User Manual

Alarm Control Panel

CA10 plus

(software version 4.7)

with LED Keypad

GDAŃSK

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WARNING

In order to avoid any operational problems with the control panel, it is recommended that you become familiar with this manual before you start using the equipment.

Making any construction changes or unauthorized repairs is prohibited. This applies, in particular, to modification of assemblies and components. Maintenance or repair operations should be performed by authorized personnel (i.e. the installer or factory service).

Telephone terminals of the panel should be connected to **PSTN lines only**. Connecting to ISDN lines may lead to damage of the equipment.

In case of upgrading the PSTN line to ISDN, system owner should contact the installer.

CAUTION!
The alarm system is fitted with a battery. After expiry of its lifetime, the battery must not be thrown away, but disposed of as required by the existing regulations (European Union Directives 91/157/EEC and 93/86/EEC).

The SATEL Company recommends that operation of the whole alarm system be regularly tested. However, a reliable alarm system does not prevent burglary, assault or fire from happening, it only diminishes the risk that such a situation will cause no alarm or notification.

History of the updates to this manual is attached at the end hereof.

CA-10 plus Control Panel with a LED keypad

The CA-10 plus control panel is a modern, microprocessor-based equipment designed for burglary and assault signaling systems. The CA-10 plus panel controls the alarm system, responds to information coming from the system detectors about an intrusion into the protected facility, and provides signaling and notification about the event. The panel is designed to be operated with LED and LCD display keypads.

Basic functions of CA-10 plus:

- signaling burglary, panic and fire alarms,
- telephone messaging about the alarms with voice or pager messages,
- answering phone calls and informing the user of the system status (whether there was an alarm condition since last arming),
- MONITORING - communication with telephone monitoring stations (real-time transmission of detailed information about selected events in the protected facility),
- printing current information about all the system events on an external printer.

Features of CA-10 plus:

- panel operation controlled with remote LED keypads,
- remote control by means of a telephone set (selected functions) - interfacing with the MST-1 module,
- real-time status display for up to 12 armed zones,
- viewing alarm condition and trouble logs available (for up to 255 events),
- optional subdivision into 4 partitions (sub-systems),
- any partition can be operated by up to 13 users with independent access codes (up to 32 access codes) - the access codes can have different authority level, any instance of using them is recorded in the event log,
- remote control of locks, lighting system and other devices from the panel keypads,
- activation of PANIC, FIRE and HELP alarms from the keypads,
- various system arming options (with automatic bypassing, with no-exit bypassing),
- internal clock capable of automatic arming and disarming of the system,
- automatic diagnostics of the basic components of the alarm system.

Armed modes

To adapt the alarm system to various needs, the CA-10 plus control panel offers several armed modes:

Armed mode (full)

The mode in which detectors connected to the panel control the protected facility and violation of the protected zones is signaled by the panel with all available means (sirens, reporting to telephone monitoring stations, telephone messages).

Silent armed mode

Armed mode in which alarms are signaled only in the panel keypads. The installer can decide which of the detectors are to be automatically by-passed on activating this mode; he can also choose signaling device to be used in that mode.

Partially armed mode

The installer can determine the detectors in the system which will be excluded from the supervision when the system is armed with a special access code (authority level 7). The user can, by entering an appropriate code, arm the system fully or in a chosen part of the facility only.

Stay armed mode

In this mode the panel enables automatic bypassing of chosen detectors if after arming the system the user did not leave the supervised area and did not violate the exit/entry zone.

Operating instructions

Operating of the alarm system consists basically in arming and disarming the system (setting surveillance mode) and responding appropriately to the information the control panel may signal on the keypad. The keypad displays the information about the status of the alarm system by means of 15 LED controls and audible signals.

LED Functions

- **ALARM** - signals an alarm condition,
- **ARMED** - indicates the status of a partition: blinking of the LED (with the ALARM LED off) signals the countdown of exit delay time; steady light signals the armed mode.
- **TROUBLE** - the LED is blinking when the control panel detects a technical problem or a telephone messaging trouble,
- **1 ÷ 12** - the LEDs show the status of zones:
  - off - zone is free (not violated),
  - on - zone is violated,
  - on with extinguishing phase every two seconds - violation of the zone antitampering circuit,
  - blinking quickly - zone caused an alarm condition,
  - winking every two seconds - anti-tampering system caused an alarm,
  - blinking slow - zone by-passed.

***Caution**: If the ALARM LED is blinking and it cannot be cleared with the user code, call the service.*

Conditions Signaled Audibly in Keypad

The signals generated to confirm an operation on the keypad:

- **three short** - system arming/disarming confirmation, deactivation of type 13 output (BI switch),
- **two long** - wrong access code, canceling a function or incorrect data for a function,
- **three long** - an attempt to arm the system with violated priority option zones (see Arming),

- **four short and one long** - successful completion of a user function, activation of type 13 output (BI switch), or activation of type 14 output (MONO switch).

System events signaling:

- **continuous signal** - alarm condition,
- **intermittent signal** - fire alarm,
- **one short signal every 3 seconds** - entry time countdown,
- **one long signal every 3 seconds** - exit time countdown,
- **two short signals every 3 seconds** - trouble condition,
- **five short** - CHIME zone violated,
- **five long** - day/night type zone violated.

Which of the events are signaled acoustically and in which keypads is determined by the installer.

User Access Codes

For everyday operation of the system its users are assigned access codes. The control panel comes with one factory-set code (master user code) for each partition:

1234 for partition 1,
2345 for partition 2,
3456 for partition 3
4567 for partition 4.

Additional 12 user access codes may be programmed for each partition (but no more than 32 for the entire system). The code can be 4 to 6 digits long.

When creating a new user access code, the master user assigns a so-called authority level to it , i.e. determines which of the panel functions are available to the particular user, and which are not. Usually, an access code entered for the particular partition will only control that specific partition. Optionally, the installer can activate the so-called "global access code" function. When selected, this option makes the user access codes accepted in all 4 partitions, irrespective of where they were entered, but the particular user number will not be recorded in the event log.

Arming [Access code][#]

Arming is only possible when the partition is not signaling any alarm and is not already armed: the ALARM and ARMED LEDs are off.

In order to arm the system, the access code should be entered and confirmed by pressing the [#] key. If, while typing the code, the user makes a mistake, the [*] key should be pressed and the code re-entered. The access codes should be entered very carefully. Giving a wrong access code three times in sequence may activate the alarm which is recorded in alarm memory log as „3 wrong codes alarm".

If the code is entered correctly and arming is possible, the panel will confirm the entry with three short beeps. At the same time the ARMED LED will start blinking, which indicates the exit delay time countdown.

The installer determines the length of the exit time and how the acoustic signaling works.

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The panel may fail to arm the system if:

- **the panel is not ready for arming**: there are specifically selected zones which cannot be violated when the system is being armed and one of them is violated at the time of arming - the panel will signal the situation with three long beeps. In such a case, it is recommended to wait until all the zones are ready (the LEDs 1+12 go out), and then arm the system again. If one of the zones remains violated (one of the LEDs 1+12 is on, which may be caused e.g. by a detector trouble) the armed mode can be activated after bypassing that zone (with function 4),
- **the access code is wrong** - the control panel will signal the event with two long beeps
- **the partition contains no armed type zones** - the control panel signals the event with two long beeps (access code is correct and allows, for example, to call user functions)
- **battery trouble** - three long beeps (proper option is selected to prevent the system from being armed in case of battery trouble).

Quick Arming [0][#]

The user can quickly arm the system without any access code by pressing the [0][#] key sequence. The Quick Arming function can be disabled by the installer. This way of arming is not affected by any detectors being violated at the time. The installer can also install a special key for quick arming of the system.

Disarming and Clearing Alarm [Access code][#]

When the control panel is armed (ARMED LED is on or blinking) or signals an alarm (ALARM LED is blinking), it can accept only one command: disarming the system or clearing the alarm. Entering the access code confirmed by pressing the keys [#] will disarm the system or turn the alarm off. If, when entering the access code, the user makes a mistake, he should press the [*] button and re-enter the code.

The panel confirms acceptance of the command by three short beeps and extinguishing the ALARM/ARMED LEDs.

The control panel will not disarm the system or clear the alarm if:

- the access code is invalid,
- the access code authority level does not allow disarming (for example, authority level 3 or 9 - see "User Functions" - "New User")

It is also possible to clear the alarm without disarming the system by using the authority level 0 access code.

If the alarm system is divided into partitions, the alarm can only be cleared in the partition whose keypad signals the alarm condition with the ALARM LED.

Clock Controlled Arming / Disarming

Arming and disarming of the system can be controlled by the control panel clock. The installer can program the exact hour and minute of arming/disarming of the system. Arming and disarming will occur **every day** at the specified time. The control panel may also be armed with the clock only - then disarming will be done manually by the user.

System Status Telephone Messaging

The owner of the facility where a CA-10 plus control panel is installed can check if there was an alarm in the system by using a telephone. In order to do so he has to call the protected facility: the control panel will answer the call and inform about the system status. The control panel will answer telephone calls only when the system in the entire protected facility is armed.

When answering the call the control panel sends:

- **one beep a second** - if there was no alarm condition since the last arming;
- **voice synthesizer message** - if an alarm occurred within the last hour;
- **sequence of five short beeps every second** - if there was an alarm, but it occurred more than an hour ago.

The panel can answer the calls in one of two modes:

- **single calling mode** - the panel answers the call after a specified number of rings (as is the case with a standard answering machine); having answered a call, the panel does not answer any more calls for 5 minutes;
- **double calling mode** - to get through to the panel, the user must call it and after hearing a specified number of the so-called callback signals (1-second continuous tone followed by a 4-second pause - this signal corresponds to the telephone ringing tone) hang up and call again (within 5 minutes) - the panel will answer the second call immediately.

The installer decides if the function is to be activated and how the control panel will answer the phone calls (number of rings, double calling, etc.)

Control Panel Interfacing with DTMF (MST-1) Control Module

The control can be effected from a telephone the control panel calls up during voice messaging (immediately after the message from speech synthesizer is reproduced), or after a connection is established with the panel from any telephone set. Having answered the call, the module connected to the CA-10 plus reports its readiness with three beeps (high-, low- and high-pitched).

Two types of operations are possible:

1. Checking the state of control panel partitions and/or zones.
2. Performing the user functions.

The table below shows functions performed by the MST-1 module.

CALLING PROCEDURE	DESCRIPTION OF FUNCTION
[0][#]	End of telephone connection with control panel
[1][#]	Checking the state of Partition 1
[2][#]	Checking the state of Partition 2
[3][#]	Checking the state of Partition 3
[4][#]	Checking the state of Partition 4
[9][#]	Checking the state of zones
[ACCESS CODE][#]	Arming/disarming, alarm clearing
[ACCESS CODE][∗][4]	Zone bypassing
[ACCESS CODE][∗][5]	Silent arming
[ACCESS CODE][∗][7]	Control of MONO switch type output
[ACCESS CODE][∗][8]	Control of BI switch type output

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The control is effected by using the DTMF signals from the telephone keypad. In order to call a particular function, press in turn the telephone keys according to the calling procedure shown in the table.

Signaling the partition state:

- three short beeps – the partition is disarmed;
- four short beeps and a long one – the partition is armed.

The partition alarm or the alarm memory are signaled by a series of short beeps (alternately, high-pitched and low-pitched) lasting approx. 2.5 seconds, immediately following the signals relevant to the partition state.

Using the „*Check zones state*" function you can read out information, which of the diodes (on the LED type keypad) are constantly on or blinking. When working in conjunction with the CA-10 plus, the module provides information according to the setting of service functions FS12 ÷ FS15.

Indication of an armed partition zone means the **memory of alarm** triggered by that zone, while indication of a disarmed partition zone means **violation of the given zone**. In the CA-6 plus control panel, the LED numbers are closely assigned to those of the zones, while in the CA-10 plus the numbers of zones to be displayed on the consecutive diodes of the given partition LED keypad are determined by the installer (such a keypad has not to be physically connected to the panel). Checking the status of LEDs 1 ÷ 12 is possible.

Procedure of checking the state of zones:

- After the function [9][#] is called first time, the module generates short beeps, the number of which is equal to the least number of lighted diode in the LED keypad. If none of the LEDs is on, the module generates two long beeps.
- Next calling of the function [9][#] will indicate the next lighted diode. Continue the viewing until you hear two long signals, which is an indication that the next LEDs are not lighted. If you re-call the function (after two long beeps), the viewing of the state of zones (i.e. the numbers of lighted LEDs) will start again.
- In order to check the zone state in CA-10 plus, you should first check the state of one zone by calling the suitable function ([1][#]; [2][#]; [3][#] or [4][#]), and then check the state of its zones with the function [9][#]. Each of the zones should be called separately.

The user functions, protected with access code, are performed in the same way as when using the control panel keypad (see a description below in the User Manual). The audible signaling of the module is identical to the keypad signaling. In order to proceed to operating another partition (GO TO function), you must press, respectively: [1][#]; [2][#]; [3][#] or [4][#].

The other user functions, the HOLD DOWN type functions, quick arming of partitions, and entering the service mode through the MST-1 module are disabled.

The function [0][#] ends the telephone connection – the control panel „hangs up". Similarly, the control panel itself will end the telephone connection, unless it receives within 30 seconds a DTMF signal from a telephone.

„HOLD DOWN" User Functions

The functions are available to any user (without using the access code). They are activated by holding down the function key for about 3 seconds.

SWITCHING TO n PARTITION (GO TO n) ①②③④

In the alarm systems divided into several partitions (subsystems), a single keypad control over the whole system is possible. When depressed and held down, the keys 1, 2, 3, 4 switch over the partition the keypad is currently controlling. The panel will confirm acceptance of the command with three short beeps. From that moment the panel recognizes the keypad, from which the function was called, as if it were connected to the given partition. Performance of all operations on that partition is possible except for the „HOLD DOWN" function (e.g., a next GO TO function cannot be called).

The given partition is exited automatically (the keypad returns to its own partition after approx. 15 seconds after the last key was depressed) or after depressing the [*] key for 3 seconds. The panel confirms the return to its basic partition with four short and one long beeps.

Pressing the [*] key in order to exit the GO TO function is immediately confirmed with two long beeps, and after 3-second holding down the key, return to the basic partition ensues.

NOTE: If the panel does not confirm depressing the given key, it is already in its basic partition and after three seconds it will call fire alarm from the keypad.

VIEWING ALARM LOG ⑤

Holding down the key [5] displays the information about the most recent alarm condition. Pressing any key (except for the [*] key, which stops viewing the memory log immediately), will display the previous alarm conditions, up to the earliest information recorded.

The panel signals three types of alarms:

- **zone alarms**: one of the LEDs 1 to 12 is steadily on (burglary alarms, panic alarms, fire alarms etc. depending on how the functions of the zones were set up by the installer)
- **anti-tampering zone alarms**: one of the LEDs 1 to 12 is blinking (this type of alarm signals an attempt to dismantle or damage detectors or alarm system wiring),
- **keypad activated alarms**: the LEDs 1 to 8 are steadily on and two LEDs - one in the 1 to 5 range and one in the 9 to 12 range - are blinking.

The LEDs have the following meaning:

1 - fire alarm keypad activated
2 - auxiliary alarm keypad activated
3 - panic alarm keypad activated
4 - anti-tampering keypad alarm
5 - three wrong access codes alarm

9 - alarm activated in **partition 1**
10 - alarm activated in **partition 2**
11 - alarm activated in **partition 3**
12 - alarm activated in **partition 4**

VIEWING TROUBLE LOG ⑥

The function allows the panel user to reproduce information about the system trouble conditions from the panel memory log.

On activating the function the LEDs ALARM and ARMED go on and the TROUBLE LED starts blinking. At the same time one of the LEDs 1 to 12 illuminates indicating the type of alarm. When viewing the TROUBLE log in LED keypad, the LEDs have the following meaning:

1 - output 1 trouble,
2 - output 2 trouble,
3 - output 3 trouble,
4 - 230VAC loss
5 - battery trouble
6 - keypad power supply trouble
7 - clock loss
8 - printer trouble
9 - no voltage on telephone line
10 - problem with transmission to monitoring station
11 - not used
12 - output 4 trouble

The previously detected troubles are displayed on repeatedly pressing any key. The [*] key cancels the memory viewing function.

CURRENT TROUBLE CHECK-OUT ⑦

When the control panel signals a trouble detection (TROUBLE LED is blinking), you can activate the current trouble check-out function by holding down the key [7]. On activating the function, the TROUBLE LED and the LEDs indicating current troubles turn on (lack of illumination of any of the 12 LEDs is also indicative of a problem). Pressing any key stops the function.

NOTE:
If the installer has activated the "Indicate trouble until cancelled" option, the trouble indicator will be on until cancelled, even if the trouble cause has been removed. The trouble will be cleared after completing the trouble memory review and quitting the function by pressing the [#] key. Quitting the function by means of another key will not cancel blinking of the TROUBLE diode.

The LEDs have the following meanings:

1 - output 1 trouble,
2 - output 2 trouble,
3 - output 3 trouble,
- no load (e.g., the siren wires are cut), or overload (short circuit) - usually service intervention is required.

4 - 230V AC loss
- the panel is equipped with a limited time battery backup; if the AC power loss trouble occurs despite of an effective AC mains, service assistance should be called.

5 - battery trouble
- to check on the type of battery trouble, press the key [5] – the LED 1 or LED 2 will show the type of trouble:
- LED 1 – the battery is not connected or almost discharged or the fuse on the control panel board is out of order,

- LED 2 – the battery voltage is too low (lower than 12V under load) – discharged battery. This state may last for several hours after the system has operated without the mains supply (or after a discharged battery is connected). The battery charging time depends on its capacitance (the battery is charged with direct current about 350mA, the time necessary for testing the battery status is approx.12 minutes).

6 - keypad power supply trouble

- signals an installation fault; service intervention is necessary (the trouble can only be displayed while viewing the trouble log).

7 - clock loss

- occurs on powering down and restarting the control panel; the clock should be set with user function 6.

8 - printer trouble

- stands for "not-ready" status of the printer connected to the control panel RS-232 port as a result of, e.g., paper out trouble or no power supply. The RS-232 port is monitored if the installer activates real-time event printout.

9 - no voltage on telephone line

- the message indicates that the telephone line is cut off. It may also indicate lifting the receiver of a telephone connected to the same line for longer than the time specified by the installer.

10 - telephone line trouble - busy signal on lifting the receiver,

11 - telephone line trouble - no signal on lifting the receiver

- this is information on why the telephone messaging has failed (no signal on line on lifting the receiver or busy signal instead of continuous tone).

The troubles 10 and 11 will be signaled until next successful telephone connection. The condition can be cleared by calling the trouble check-out function and pressing the [#] key.

12 - output 4 trouble

ALL OFF - system memory error

- the message appears in case of erratic microchip operation of the system (it may be caused by strong electromagnetic interference e.g. produced by lightning) - in most cases service should be called.

Depressing any key stops the function. If the installer has enabled the audible trouble signaling, activating the trouble check-out function turns the signaling off.

SWITCHING CHIME ON/OFF ⑧

The function makes it possible for the user to switch the chime (audible signaling of the violation of specified detectors) on/off in the keypad. Three short beeps in the keypad confirm switching off of the chime signaling. Four short and one long beeps confirm switching the chime on.

The installer decides which zones and in which keypads can use chime to signal their status.

FIRE ALARM (*)

This function activates the fire alarm from the keypad.

AUXILIARY ALARM ⓪

The purpose of this alarm depends on current needs. It may be, for instance, an emergency call for medical assistance. The function may transmit an appropriate

message about auxiliary alarm to the monitoring station and activate telephone messaging.

PANIC ALARM (#)

This function activates the panic alarm from the keypad.

The keypad activated functions can be disabled by the installer.

User functions

If the control panel is not armed and is not signaling any alarm, users with an appropriate authority level can access several functions useful in everyday operation of the alarm system.

To activate the user functions, enter the user access code and confirm it with the [*] key (not the [#] key as for arming/disarming the system). The panel will accept the operation by the LEDs ALARM, ARMED and TROUBLE blinking simultaneously. Then, press the key with the number of selected function.

User functions:

- user access code change [code][*][1]
- new user (new code) [code][*][2]
- delete user (code) [code][*][3]
- bypassing panel (partition) zones [code][*][4]
- switch on silent armed mode [code][*][5]
- system clock programming [code][*][6]
- MONO switch zone on [code][*][7]
- BI switch zone status on/off [code][*][8]
- power supply reset (on „RESET power supply” outputs) [code][*][9]
- DOWNLOADING function start [code][*][0]

NOTES:

- *The functions [CODE][*][2] and [CODE][*][3] are only available to the partition master code user.*
- *The functions [CODE][*][7] and [CODE][*][8] are always available, irrespective of whether the control panel is armed, or not.*

Access Code Change [CODE][*][1]

This function enables changing the access code of the user by whom it was activated. Having called the function, enter a new code and confirm it by pressing the [#] key. The function is available to the master user and users with authority level 1, 2 or 7.

Example: changing the access code from [1234] to [7890]

[1234][*] - calling the „user function” mode confirmed by one short beep and blinking of LEDs ALARM, ARMED and TROUBLE.

[1] - calling the „change access code” function, confirmed by two short beeps.

[7890][#] - entering the new code digits and their acceptance confirmed with four short and one long beeps.

New User [CODE][*][2]

This function is only available to the master user. It makes possible to add new users to a partition, assign an access code to them and determine their authority level.

After calling the function, the panel waits for a new user access code to be entered (4 to 6 digits after which the [#] key should be pressed), followed by one more digit (0 to 9) to determine the new user authority level.

As new users are being added to the partition, the panel automatically assigns consecutive numbers to them. The number of the user being programmed is indicated by one of the zone LEDs blinking. The illuminated LEDs indicate current users, the extinguished ones - empty items. Any partition can accept up to 12 users (besides the master user).

An access code can have the following functions/authority levels:

1 - all functions available except for adding and deleting users,
2 - arming and disarming functions available as well as changing access code,
3 - arming function available, however disarming is only available if the same access code is used as for arming,
4 - access code-trap: arming and disarming functions are available but on disarming, the "DURESS" message is sent to the monitoring station
5 - activates the MONO type output (the use of the output is determined by the installer)
6 - switches over the BI type output (the use of the output is determined by the installer)
7 - partial arming of the system: the code arms the system with simultaneous bypassing of a group of zones (determined by the installer in service functions), except for that the code gives the same authority as any level 2 code,
8 - arming and disarming available without the possibility of changing access code,
9 - arming only available,
0 - clearing the alarm only available

NOTES:

- *The access codes of type 5 and 6 may be used in the following way:*
  1. *In the user function basic mode ([CODE][*]7 or [CODE][*]8) which allows multiple control of single outputs (see description of user functions).*
  2. *In the mode realized in the previous versions of alarm control panel (i.e.. [CODE][#]), which simultaneously controls all the particular types of outputs belonging to the partition to which the given access code is assigned.*
- *Using the access code with authority level 5 or calling the function 7 is recorded in event log as the „Entry/Exit (guard round)".*
- *To make the control possible, there must be compatibility between the code type, output type and partition assignment.*

Delete code [CODE][*][3]

This function is used for deleting the codes of existing users to revoke their right to use the system. The function is only available to the master user.

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Example: deleting the third user's access code (master code = 1234)
[1234][∗] - activating the „user function" mode by the master user,
[3] - calling the „delete code" function, the zone LEDs indicate the partition users' numbers.
[3] - selecting the code to delete; the LED of the chosen code starts blinking
[#] - selected user code deletion; four short and one longer beeps signal the end of the function.

After entering the access code of the user to be deleted, the panel waits for confirmation if the selected user is to be deleted. If not, press the [∗] key, if yes, press the [#] key.

Zone Bypassing [CODE][∗][4]

This function makes it possible to bypass zones in order to partially arm the alarm system or to bypass malfunctioning detectors.

Only disarmed zones can be bypassed. After bypassing any zones, their corresponding LEDs start blinking. The zones remain bypassed until next disarming of the system or disabling of the bypass function. You should enter the number of LED, which indicates a zone, or the zone number if it is higher than 12. To enter the numbers 10 to 16, press two keys - first the [∗] key (tens), and then the key of single digits (0 to 6).

Example: bypassing lines 3, 5 and 12 (master access code = 1234)
[1234][∗] - activating the „user function" mode by the master user,
[4] - calling the „partition line bypass" function,
[3] [5] - selecting line numbers 3 and 5; the panel will confirm the entry of each number by with two short beeps,
[∗] [2] - selecting line number 12; the panel will confirm the entry with two short beeps,
[#] - confirmation of the data and quitting of the function programming.

When the function is active, on entering a line number, the panel will signal bypassing the line with two beeps, and enabling the line with one beep. Two long beeps mean that the line belongs to another partition, or it is armed and its bypassing is not possible.

The function is available only to the master user with authority level 1.

Silent Armed Mode [CODE][∗][5]

In the silent armed mode the alarms are only signaled in keypads and reported to the monitoring station. The installer decides if the silent armed mode is to be active in the entire protected facility or if a selected area will remain disarmed.

The function is not available to the users with authority levels 5, 6, 0.

Setting Time [CODE][∗][6]

The function enables setting the panel's clock. The programming procedure is as follows:

- HOURS, MINUTES - acceptance ([H][H][M][M][#]),
- DAY, MONTH - acceptance ([D][D][M][M][#]),
- YEAR - acceptance ([R][R][R][R][#]).

It is possible to quit the function already after programming either time or date by pressing the [#] key twice.

The function is only available to the master user and users with authority level 1.

Activating MONO SWITCH **Type Output** **[CODE][*][7]**

The purpose of the function will be determined by the installer. It can activate e.g. electric locks, bells, signal lamps, or any other devices.

After calling the function, the control panel generates two short beeps and waits for the output number key (1-6) to be pressed. Provision is made for multiple control of the same output or control of different outputs of the MONO switch type after single calling of the function. Correct performance of the control is confirmed by four short and one long beeps, and refusal of the control - by two long beeps. The control panel may refuse control, if the output is not of the "MONO switch" type or if it belongs to another partition. Pressing the key [#] or [*] will end the function. The control panel will automatically end the function if none of the outputs is of the „MONO switch” type, or if no key on the keypad is depressed for 40 seconds.

The function is accessible to the master user, as well as to the users with authority levels 1 and 5.

EXAMPLE: successive control of the outputs 4, 5, 4 (master code=1234)

[1234][*] - calling the "user function" mode by the MASTER user
[7] - calling the function of "activating the MONO switch type output " (two short beeps)
[4] - monostable triggering of the output 4 confirmed by four short and one long beeps
[5] - monostable triggering of the output 5 confirmed by four short and one long beeps
[4] - monostable retriggering of the output 4 (four short and one long beeps)
[#] - end of the function (four short and one long beeps)

Changing Over BI SWITCH **Type Output** **[CODE][*][8]**

The purpose of the function will be determined by the installer. It can be used e.g. for switching on external lighting or any electrical equipment.

After calling the function, the control panel generates two short beeps and waits for the output number key (1-6) to be pressed. Provision is made for multiple control of the same output or control of different outputs of the BI switch type after single calling of the function. Activation of the output is confirmed by four short and one long beeps, and its deactivation - with three short beeps. Refusal of control is signaled with two long beeps. The control panel may refuse control, if the output is not of the "BI switch" type or if it belongs to another partition. Pressing the keys [#] or [*] will end the function. The control panel will automatically terminate the function if none of the outputs is of the „ BI switch” type, or if no key on the keypad is depressed for 40 seconds.

The function is accessible to the master user, as well as to the users with authority levels 1 and 6.

Power Supply Reset **[CODE][*][9]**

This function is used to operate special detectors equipped with individual on/off memory which is cleared by powering down the system (e.g., smoke detectors, broken glass detectors) The function temporarily disconnects power supply to such detectors.

The function is available to the master user and users with authority level 1.

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Start Download **[CODE][*][0]**

This function can be activated by the master user and the users with authority level 1. It starts the control panel - service PC telephone connection. The function enables the panel - PC telephone communication when the possibility to initiate connection from the PC computer is blocked.

On activating the function the panel engages the telephone line and connects to the service computer. If the panel fails to establish connection, it will make four more attempts to get through. During the data exchange the telephone line will be busy. The service can temporarily suspend the connection to free the telephone line and, after some time, call back the panel to continue data exchange. The installer should make users aware of the procedure so that they do not answer the incoming calls and allow re-establishing and correct completion of the transmission.

Technical Reliability of the Alarm System

The alarm system consists of devices whose reliability is vital for the effectiveness of facility protection. The elements of the alarm system are exposed to various outside factors, for example, weather conditions (outdoor signaling devices), lightning (overhead telephone lines, power lines, outdoor signaling devices), mechanical damage (keypads, detectors, etc.). Only regular testing of the alarm system operation makes it possible to keep a high level of burglary and fire protection.

The control panel is equipped with a number of safeguards and auto diagnostic functions for testing reliability of the system. The control panel signals detection of malfunctions by illuminating the TROUBLE diode on the keypad. **The signal should be immediately taken care of - if necessary, the installer should be consulted.**

Periodical testing of the alarm system reliability is necessary. For this purpose, you must check that the control panel reacts to violation of particular detectors, that their field of vision is not obstructed, that response to the opening of protected doors and windows is correct, and that the signaling devices and telephone messaging function properly.

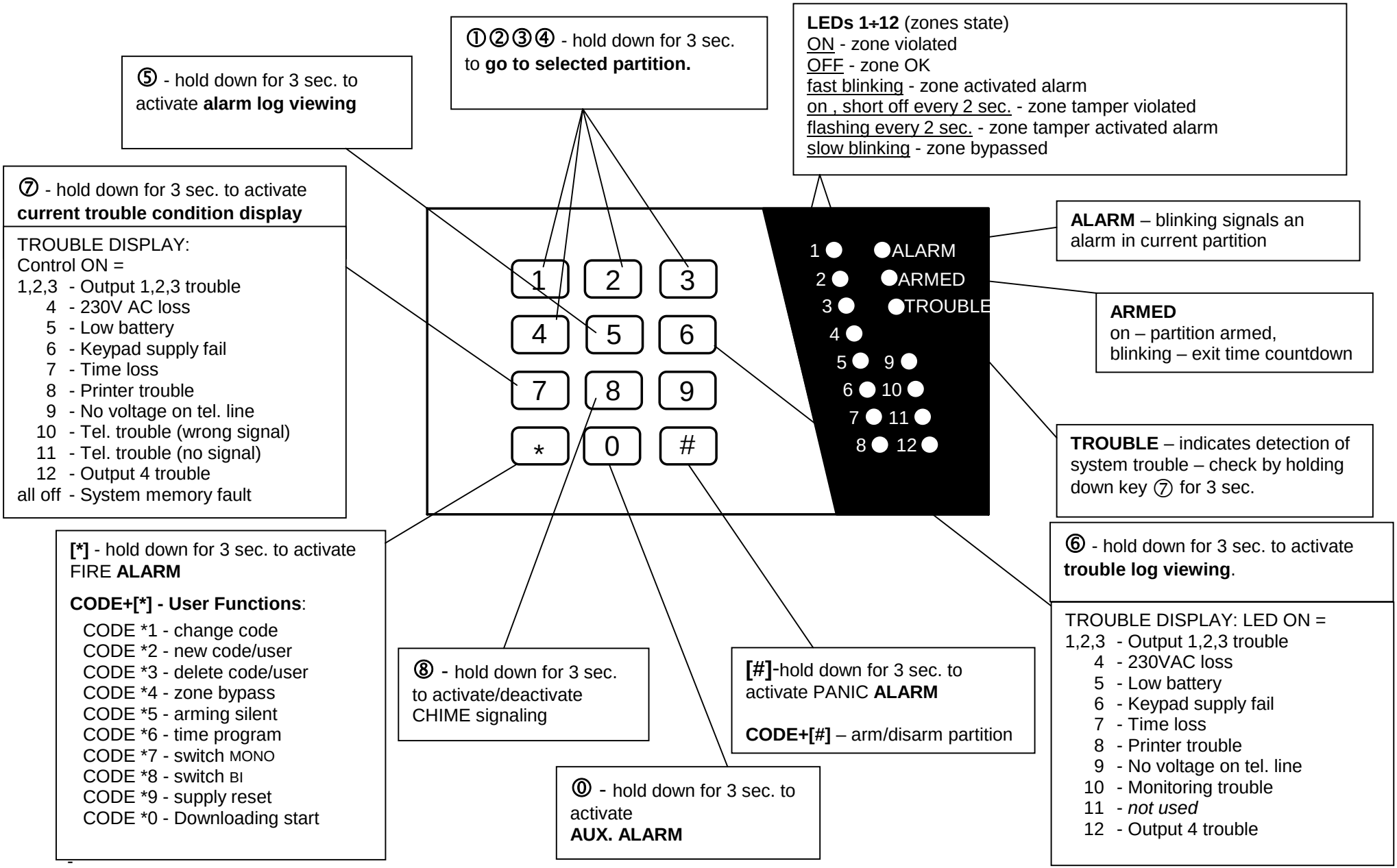
The installer provides detailed instructions on how the system should be checked. It is recommended that the installer carry out periodic maintenance of the alarm system by the user order.

In his best interest, the user should plan beforehand appropriate procedures in case the control panel signals any alarm conditions. It is important that he should be able to verify the alarm, determine its source on the basis of keypad information, and take an adequate action, e.g., to organize evacuation.

History of the manual updates

The updates below refer to the manual for the control panel with program version **4.1**.

Date	Program version	Description of updates
08-2002	4.2	A new section added: operation via a telephone of the control panel working with MST-1 telephone control module (see p. 6) (NOTE: Control is not made available by the panel, if it calls itself reporting an alarm).
01-2003	4.3	• Disarming only effected by entering [CODE][#] from keypad (p. 4) – previously also [CODE][*]. • "Battery trouble" added as one of conditions of preventing the system from being armed (p. 4). • Control panel operation made available on receiving alarm message in case of a joint work with MST-1 module (p. 6). • Change of the control panel reaction to entering [CODE][*] from keypad. Now the panel always enters the user function mode, thus enabling the functions 7 or 8, irrespective of whether it is armed or not. The other user functions are only available with no alarm condition and the system disarmed (p. 12). • Introduction of notes regarding codes with authority level 5 and 6 (p. 12). • Audible distinction introduced in functions 7 and 8 for output activation / deactivation (p. 3, 13-14). • Change of description regarding performance of user functions 7 and 8 (p. 13-14).
07-2003	4.7	• A note on the ALARM LED has been added in the description of LED functions (p. 3). • A note on the trouble indicator function has been added (key 7 function - p. 9). • Differentiation between 2 types of battery troubles has been introduced (see LED 5 description - p. 9).


①②③④ - hold down for 3 sec. to **go to selected partition.**
LEDs 1÷12 (zones state)
ON - zone violated
OFF - zone OK
fast blinking - zone activated alarm
on , short off every 2 sec. - zone tamper violated
flashing every 2 sec. - zone tamper activated alarm
slow blinking - zone bypassed
⑤ - hold down for 3 sec. to activate **alarm log viewing**
⑦ - hold down for 3 sec. to activate **current trouble condition display**
TROUBLE DISPLAY:
Control ON =
1,2,3 - Output 1,2,3 trouble
4 - 230V AC loss
5 - Low battery
6 - Keypad supply fail
7 - Time loss
8 - Printer trouble
9 - No voltage on tel. line
10 - Tel. trouble (wrong signal)
11 - Tel. trouble (no signal)
12 - Output 4 trouble
all off - System memory fault
1 2 3
4 5 6
7 8 9
* 0 #
1 ALARM
2 ARMED
3 TROUBLE
4
5 9
6 10
7 11
8 12
ALARM – blinking signals an alarm in current partition
ARMED
on – partition armed,
blinking – exit time countdown
TROUBLE – indicates detection of system trouble – check by holding down key ⑦ for 3 sec.
[*] - hold down for 3 sec. to activate FIRE **ALARM**
CODE+[*] - User Functions:
CODE *1 - change code
CODE *2 - new code/user
CODE *3 - delete code/user
CODE *4 - zone bypass
CODE *5 - arming silent
CODE *6 - time program
CODE *7 - switch MONO
CODE *8 - switch BI
CODE *9 - supply reset
CODE *0 - Downloading start
⑧ - hold down for 3 sec. to activate/deactivate CHIME signaling
⓪ - hold down for 3 sec. to activate
AUX. ALARM
[#]-hold down for 3 sec. to activate PANIC **ALARM**
CODE+[#] – arm/disarm partition
⑥ - hold down for 3 sec. to activate **trouble log viewing**.
TROUBLE DISPLAY: LED ON =
1,2,3 - Output 1,2,3 trouble
4 - 230VAC loss
5 - Low battery
6 - Keypad supply fail
7 - Time loss
8 - Printer trouble
9 - No voltage on tel. line
10 - Monitoring trouble
11 - *not used*
12 - Output 4 trouble