the fire detector.

2. LINE CURRENT – measures the current of a selected line or loop.

3. LCD DISPALY TEST – test of the LED indication, LCD display and of the internal sound signaler.

4. OUTPUTS TEST – test of Open Collector Outputs, Relay Outputs, Controllable Outputs and of all assigned periphery devices.

2.5.1 SENSOR TEST

Press ENTER to display the screen for address selection (number of line and number of fire detector)



LL is the number of the line (01 to 16), SSS is the number of the fire detector (001 – 127). The cursor is positioned over the first figure of the parameter LL. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the figure selected by the cursor. After the desired value has been entered, press ENTER to start the test procedure. If the parameters LL and SSS are out of specified limits, the screen remains unchanged and the cursor is positioned over the first wrong figure. After the test procedure is in progress, a dynamic analysis of the status of the selected fire detector begins and one of the following five screens appears:

< TEST MODE > < SENSOR TEST > LINE LL SENSOR SSS NORMAL STATE



The messages mean:

NORMAL STATE – the selected fire detector operates normally and no fire condition has been detected.

FAULT STATE – the selected fire detector does not respond as expected; the reasons could be within the area LINEAR MODULE – CABLE SYSTEM – FIRE DETECTOR.

FIRE STATE – the selected fire detector operates normally and a fire condition has been detected.

ACCESS DENIED (SYSTEM ERROR) - означава, че е региситрирано събитие, което не позволява нормална комуникация между централата и датчика. Такива събития са КЪСО СЪЕДИНЕНИЕ В ЛИНИЯ, ОТВОРЕНА ЛИНИЯ.

SWITCHED OFF STATE – the selected fire detector or fire alarm line are configured in OFF MODE (i.e. are not operating)

Press ESC to interrupt the state analysis and to go back to the previous screen for new selection of a new address.

2.5.2 LINE CURRENT

Press ENTER to display the option for line selection:

TEST MODE > < < LINE CURRENT > LINE LL

LL is the number of the line (01 to 16). The cursor is positioned over the left figure of the parameter LL. Buttons \leftarrow and \rightarrow move the cursor horizontally, buttons \uparrow and \downarrow change the selected figure. When the desired value is set, press ENTER to start the test procedure. If

the parameter LL is out of specified limits (01 - 16), the screen remains unchanged and the cursor is positioned over the first wrong figure. After the test procedure is in progress, a dynamic analysis of the current in the selected line and the following screen appears:

/				
<	TEST MO	DE >		
<	LINE CUF	RRENT	>	
LIN	NE LL			
୍ପ	JRRENT	CCC r	nA /	
 				

CCC is the line current in mA.

Press ESC to interrupt the operation and to go back to the previous screen for new selection of a new line.

2.5.3 LCD DISPLAY TEST

Press ENTER to activate the typical indication of the Fire Condition Indicators, Fault Condition Indicators and Common Fault Indicators. The local sounder is activate with the typical two tone signal for a fire condition. The LCD display appears:



Press ESC to interrupt the test procedure and to go back to the previous screen.

2.5.4 OUTPUTS TEST

Press ENTER to display the first from the three optional screens for Open Collector Outputs Test, Relay Outputs Test and Controllable Outputs Test, as well as test of the included periphery devices. It is relevant to the Open Collector Outputs (OC):



0 means, that the corresponding output is "off", 1 means that the corresponding output is "on". The cursor is positioned down below OC1. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the value alternatively (0 or 1) of the selected output, which puts the output in state "off" or "on". After the test procedures have been completed, press ENTER to switch off all outputs and to display



0 means, that the corresponding output is "off", 1 means that the corresponding output is "on". The screen is valid for the Relay Outputs. The cursor is positioned down below

REL1. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the value alternatively (0 or 1) of the selected REL output, which puts the output in state "off" or "on". After the test procedures have been completed, press ENTER to switch off all outputs and to display

```
< TEST MODE >
< OUTPUTS TEST >
M OUT 12
00
```

0 means, that the corresponding output is "off", 1 means that the corresponding output is "on". The screen is valid for the Controllable Outputs. The cursor is positioned down below MOUT. Buttons \leftarrow and \rightarrow move it horizontally, buttons \uparrow and \downarrow change the value alternatively (0 or 1) of the selected MOUT, which puts the output in state "off" or "on". Press ESC to switch off all outputs and to go back to the TEST MODE main menu.

2.6 SYSTEM INFORMATION

Press ENTER to display one of the two system information modes:

< SYSTEM INFORMATION >

1.PARAMETERS CHECK 2. DISPLAY ARCHIVE

Use buttons \uparrow and \downarrow to select a mode, press ENTER to confirm the activation of selected mode.

2.6.1 PARAMETERS CHECK

After PARAMETERS CHECK selection, a group of menus is activated, allowing the user to view the current settings of the fire alarm system. The operation with these menus is similar to the operation described in 2.4. The important difference is that the user cannot change the settings, and that some of the parameters are not visible (for example PASSWORD).

2.6.2 ARCHIVE REVIEW

Press ENTER to visualize the information saved in the energy independent memory. Press \downarrow or \uparrow to display the total number of registered events – Fire Condition Stage I, Fire Condition Stage II and Fault Condition:

< DISPLAY ARCHIVE > < FIRE 1 NUMBER > NNNN

< DISPLAY ARCHIVE > 39

< FIRE 2 NUMBER > NNNN

< DISPLAY ARCHIVE > < FAULTS NUMBER > NNNN

NNNN is the total number of the registered events, of each type.

The next screens (press \downarrow or \uparrow) visualize the particular information for each event, registered by the fire control panel, with event's type, date and time, and address.

FIRE 1	ALARM
LINE LL	SENSOR SSS
< text message >	
HH:MM DD-MM-YY	

Fire Condition Stage I detected from the displayed address

FIRE	2	ALARM
LINE LI	_ S	ENSOR SSS
< text m	ess	sage >
HH:MM		DD-MM-YY

Fire Condition Stage II detected from the displayed address

SENSOR FAULT LINE LL SENSOR SSS < text message > HH:MM DD-MM-YY

Fault condition in fire detector (address is displayed)

INSPECTIO	N TIME
HH:MM	DD-MM-YY

If INSPECTION TIME button is pressed during FIRE 1 ALARM



Backup battery supply fault

FAUL	.T 220 V
HH:MM	DD-MM-YY

Mains supply fault

ACC. NORMAL	
HH:MM	DD-MM-YY

Backup battery supply restored



Mains supply restored

DETECTOR OFF LINE LL SENSOR SSS < text message > HH:MM DD-MM-YY

Fire detector switched off (from SETUP MODE)

DETECTOR ON LINE LL SENSOR SSS < text message > HH:MM DD-MM-YY

Fire detector switched on (from SETUP MODE)

ZONE OFF ZONE ZZ	
HH:MM	DD-MM-YY

Zone switched off (from SETUP MODE)

ZONE ON ZONE ZZ	
HH:MM	DD-MM-YY

Zone switched on (from SETUP MODE)



Fire alarm line off (from SETUP MODE)



Fire alarm line on (from SETUP MODE)

LOOP OFF LOOP LL	
HH:MM	DD-MM-YY

Loop off (from SETUP MODE)

LOOP ON LOOP LL	
HH:MM	DD-MM-YY

Fire alarm line off (from SETUP MODE)

SETUP MC	DDE
HH:MM	DD-MM-YY

Transition to SETUP MODE

)E
HH:MM	DD-MM-YY

Transition to DUTY MODE

OPEN CIRC LINE LL	UIT LINE
HH:MM	DD-MM-YY

Registered event OPEN CIRCUIT LINE

SHORT CIR	CUIT IN A LINE
HH:MM	DD-MM-YY

Registered event SHORT CIRCUIT IN A LINE

PANEL RES	ET
HH:MM	DD-MM-YY

Button RESET

FIRE 1	ALARM	
HH:MM	DD-MM-YY	

The time for Fire Condition Stage I expires

FIRE	2	ALARM
HH:MN	Л	DD-MM-YY

The time for Fire Condition Stage II expires

(
DETECTOR NORMAL		
LINE LL SEN	ISOR SSS	
(text message)		
HH:MM	DD-MM-YY	

Fire detector's operation is restored (after Fault In Fire Detector)

Meaning of symbols:

LL – number of line or loop ZZ – zone number SSS – fire detector number HH:MM – time of event (hours:minutes). DD:MM:YY – date of event (date:month:year). (text) – 14 - symbol text message, associated to the address

When you reach the oldest event record in the archive, either of the following messages appear on the screen:

FIRST ARCHIVE RECORD

or

FINAL ARCHIVE RECORD

Press ESC to move to the main screen of SYSTEM INFORMATION.

3.FINAL NOTES

All set values and modes of operation are saved in the energy independent memory and in case of mains supply or backup battery supply failure remain unchanged. When the energy supply is restored, the fire control panel will operate with the previously set values and modes.

The factory settings are the default settings.

All settings described in the previous sections can be entered in the energy independent memory of FS6000 via:

- built in keypad and LCD display;

- standard interface RS232 and IBM compatible PC, (the specialized UniPOS software is necessary).

- commutated telephone line and IBM compatible PC (the units and the software of UniPOS for Dispatcher Control Point are necessary)

We have to note, that the last two methods have greater advantages for the user. It's quite easier to enter via keyboard of a PC the large amount of information, connected to the modes of operation of the fire alarm system and allows for saving the settings in a file. Where the Dispatcher Control Point is available, no physical attendance on site is necessary.

We wish you a successful work!