CA824
Programming manual

3.3 version

WARNING
This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.

September 2004

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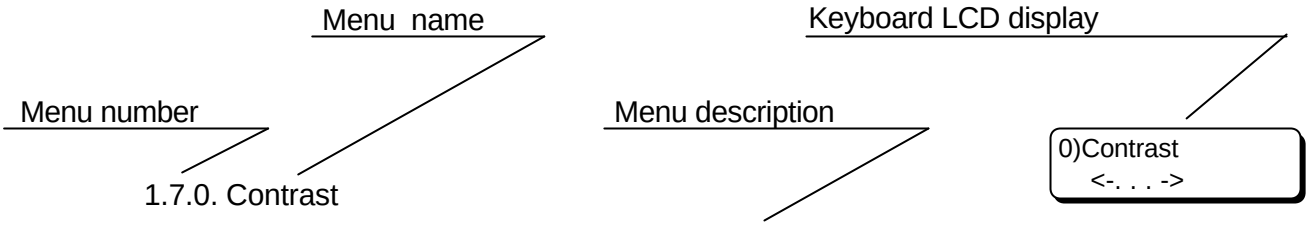
INTRODUCTION

This manual describes all engineer available programmable parameters of the CA824 Alarm System, its features and functions. The manual includes a structure chart of the menus, which provide access to the parameters.
The menus within the system are explained in the manual as follows:



LCD contrast can be adjusted with the help of the arrows:

The following buttons can be used for programming:

◄ Left arrow for back-browsing the menu structure

► Right arrow for forward-browsing the menu structure

ENT ENT button to confirm changes / move to next structure level of menus

CLR CLR button to reject changes / move to previous structure level of menus

OTHER INSTRUCTIONS

1. CA824 ALARM SYSTEM installation guide – provides system installation instructions
2. CA824 ALARM SYSTEM user guide – provides use level system installation guide

PHYSICAL AND LOGICAL SYSTEM LEVEL

Any security system established on CA824 principles should be regarded as a physical and logical entity.
At its physical level it comprises of all modules, together with all their resources – inputs and outputs. Limitations at this level consist of the number of modules, which can be connected to the bus – no more than 15. As to the resources – there are no limitations at this level to the number of inputs or puts. In practice, this would mean that the actual number of modules connected to the bus could be backed up by more inputs and outputs than those maintained at the logical level.
The logical level of the system includes the zones, their types, their attached areas, etc; the programmable outputs (PGM) together with their performance logics; the user codes with all their adjustments; the specified areas, etc. In other words, the logical level allocates the resources at a physical level and configures performance of the system as a security station.
Zones are limited up to 24 logical numbers, whereas programmable outputs (PGM) are up to 16 logical numbers. the logical number 00 is used to initialize the resources of any arbitrary module, which are not to be utilized.
The modules engaged by the system can be activated in “double zoning” performance mode or deactivated in that mode. The “double zoning” mode is universal for all devices and means that two sensors can be connected to any input of a given device. Hence, 2*N sensors can be connected to a module which has N number of inputs. Two menu inputs correspond to one physical input. These are located at address 8.0.xx.0, where device inputs can be configured and therefore 2*N zones can be attached to module inputs in programming mode.
Where the double zoning option has not been activated, only one sensor can be connected to one input, thus attaching only one zone to this input, when in programming mode. Therefore, where one module has N inputs in this mode, no more than N sensors can be connected to it.
Only one zone can be connected to one input, irrespective of whether the double zoning mode is active or not.
Figure 2 in Item 4.3 – Zone Hardware – describes how to connect sensors.

Module inputs will be processed only after they are assigned a number for the zone they are connected to. This is done separately for each individual module at address 8.0.xx.0, Inputs config**.** XX designates the number of the module from the list of devices included in the system. The parameters of the respective zone also have to be assigned at address 4.1.

This address is inaccessible for modules without inputs.

Table 1. Correspondence between the physical inputs and the input numbers of the menu located at address 8.0.xx.0 for double zoning mode.

Physical input number	1	2	.....	N
Input number from the menu for Zone 1	1	2	.....	N
Input number from the menu for Zone 2	N+1	N+2	.....	2*N

Elaboration on Table 1. The columns indicate which inputs of the menu, rows 2 & 3, correspond to a given physical input in row 1. In Figure 2, input numbers for Zone 1 are in row 2. Input numbers for Zone 1 in Figure 2 are in row 3. For example – 1 and N+1 inputs from the menu at address 8.0.xx.0 correspond to first physical input. Input number 1 corresponds to Zone 1 and input number N+1 corresponds to Zone 2.

Table 2. Correspondence between the physical inputs and the numbers of the inputs in the menu located at address 8.0.xx.0 for deactivated double zoning mode.

Physical input number	1	2	.....	N
Input number from the menu	1	2	.....	N

Module inputs are processed only after they are assigned the number of the zone to which they are connected. This is done for every module separately at address 8.0.xx.0. Input config. XX designates the number of the module within the list of devices, which have been included in the system. The parameters of the respective zone also need to be assigned, at address 5.1.
This address is inaccessible for modules with no outputs.
Any arbitrary number of physical outputs can be connected to one PGM. These outputs can belong to different system devices.

BEFORE PROGRAMMING THE CA824 ALARM SYSTEM

Carefully read this manual to learn about system options and programming procedures.
Any necessary changes to system configurations have to be set prior to programming, in order to comply with the specifications of your security system.
Alterations to system configurations can be done at any time.
Fig. 1 shows LCD buttons on the keyboard.

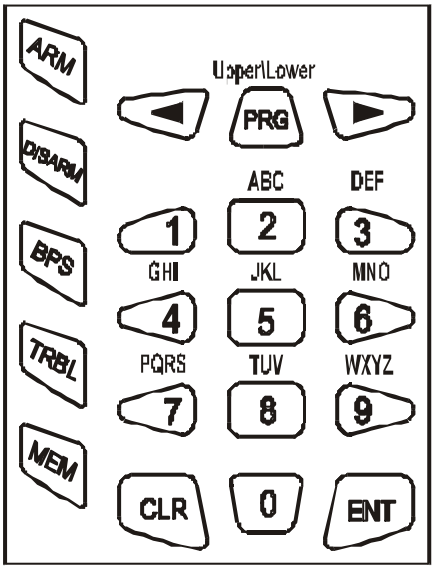


Fig. 1. LCD keyboard buttons

Both figures and letters can be keyed in. The letters, and their respective figure association, are shown in Fig. 1.
Any figure or letter can be introduced depending on the number of clicks on the button. The PRG button changes capital to small case and vice-verse. Special symbols like space or coma can be introduced via the 1 and 0 buttons. The correspondence between the number of button clicks and the symbol to be displayed is shown in Table 1.

The arrows will move the cursor within the edited section. Pressing ENT confirms any changes. Pressing CLR rejects the changes.

Table 3. Correspondence between the number of button clicks and the respective symbol

		Number of clicks							
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Button	**0**	0		.	,	:	!	<	>
	1	1	-	=	+	$	%	@	/
	2	2	A	B	C	?	?	?	?
	3	3	D	E	F	?	?	?	?
	4	4	G	H	I	?	?	?	?
	5	5	J	K	L	?	?	?	?
	6	6	M	N	O	?	?	?	?
	7	7	P	Q	R	S	?	?	?
	8	8	T	U	V	?	?	?	?
	9	9	W	X	Y	Z	?	?	?

STEP-BY-STEP PROGRAMMING OF SYSTEM PARAMETERS

I. It is necessary to design a model of your security system and to establish a scheme describing this model in order to begin programming (showing the type and number of sensors, their interconnections, any specific requirements towards system configuration). Then the system can be integrated and programmed.

II. If the system is to be programmed for the first time, it would be necessary to Load factory settings.

III. Loading factory settings

Use the RESET jumper on the motherboard. Proceed as follows:

- Power down the system – both battery and mains;
- Place the RESET jumper on the motherboard;
- Power up the system, wait 8 seconds and remove the RESET jumper. System factory configurations have now been restored, all modules identified and the system configured. The Engineer Code is 7777. The manager code is 0000.

System factory configurations for inputs and outputs are issued in Table 2 and Table 3.

The RESET jumper is used only to perform RESET and should be removed during system operation.

IV. All areas must be disarmed when adjustments to any settings of the system, which has already been programmed, are going to be made. Access will thus be enabled to the engineer menu, where programming is done.

V. Introduce engineer code to access engineer menu. Once in programming mode, it is recommended to observe the following steps in order to reduce the risks of mistake or omission.

VI. Assign zone numbers, the logical inputs are to be connected to, and the number of the PGM, to which the device outputs are to be directed, by observing the requirements of your own security system. This procedure is described in Item 8.

VII. Program areas within the system. This procedure is described in Item 6.

VIII. Program station user codes. The procedure is described in Item 3.

IX. Program zones according to requirements – make changes to the names of the zones, to the type and attributes of the zones, define system area attachment. The procedure is described in Item 4.

X. Program PGM. The procedure is described in Item 5.

XI. Program system timers (entry time, exit time, bell time, date, etc.). The procedure is described in Item 2.

XII. Program other parameters.

XIII. Exit programming mode after the system is programmed in order for your new adjustments to be adopted.

XIV. Access the engineer menu and check the performance of the zones. The procedure is described in Item 1.

XV. Exit engineer menu and test the performance of the system according to your requirements.

XVI. Go back to programming mode and set the dialer. The procedure is described in Item 7.

During Engineer programming mode is active activations of Zones and Tampers will not affect in the system.

After Engineer programming mode is leaved all active zones and Tampers will affect in the system.

Only one LCD keypad can be in Engineer programming at the same time.

Engineer programming mode is allowed only when all areas in the system ar disarmed.

Table 2 *System factory configurations for inputs*

Input?	Zone?	Type	Area	Zone parameters
1	1	Entry/Exit	1	AutoZoneShutdown, Chime, Audible
2	2	Follow	1	AutoZoneShutdown, Stay, Audible
3	3	Instant	1	AutoZoneShutdown, Stay, Force, Audible
4	4	Instant	1	AutoZoneShutdown, Stay, Force, Audible
5	5	Instant	1	AutoZoneShutdown, Stay, Force, Audible
6	6	Instant	1	AutoZoneShutdown, Stay, Force, Audible
7	7	Panic	1	
8	8	Tamper	1	

Table 3 *System factory configurations for outputs*

Output ?	PGM?	Parameters of PGM
1	1	ARM area 1
2	2	Alarm, Tamper
3	3	Technical trouble
4	4	Siren

LEAVING PROGRAMMING MODE

To exit programming mode press CLR several times until the display shows 9) Engineer out good-bye?**,** and then confirm by pressing ENT.
If the system siren is triggered, introduce a valid user code, select from the list the area which caused the alarm and then press the DISARM button to stop it. It would be sufficient to merely introduce this code to stop the siren by introducing a code, where this is permitted.

NEW PnP HARDWARE IDENTIFICATION PROCEDURE

Every module from the CA824 system set has a singular number, recorded during the production process. This number consists of two parts – batch number and device type, and is used to carry out the new hardware identification procedure **or to** load factory settings. After this procedure is completed, each identified device is assigned a number, singular to the system, and used to indicate the location of the module within the list of devices, which comprise the security system. The module uses it to participate in the exchange along the bus.
The PnP procedure is used to include the new modules within the logical structure of the system, which are connected to the communication network.

This can be done at address 8.1. Add hardware in engineer programming mode. This mode is used when the network is extended to include new modules or when a faulty module is being replaced. The new module must have been connected beforehand to the System bus.
Upon starting a PnP procedure, the principle system module passes an identification command to the bus modules for new devices. This procedure takes 20 seconds and concludes when a list of bus related devices is compiled. This list can be viewed at address 8.0. in engineer programming mode.
If positioned over a specific module, the display will show its singular number and the module number in the list of bus devices.

REMOVING MODULES FROM THE SYSTEM

The following has to be executed in case of physical removal of the module from the system:
The respective module can be removed from the list of modules by executing the Remove command at address 8.0.xx.5., where xx is the module number in the device list. All adjustments set for a module, after a Remove function, will be retained. Factory settings, however, will be preserved in the device itself. Following this procedure, the device can be connected to another system.
A Remove procedure must be performed fore a faulty device, designated to be removed, after which the new module should be connected and function 8.1. Add hardware carried out. Thus, the new device will have the same settings as the old one.

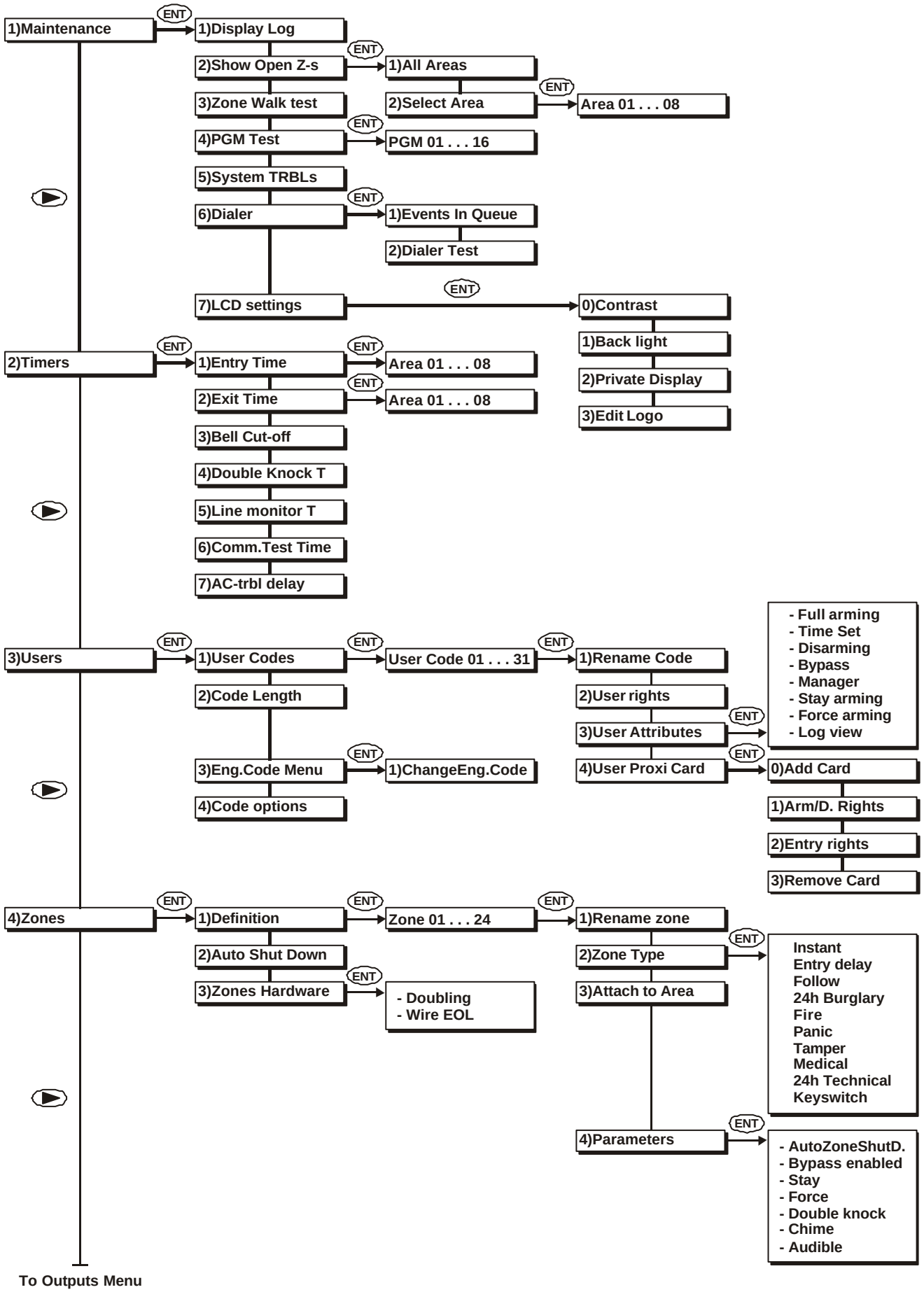
DISABLING SYSTEM MODULES

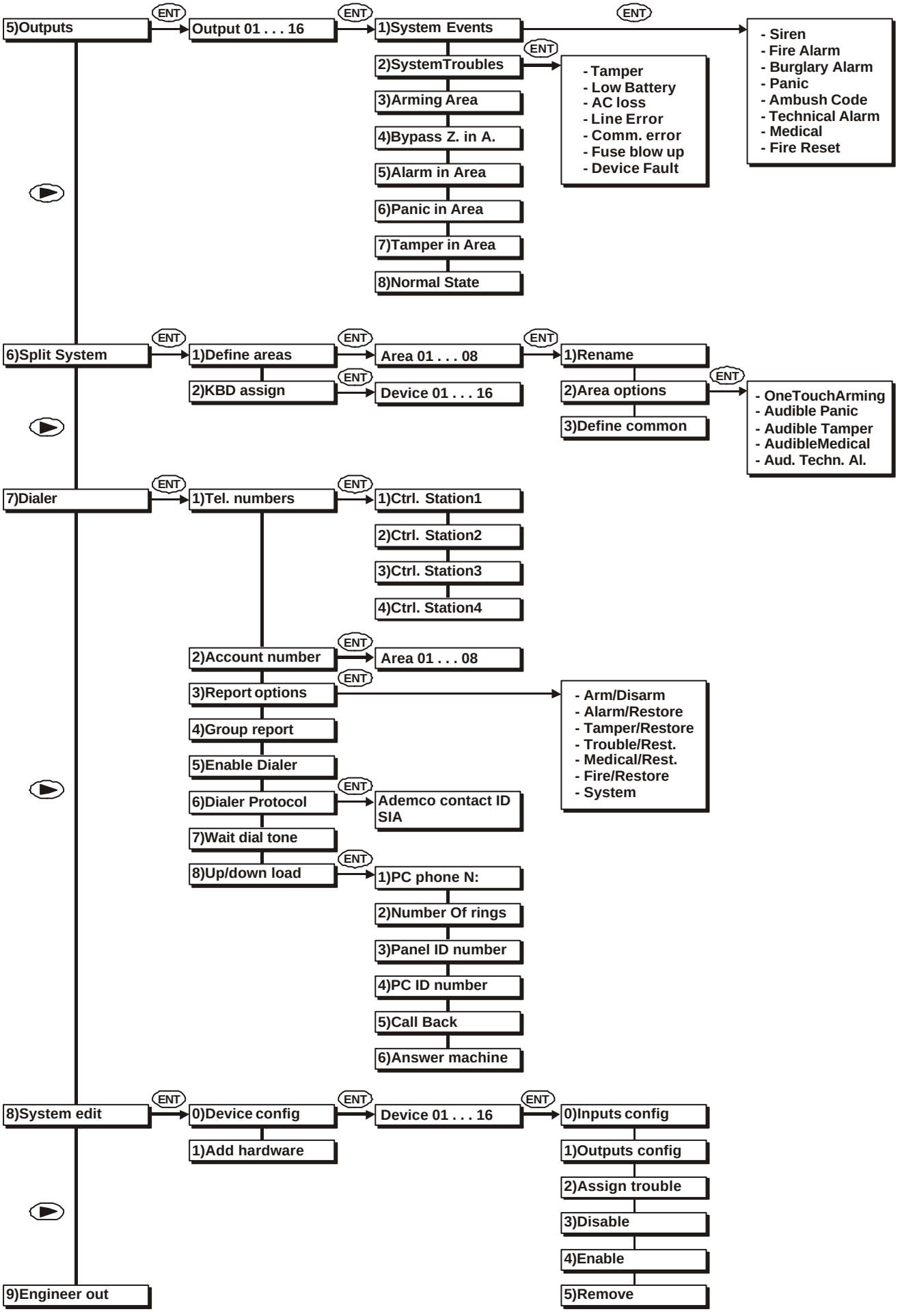
This is done where a module has to remain physically connected to the system, but will not be in use:
1. 1. Issuing a command at address 8.0.xx.3 can disable the respective module. Disable, where xx is the number of the module in the list of devices. The settings and the singular number of the module, subject to this function, will be retained, but all communications with it will be terminated.
2. 1. Where necessary, the module can again be integrated with the regular performance of the system by issuing a command at address 8.0.xx.4. Enable, where xx is the number of the module in the list of devices. After this function is executed, communication with it the will be renewed.

PROGRAMMING MENU STRUCTURE CHART FOR CA824 ALARM SYSTEM

The programming chart allows for quick scan of all program menus for the CA864 Alarm System configurations.
There are two options for attaining to a specific programming menu.
1. Use the left/right arrows to browse the menus, ENT to confirm and CLR to reject.
2. Use the menu short code. Here you only introduce the figure (quick access code) shown in the chart of the respective menu and the system is immediately positioned in the desired menu. This method is quicker than the previous one, because it only needs several clicks on the button. It also protects from misclicks.
A detailed description of the menus can be found in the MENU section. These have been listed by quick access code.

ENGINEER PROGRAMMING MENU STRUCTURE CHART




5)Outputs
ENT
Output 01 . . . 16
ENT
1)System Events
ENT
- Siren
- Fire Alarm
- Burglary Alarm
- Panic
- Ambush Code
- Technical Alarm
- Medical
- Fire Reset
2)SystemTroubles
ENT
- Tamper
- Low Battery
- AC loss
- Line Error
- Comm. error
- Fuse blow up
- Device Fault
3)Arming Area
4)Bypass Z. in A.
5)Alarm in Area
6)Panic in Area
7)Tamper in Area
8)Normal State
6)Split System
ENT
1)Define areas
ENT
Area 01 . . . 08
ENT
1)Rename
2)KBD assign
ENT
Device 01 . . . 16
2)Area options
ENT
- OneTouchArming
- Audible Panic
- Audible Tamper
- AudibleMedical
- Aud. Techn. Al.
3)Define common
7)Dialer
ENT
1)Tel. numbers
ENT
1)Ctrl. Station1
2)Ctrl. Station2
3)Ctrl. Station3
4)Ctrl. Station4
2)Account number
ENT
Area 01 . . . 08
3)Report options
ENT
- Arm/Disarm
- Alarm/Restore
- Tamper/Restore
- Trouble/Rest.
- Medical/Rest.
- Fire/Restore
- System
4)Group report
5)Enable Dialer
6)Dialer Protocol
ENT
Ademco contact ID
SIA
7)Wait dial tone
8)Up/down load
ENT
1)PC phone N:
2)Number Of rings
3)Panel ID number
4)PC ID number
5)Call Back
6)Answer machine
8)System edit
ENT
0)Device config
ENT
Device 01 . . . 16
ENT
0)Inputs config
1)Add hardware
1)Outputs config
2)Assign trouble
3)Disable
4)Enable
5)Remove
9)Engineer out

1)Maintenance
1)Display Log

1. MAINTENANCE

This menu allows for system tests and diagnostics. It includes the following submenus:

RXXX D/U/Z short text
A.XX dd/mm hh:mm

1.1. Display Log

The system maintains a 255-event log. After the menu is accessed the display shows the last event. The arrows help move around the file. If 255 events have already been recorded, the last will be deleted from the memory upon occurrence of a new event.
Events from all areas are displayed in chronological order. The display shows the following data:
- R – indicates the type of event – " " for alarm event or "R" for restore event
- XXX - the successive memory number of the event
- D/U/Z - specifies a device, user or zone number event
- short text - short description of the event (see Table 4)
- XX - area number of event occurrence

Pressing the ENT button will display the complete text of the event message. The display shows:
-... entire text of event – the complete text for the event (see Table 4)
- XX – system area number
- name of U/Z – user name or event zone

..entire text of event
A.XX name of U/Z

2)Show Open Z-s.
1)All Areas

1.2. Show Open Zones

This menu shows the zones activated within the system. It can display a list of zones, which are open or have been tampered, for all areas or for a specific area.

open Zs. in syst
XXS ..name..

1.2.1. All areas

The display shows all open zones in the system, listed by logical number order. The display shows the following information:
- XX indicates the logical number of the zone within the system
- S indicates zone status - " " for an open zone, "T" for tampered self-arming circuit.

2)Select Area
A. XX - ..name..

1.2.2. Select area

Creating a list of open zones for a specific area requires for the respective area number to be specified. This can be done either by moving the arrows through the list with the areas or by entering the area number.
Exit the menu by pressing the CLR button.

3)Zone Walk test
XXS ..name..

1.3. Zone Walk Test

The system integrity of a specific zone can be tested in this menu. The zone has to be first selected. This is done either by moving the arrows through the list with the system zones or by introducing the zone number.
If the selected zone opens (becomes activated) or the self-protected circuit is tampered, the key-board sends out a regular sound signal. The information sent out is:
- XX gives the logical number of the system zone
- S designates the status of the zone – "c" for a closed zone, "o" for an open zone, "T" for a tampered self-arming circuit

Press CLR to leave the menu.

Table 4. Text and Meaning of Log message

MESSAGE		MEANING
SHORT	LONG	
Medical	**Medical alarm**	Medical type ZZ zone has been activated or a Medical signal has been manually triggered off from a keyboard/DD device.
Fire	**Fire alarm**	Fire type ZZ zone has been activated or a Fire signal has been manually triggered off from a keyboard/DD device.
Panic	**Panic alarm**	Panic type ZZ zone has been activated or a Panic signal has been manually triggered off from a keyboard/DD device.
Duress	**Duress**	A UU code has been entered for duress.
Alarm	**Burglary alarm**	An Entry Delay, Follow or Instant type ZZ zone has been activated.
Alarm	**24 hour alarm**	A 24h Burglary type ZZ zone has been activated.
Tamper	**Tamper**	A Tamper type ZZ zone has been activated
ExpFail	**Exp. module fail**	Connection with a DD module has failed along the bus
SenrTmp	**Sensor tamper**	A self-arming ZZ zone sensor has been activated
Exp.Tmp	**Exp. module tmp.**	A self-arming DD module has been activated.
24h nB	**24h non-burglary**	A 24h non-burglary ZZ zone has been activated.
SystTrb	**System trouble**	A PGM or AUX fuse of the main module has failed.
AC loss	**AC loss**	220V mains power loss.
Battlow	**Low system Batt.**	Low system battery voltage.
SystRst	**System reset**	System hardware has been reset.
BattFlt	**Batt test failed**	No battery or blown system battery fuse.
C-tion	**Fail to commun.**	Communication failure in built-in communicator
UserO/C	**User Open/Close**	User arming via UU code.
Arm Q	**Quick Arming**	Single click arming from keyboard/DD device.
C-tion	**CommunicationERR**	Telephone line failure.
KeyOpen	**Key switch Op/Cl**	Arming from Key-switch type ZZ zone.
Bypass	**Zone Bypass**	Bypassing a ZZ zone.
TestRep	**Per. Test report**	Regular text test via built-in communicator.
TimeRST	**Time/Date reset**	System date and time resetting.
Cancel	**Cancel**	Cancel day mode alarm.
System	**System shut down**	System power failure.
Test Man	**M-ual T-ger Test**	Manual communicator test.

4)PGM Test
XX

1.4. PGM Test

The integrity of programmable outputs (PGM) of the system can be tested in this menu. Select a programmable output. This can be done either by moving the arrows through the list of programmable outputs within the system, or by introducing the output number. The selection can be confirmed by pressing ENT.
Press 0 to deactivate the programmable output, or 1 to activate the programmable output.
Press CLR to leave the menu.

change PGM state
with 0/1 OFF

5)System TRBLs
AC Loss

1.5. System troubles

This menu shows some system trouble shootings.

Table 5. System Trouble shooting messages and their meaning

Message	Meaning
AC loss	Loss of 220V mains supply.
AUX Power Failed	AUX fuse failure at main module.
Batt Low	Low system battery, no battery or system battery failure.
Bus Error	No bus module communication
PGM Power Failed	Main module PGM fuse failure
Tel Failure.	Unsuccessful communication via inbuilt dialer
TL Fault	Telephone line failure

6)Dialer
1)EventsIn Queue

1.6. Dialer

A test can be run for the communicator in this submenu, or the queue of events, which have to be sent to the central station, can be erased.

clear all events
in queue?

1.6.1. Events In Queue

This menu will erase the queue of events, which have to be sent to the central station. Press the ENT button to complete the function or CLR to reject.

2)Dialer Test
start?

1.6.2 Dialer Test

It checks the system integrity of the inbuilt digital communicator. A test message to the central station is transmitted for any area, which has been enabled to send a message along the telephone line.
The telephone numbers need to have been introduced in advance and the dialer needs to have been enabled. Any messages will be transmitted to the first telephone number contacted.

Table 6. Communicator test messages and their meaning

Message	Meaning
taking line	Engages telephone line
wait dial tone	Waits for dial signal
dialing	Dials telephone number
wait handshake	Waits for handshake signal from central station
transmit	Transmits message
wait kiss-off	Waits for kiss-off confirmation for duly received message
test OK	Test signal successfully transmitted
test FAILED	Test signal transmission failed

7)LCD settings
0)Contrast

1.7. LCD settings

LCD display settings can be adjusted in this menu – the contrast of signs and the brightness of screen backlight.

0)Contrast
<-. . . ->

1.7.0. Contrast

The contrast of the display signs can be adjusted with the help of the arrows.

1)Back light
<-. . .->

1.7.1. Backlight

The brightness of screen backlight can be adjusted with the help of the arrows.

2)Private Display
0/1 OFF

1.7.2. Private Display

Allows or disallows Private Display indication mode.
LCD display keyboards maintain a Private Display office mode where the display indicates system areas and their modes – armed, disarmed, alarm, etc.
The status of those areas only, which the keyboard is compatible with, will be indicated below the area number on the display.
The current S state is given for any indicated XX area, which is serviced by the LCD keyboard. The S state of the XX area is indicated by one symbol.
The S symbols and their meanings are as follows:
- "-" symbol – XX area is disarmed and in normal state;
- "+" symbol – XX area is disarmed and open;
- "f" symbol – XX area is in Full Arming mode;
- "p" symbol – XX area is in Stay Arming mode;
- "s" symbol – XX area is in Instant Arming mode;
- "M" symbol – available memory for XX area;
- "A" symbol – XX area is in alarm state;
- "F" symbol – XX area is in fire state;
- " " symbol – XX area is not being serviced by this keyboard.

123456789 (11 13 15 / 10 12 14 16)
SSSSSSSS

Pressing the 1 button will enable Private Display indication mode. This is indicated on the display by an ON sign.
Pressing the 0 button will disable Private Display indication mode. This is indicated on the display by an OFF sign.

enter new Logo
TeleTek CA824

1.7.3. Edit Logo

The signs for LCD display keyboards can be edited in this menu, according to the owner's desire. The sign should not exceed 16 digits – both figures and letters.

2)Timers
1)Entry Time

2. Timers

System timers can be adjusted in this menu.

1)Entry Time
A. xx - .area name.

2.1. Entry Time

Entry time values for an area are assigned at this menu. The area can be selected either by keying in its ordinal number or by scrolling in the list of areas with the help of the arrows. XX indicates the area number.
Valid values are between 0 and 99 seconds. The introduced entry time value will apply to all entry/exit zones in the area.

enter entry time
00 . . 99sec: __

2)Exit Time
A. xx - .areaname.

2.2. Exit Time

Exit time values for an area are assigned at this menu. The area can be selected either by keying in its ordinal number or by scrolling through the list of areas with the help of the arrows. XX indicates the area number.
Valid values are between 0 and 99 seconds. The introduced exit time value will apply to all entry/exit zones in the area.

enter exit time
00 . . 99sec: __

3)Bell Cut-off
01 . . 99min: __

2.3. Bell Cut-off

Bell time value for the system is assigned at this menu.
Valid values are between 0 and 99 minutes. The introduced bell time value will apply to all areas.

twoActivationsIn
01 . . 99min: __

2.4. Double Knock Time

A timeslot for the Double Knock function is assigned at this menu. The alarm is triggered off where there are two activations in one zone with a Double Knock feature, or two activations from different zones, defined as being in one and the same area, where the first of the activated zones has a Double Knock parameter within the assigned timeslot.
Valid values are between 0 and 99 minutes. The defined value for a timeslot for the Double Knock function will apply to all zones with a Double Knock attribute.

5)Line monitor T
01 . . 99min: __

2.5. Line Monitor T

The indication values for telephone line failure are assigned at this menu. Valid values are between 0 and 99 minutes.

hh:mm day
01:01 01

2.6. Comm.Test Time

The hour and the timeslot for transmitting test messages along the digital dialer are assigned at this address.

ON for 30min. AC
TRBLdelay:OFF

2.7. AC-trbl delay

Allows or disallows indication delay for AC power loss.
Pressing the 1 button will allow indication delay for AC power loss. The display will report an ON sign.
Pressing the 0 button will disallow indication delay for AC power loss. The display will report an OFF sign.
Where delayed indication for AC loss has been allowed, a failure signal will be transmitted thereof from the system keyboard 30 minutes after it occurs. All other failures will instantaneously cause indication.

3)Users
1)User Codes

3. Users

System access codes are assigned at this menu. The length of access codes can be set – 4 or 6 digits. There are 32 user codes in the system. Each can be assigned a singular name and have its rights specified, as well as the areas it will have access to.
For every access code the system automatically maintains duress codes. A duress code is obtained by the following rule: <user code>+1. Therefore, if the access code is 1234, the duress code would be 1235. Where the code is xxx9 (for a four digit code) or xxxxx9 (for a six digit code), the duress code will be xxx0, respectively xxxxx0. The x symbol is an arbitrary number.

1)User Codes
C. XX - Code name

3.1. User codes

The parameters of the user access codes can be set in this submenu.
A number for the access code has to be set (indicated by XX). This can be done by scrolling through the list of codes with the help of the arrows or by keying in the code number. Press ENT to confirm the selected code.

C. XX - Code name
1)Rename code

The symbol "-" following the user code number means that a code (combination of digits) was not programmed.
The symbol "*" following the user code number means that a code (combination of digits) was brogrammed to the code.

1)Rename code
new: Code name

3.1.xx.1. Rename code

The code name can be entered in this submenu. The name may contain figures and letters.
To enter letters refer to Table 3 attached hereto.
Press PROG to change upper to lower case and vice-versa.
To go to the following/previous position use the arrows.
The maximum length of the name can be 8 digits.

Areas: 12345678
0/1 :- - - - - - -

3.1.xx.2. User rights

The code can be attached to system areas in this submenu.
There is no limitation to the number of areas a code can be attached to.
With the help of the arrows the cursor is positioned below the number of the selected area.
Keying in 1 will set the attachment of the code to the respective area. This is marked by the "*" symbol on the display.
Keying in 0 disallows the attachment of the code to the respective area. This is marked by the "-" symbol on the display.
Settings are confirmed by pressing ENT.

3)UserAttributes
- Full arming

3.1.xx.3. User attributes

The code access attributes are assigned here. These attributes are described in Table 7.
Move around the list of attributes with the help of the arrows.
Keying in 1 will set the selected code attribute. This is marked by the "*" symbol on the display.
Keying in 0 disallows the selected code attribute. This is marked by the "-" symbol on the display.
Settings are confirmed by pressing ENT.

Attribute	Function
Log View	Right to review memory log for area Log-file events that the user code belongs to
Force Arming	Right to Force type arm
Stay/Instant Arming	Right to Stay and Instant type arm
Manager	Right of manager creates and edits user codes
Bypass	Right to eliminate Bypass zones
Disarming	Right to disarm
Time/Date Set	Right to change system time
Full Arming	Right to Full type arm

4)User ProxiCard
0)Add Card

3.1.xx.4. User Proxi Card

Proxi Card related adjustments can be done in this submenu. XX represents the number of the code where the Proxi Card will be registered.
The Proxi Card helps to enable or disable an arm mode, FULL type, or to activate the Proxi-Reader relays.
One code can be assigned only one card and one card can be assigned only one code.

0)Add Card
start?

3.1.xx.4.0. Add Card

The Proxi Card is recorded in this submenu. Press ENT to confirm or CLR to reject.

During an active sign:

0)Add Card
please wait...

Introduce the card to be recorded to the Proxi-Reader.

0)Add Card
time-out error

If the card has not been previously recorded, the display will show the message:

0)Add Card
card exist

If tthe card is not introduced by the 30th second, the display will show the following sign:

0)Add Card
success

1)Arm/D Rights
to Area N: __

3.1.xx.4.1. Arm/D. Rights

The area, which the card can arm or disarm, can be assigned here.
It is necessary for the code, to which the card has been assigned, to have been delivered rights to the same area. These settings can be done at address 3.1.xx.2. A Proxi Card can be used to:
- Only FULL type arm – the code has to have been assigned an attribute to arm, but not to disarm. Address 3.1.xx.3.
- Only Disarm - the code has to have been assigned an attribute to disarm, but not to arm. Address 3.1.xx.3.
-Arm or disarm - the code has to have been assigned attributes to arm and disarm. Address 3.1.xx.3.

Areas:12345678
0/1: ----------

3.1.xx.4.2. Entry rights

Proxi Card access areas are assigned in this submenu. The relay, which opens the door, will be activated for the indicated areas.
Every time the card, which is authorized to activate the relay, is removed from the Proxi-Reader, will activate it for 3 seconds.
With the help of the arrows the cursor is positioned below the desired areas.
Keying in 1 will select the area to which the cursor is pointing.
Keying in 0 disallows the area to which the cursor is pointing.

3)Remove Card
start?

3.1.xx.4.3. Remove Card

3)Remove Card
success

The Proxi Card can be removed in this submenu.
The following sign is displayed after the card is removed:

Press CLR after the card is removed to exit the menu.

2)Code Length
long code:OFF

3.2. Code length

The length of access codes can be set here.
There is an option between a short (4 digits) and long (6 digits) code. The selected code length is valid for all codes in the system, including the engineer code.
Note: When switching over from short to long code, the figures 00 will automatically be added to all short codes. For example, the short code 1234 will become 123400.
When changing over from long to short code, only the first four figures in the long code will remain valid. For example, the long code 123456 will become 1234.
Due to the risk of coincidence of codes, changing over from long to short code IS NOT RECOMMENDED!
Switching over between two code lengths is done as follows:
- press 1 for a 6-digit code. “Long code: ON” is displayed.
- press 0 for a 4-digit code. “Long code: OFF” is displayed.

Pressing 1 or 0 immediately activates the selected code length.

3)Eng.Code Menu
1)ChangeEng.code

3.3. Engineer code menu

The engineer code can be adjusted in this menu.

1)ChangeEng.code
new:[ ]

3.3.1. Change engineer code

The engineer code can be changed in this submenu.
The new engineer code has to be introduced twice.

stopSirenOn code
enter : OFF

3.4. Code options

Stopping the siren is allowed or disallowed in this submenu by the introduction of a code.
Press 1 to allow the siren to be stopped after a code is introduced. Introducing a code is enough to stop the siren. The display shows ON.
Press 0 to prohibit the siren to be stopped after a code is introduced. To stop the siren requires a disarm action. The display shows OFF.

4)Zones
1)Definition

4. Zones

The system zone/input configurations are set in this menu. It sets the zone/input type, the zone name, zone attachment to areas, etc. In addition to these configurations, general input configurations can also be adjusted – zone/input auto shutdown time, Double knock function time, type of balancing.

1)Definition
XX ZoneName

4.1. Zones definition

The system zone/input configurations are set in this submenu.
It is necessary to enter the zone/input number. This can be done either by moving the arrows through the list of the system zones/inputs or by introducing the zone/input number.
The number of the zone is indicated by xx.
The selected zone/input is confirmed by pressing ENT.

XX ZoneName
1)Rename zone

1)Rename zone
new: ZoneName

4.1.x.x.1. Rename zone

The zone name is entered in this submenu. The name may contain figures and letters.
To enter letters refer to the attached hereto Table 3.
Press PROG to changes upper to lower case and vice-versa.
To go to the following/previous position use the arrows.
The name cannot exceed 8 digits.

2)Zone Type
Instant

4.1.x.x.2. Zone type

The zone/input type can be set in this submenu. The type is selected by going through the list of zone types with the help of the arrows. After positioning on the specific type of zone/ input, press ENT for confirmation.
The possible zone/input types are listed in Table 8.

enter Area No:
00 . . 08 : __

4.1.x.x.3. Attach to area

The zone/input attachment to system areas is specified in this submenu.
Enter the number of the area to which a zone/input can be attached. One zone can be attached to one area.

4)Parameters
- AutoZoneShutD.

4.1.x.x.4. Parameters

The zone/input parameters are specified here. The optional parameters are shown in Table 9.
With the help of the arrows the cursor is positioned on the list of zone/input parameters.
Keying in 1 will select the parameter. The selected parameters are marked with the "*" symbol to the left of the name of the parameter.
Keying in 0 will remove the parameter. This is marked with the "-" symbol to the left of the name of the parameter.
The permitted parameters for any given zone/input type are provided in the Zone/Input Type Table.
Settings are confirmed by pressing ENT.

Table 8. Zone types and their functions

Zone Type	Function
Instant	Activating a zone in armed mode immediately triggers the alarm. The function of the zone does not depend on the type of arm mode. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Double Knock, Chime, Audible Alarm
Entry Delay	Activating a zone in armed mode of the type Force, Stay or Full starts input time. The alarm will be triggered if not disarmed by the time it is out. In case of successive activation of several zones of this type in armed mode of Force, Stay or Full Arm within one area will record the input time of the first. Activating a zone in armed mode of Instant type immediately triggers the alarm. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Double Knock, Chime, Audible Alarm
Follow	Activating a zone during input or output time will not trigger the alarm. Activating a zone in armed mode immediately triggers the alarm. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Double Knock, Chime, Audible Alarm
24h Burglary	A 24-hour zone, which, if activated, immediately triggers the alarm. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Double Knock, Chime, Audible Alarm
Fire	A 24-hour zone, which, if activated, immediately triggers the alarm. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Chime, Audible Alarm
Key-Switch	A 24-hour zone, which, if activated, will control zone arming and disarming. It is controlled from a pulse switch. A pulse from a disarmed zone will start FULL type arming. A pulse from an armed zone will start disarming. Parameters: Bypass Enabled, Stay, Force, Chime
Panic	A 24-hour zone, which, if activated, generates the message Panic. Parameters: Bypass Enabled, Stay, Force, Chime, Audible Alarm
Tamper	A 24-hour zone, which, if activated, immediately generates an alarm. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Chime, Audible Alarm
Medical	A 24-hour zone, which, if activated, generates the message Medical. Parameters: Bypass Enabled, Stay, Force, Chime, Audible Alarm
24h Technical	A 24-hour zone, which, if activated, generates the message 24h Technical. Parameters: Auto Shutdown, Bypass Enabled, Stay, Force, Chime, Audible Alarm

Table 9. Zone Parameters and Functions

Parameters	Function
Auto Shutdown	Activating a zone more times than those set for a given armed period will shut it down automatically.
Bypass Enabled	User enabled to bypass zone.
Stay Zone	Zone is bypassed when reverted to Stay type arming.
Force Zone	Active zone is automatically shut down when reverted to Force type arming.
Double Knock	A timeslot, which has been assigned in Double Knock Time starts, after a zone with a Double Knock parameter is activated in armed mode. If that zone, or another from the same area, is activated again before the set time expires, the alarm will be immediately triggered. If the zone remains active for more than 15 seconds the alarm is immediately triggered. The duration of this timeslot is set at address 2.4.
Chime	Permits a Chime sound signal when a zone in day mode is activated.
Audible Alarm	Melodious alarm signal when alarm is triggered from a zone.

bypass if Alarm
01 . . 99tims: __

4.2. Auto Shut Down

Sets a number with a value equal to the number of activations of the sensor in the zone, after which the zone will be ignored. This parameter will be common to all zones.

The counter for the number of signals will be nullified every time the area, where the zone with the parameter Auto shutdown was assigned, is armed.

3)Zones Hardware
- Doubling

4.3. Zones hardware

Configures type of zoning and balancing of system inputs. This configuration is valid for all system inputs.
The attributes for the type of zoning and balancing of system inputs can be browsed with the help of the arrows.
Keying in 1 will assign the selected parameter. It is marked with the "*" symbol on the display.
Keying in 0 will remove the selected parameter. It is marked with the "-" symbol on the display.
The Doubling attribute indicates performance with one (inactive) or two (active) zones per one physical input.
The Wire EOL attribute indicates performance with (active) or without (inactive) a balancing resistor.

The possible variants for adjusting and wiring the sensors to the system input are shown in the figure.

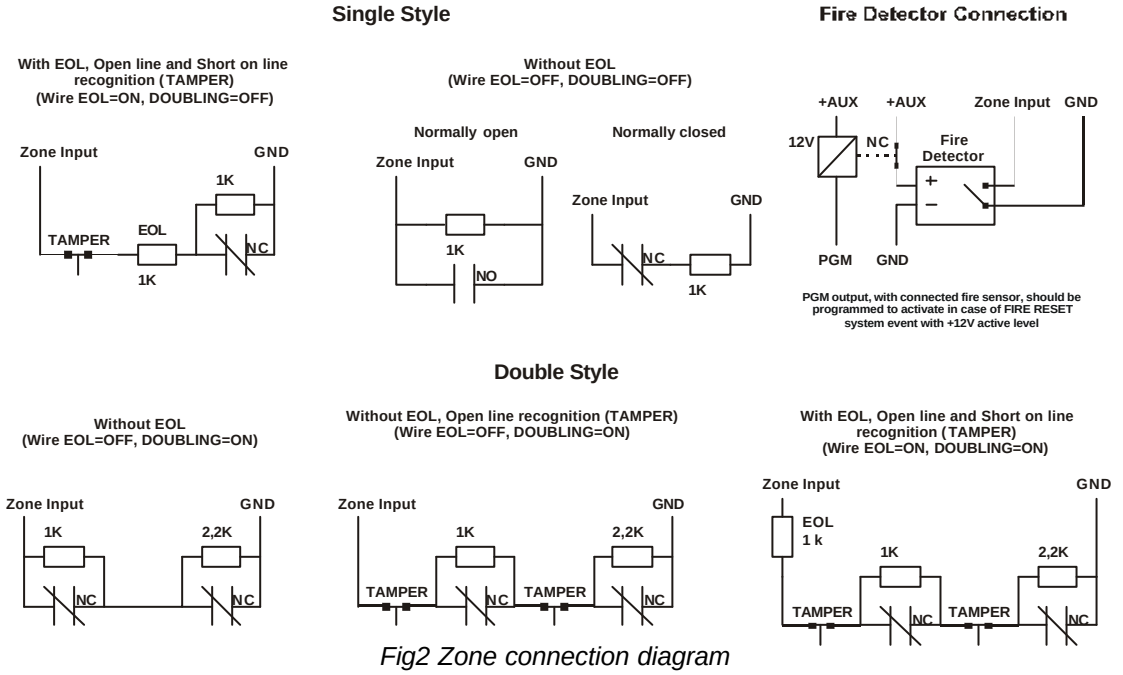


Fig2 Zone connection diagram

5)Outputs
01

5. Outputs

This menu configures programmable system output parameters.

The programmable output has to be assigned a number. This can be done either by moving the arrows through the list with the programmable outputs or by introducing the programmable output number. The selected programmable output is confirmed by pressing ENT.
Events, whose occurrence will set the output to normal active state, have to be selected. The output will function according to an “OR” scheme for the selected events. This means that it would be activated if any of the assigned events occur and will be deactivated when all of them are discarded. The probable events have been grouped – System Events, System Trouble, etc.

1)System Events
- Siren

5.xx.1. System Events

This area includes events, which are common to the system. For example, the programmable output will be activated if an alarm event occurs in any of the system zones when a Siren event is selected. System Events are explained in Table 10. The arrows help to position within the list of events.
Keying in 1 will select the chosen event. This will be marked with the “*” symbol against the event on the display.
Keying in 0 will remove the selected event. This will be marked with the “-” symbol against the event.
The selection is confirmed by pressing ENT.

Table 10. Description of system events

Event	Programmable output function
Siren	On for sound alarm from arbitrary area Off for area Disarm, during alarm or following bell time. Bell time duration is common to all areas. Bell time duration is assigned at address 2.3 Bell Cut-off in minutes. **!No other alarms from the same area will be observed before the bell time of a specific area is over. A new bell time will be initiated if an alarm is triggered of in a different area.**
Fire Alarm	On when activating Fire type zone in arbitrary area Off when deactivating all Fire type zones within the system
Burglary Alarm	On for alarm from Entry, Follow, Instant or 24h Burglary type zone in arbitrary area Off for area Disarm, which is in alarm or following alarm time. Bell time duration is common to all areas. Bell time duration is assigned at address 2.3 Bell Cut-off within a minute. **! No other alarms will be observed before the bell time runs out.**
Panic	On when activating Panic type zone from arbitrary area Off when Disarm all zones in Panic type alarm
Ambush Code	On when introducing an arbitrary Ambush code Off to exit the code menu
Technical Alarm	On when activating Technical Alarm type zone from arbitrary area Off when disarming all Technical Alarm zones within the system
Medical	On when activating Medical type zone from arbitrary area Off when disarming all Medical type zones within the system
Fire Reset	On for introducing a valid area alarm code and Disarm for open Fire type zones Off four seconds following activation

2)System Troubles
- Tamper

5.xx.2. System Troubles

This area includes events, which are related to system problems. For example, if a Tamper event is chosen, the programmable output will be activated if a Tamper event occurs in any system area. System Trouble events are explained in Table 11.
The arrows can be positioned within the list of the events.

Keying in 1 will assign the selected event. This is marked with the "*" symbol against the event on the display.
Keying in 0 will remove the selected event. This is marked with the "-" symbol against the event on the display.
The selection is confirmed by pressing ENT.

Table 11. Description of system troubles

Event	Programmable output function
Tamper	On when activating a Tamper event from arbitrary area Off when deactivating all Tamper events within the system **!A Tamper event can be generated from a Tamper type zone, from a zone with a balancing resistor or by a device along the system bus.**
Low Battery	On when there is no battery or charge less than 11,5 V Off when normal level of battery charge is restored **!The battery is tested every minute.**
AC Loss	On when there is no power supply. In order to filter power interruptions, activation is delayed by 50 seconds. There is an option for the delay to be extended to 30 minutes. This is done at address 2.7 AC-trbl delay. Off when power failure is restored.
Line Error	On when telephone line fails. Delay can be programmed at address 2.5 Line onitor T. Off when telephone line is restored.
Comm. Error	On for unsuccessful message transmission along digital communicator. Off for successful message transmission along digital communicator.
Fuse Blow Up	On for AUX or PGM fuse failure. Off for restored fuses. **!The PGM of the motherboard will not be powered in case of fuse failure. The Low Battery event monitors the battery fuse.**
Device Fault	On when connection with a device along the system bus is fails. Off when connection with all devices along the system bus is restored.

areas:12345678
0/1 : - - - - - - - -

5.xx.3. Arming Area

Areas, which will activate the exit when armed, are assigned here. The output will remain active as long as there is at least one assigned armed area.
The marker is positioned with the help of the arrows.
Keying in 1 will assign the selected area. This is marked with the "*" symbol below the area number on the display.
Keying in 0 will remove the selected area. This is marked with the "-" symbol below the area number on the display.
The selection is confirmed by pressing ENT.

areas:12345678
0/1 : - - - - - - - -

5.xx.4. Bypass Zone in Area

An active output can be assigned to this area of events when bypassing an area zone. It is possible to designate several areas. The output will be activated if one zone in at least one of the indicated areas is bypassed. It will be deactivated when the bypass of all zones, attached to the indicated areas, is discarded.
The marker is positioned with the help of the arrows.
Keying in 1 will assign the selected area. This is marked with the "*" symbol below the area number on the display.
Keying in 0 will remove the selected area. This is marked with the "-" symbol below the area number on the display.
The selection is confirmed by pressing ENT.

areas:12345678
0/1 : - - - - - - - -

5.xx.5. Alarm in Area

An active output can be assigned to this area of events when an alarm occurs in the area. It is possible to designate several areas. The output will be activated if an alarm occurs in at least one of the indicated areas.
It will be deactivated:
- after a DISARM function is applied to all of the indicated active areas;
- after bell time expires for all of the indicated active areas.

Bell time duration can be set at address 2.3.
The marker is positioned with the help of the arrows.
Keying in 1 will assign the selected area. This is marked with the "*" symbol below the area number on the display.
Keying in 0 will remove the selected area. This is marked with the "-" symbol below the area number on the display.
The selection is confirmed by pressing ENT.

areas:12345678
0/1 : - - - - - - - -

5.xx.6. Panic in Area

An active output can be assigned to this area of events when a Panic event occurs in the area. It is possible to designate several areas. The output will be activated if a Panic event occurs in at least one of the indicated areas.
It will be deactivated:
- after a DISARM function is applied to all of the indicated active areas;
- after bell time expires for all of the indicated active areas.

Bell time duration can be set at address 2.3.
The marker is positioned with the help of the arrows.
Keying in 1 will assign the selected area. This is marked with the "*" symbol below the area number on the display.
Keying in 0 will remove the selected area. This is marked with the "-" symbol below the area number on the display.
The selection is confirmed by pressing ENT.

areas:12345678

5.xx.7. Tamper in Area

An active output can be assigned to this area of events when a Tamper event occurs in the area. It is possible to designate several areas. The output will be activated if a Tamper event occurs in at least one of the indicated areas.It will be deactivated:
- after a DISARM function is applied to all of the indicated active areas;
- after bell time expires for all of the indicated active areas.

Bell time duration can be set at address 2.3.

The marker is positioned with the help of the arrows.Keying in 1 will assign the selected area. This is marked with the "*" symbol below the area number on the display.
Keying in 0 will remove the selected area. This is marked with the "-" symbol below the area number on the display.
The selection is confirmed by pressing ENT.

8)Normal State
normal ON

5.xx.8. Normal state

The inactive - normal state of the programmable output is assigned.
Keying in 1 assigns inactive - normal ON status, which corresponds to N.C. The voltage at output in this condition will be 0 V.
Keying in 0 assigns inactive - normal OFF status, which corresponds to N.O. The voltage at output in this condition will be 12 V.

6)Split System
1)Define areas

6. Split system

The system can be split into areas in this menu. Specific parameters can be defined for each area. The keyboards installed in the system and the Proxi Reader are allocated to the established areas.

0)Define areas
A. XX - Area Name

6.1. Define areas

The parameters are defined for the areas in the system.
Up to 8 areas can be defined.
Areas have to be assigned a number.
This is done by going through the list of functions with the help of the arrows or by keying the number of the function.
Confirm the selected area by pressing ENT.

A. XX - Area Name
1)Rename

1)Rename
new : Area Name

6.1.xx.1. Rename area

The area name is defined in this menu. The name may contain figures and letters. To enter letters use the enclosed Table 3.
Pressing the PROG button changes upper to lower case and vice-versa.
To go to the following/previous position use the arrows.
The maximum length of the name is 8 symbols.

2)Area options
- OneTouch Arming

6.1.xx.2. Area options

Single touch arming and sound alarm for Panic, Tamper, Medical and Technical alarm events are allowed or disallowed in this menu.
Move through the list of options with the help of the arrows.

- Single-Touch Arming

Enables or disables a quick arm function for the area.
Keying in 1 enables quick arm of the area. The display shows the "*" symbol.
Keying in 0 disables quick arm of the area. The display shows the "-" symbol.

- Audible Panic

Enables or disables sound alarm for Panic event in the area.
Keying in 1 enables sound alarm for Panic event in the area. The display shows the “*” symbol.
Keying in 0 disables sound alarm for Panic event in the area. The display shows the “-” symbol.

- Audible Tamper

Enables or disables sound alarm for Tamper event in the area.
Keying in 1 enables sound alarm for Tamper event in the area. The display shows the “*” symbol.
Keying in 0 disables sound alarm for Tamper event in the area. The display shows the “-” symbol.

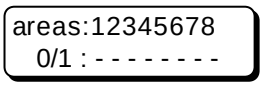
- Audible Medical

Enables or disables sound alarm for Medical event in the area.
Keying in 1 enables sound alarm for Medical event in the area. The display shows the “*” symbol.
Keying in 0 disables sound alarm for Medical event in the area. The display shows the “-” symbol.

- Audible Technical Alarm

Enables or disables sound alarm for Technical Alarm event in the area.
Keying in 1 enables sound alarm for Technical Alarm event in the area. The display shows the “*” symbol.
Keying in 0 disables sound alarm for Technical Alarm event in the area. The display shows the “-” symbol.

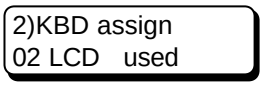
6.1.xx.3. Define common



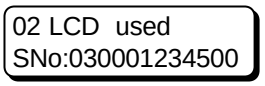
Common areas can be defined in this menu
Areas, which can be armed individually, are independent areas.
Move through the list of areas with the help of the arrows to indicate for which areas xx is common. Press 1 to include an area and 0 to exclude it.
How to work an area, defined as being common is described below.
For example, if we mark 1 and 3 in the second area menu (6.1.02.3), second area is going to be common to them. Areas 1 and 3 are independent. The system will behave as follows:
- if areas 1 or 3 are armed, then area 1 or 3 will respectively be armed;
- in the example, if area 1 is armed and area 3 was previously armed, then area 2 will automatically be armed;
- to arm a common area requires all areas, it is common to, to have been previously armed. In this example, areas 1 and 3 must both be armed, for area 2 to be armed;
- if a common area is disarmed, it alone will be disarmed. In this example, only area 2;
-- if areas 1 or 3 are disarmed, this will disarm area 2.

More than one common area can be defined. However, if a given area is common to a group of areas, it cannot be independent in relation to another group of areas.

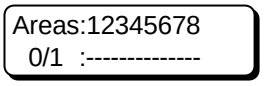
6.2. Keyboard assign



Keyboard or Proxi Reader is attached to areas here.
There is no limitation to the number of keyboards or Proxi Readers, which can be attached to a given area, nor to the number of areas attached to one keyboard or Proxi Reader.
A number has to be defined for the keyboard or Proxi Reader. This can be done by going through the list of devices with the help of the arrows or by entering the number of the respective module. The selected device can be confirmed by pressing ENT. The singular identification number of the keyboard device is shown on the display. After single clicking ENT, one can define its attachment to areas.
Any attempt to configure a device other than a keyboard or Proxi Reader would be rejected.



Position the cursor below the number of the selected area with the help of the arrows.
Keying in 1 will attach the module to the respective area. The display shows the “*” symbol.



Keying in 0 will undo attach for the module to the respective area. The display shows the “-” symbol.
Press ENT to confirm settings.
In order for a keyboard to control specific areas, the areas to which it has rights must be defined in the menu of the respective keyboard. For these areas the keyboard will also display indication.
The Proxi Reader can arm or disarm a specific area or it can activate its relay, when a registered Proxi Card is introduced, only if the respective area has been allowed in this menu.

7)Dialer
1)Tel. numbers

7. Dialer

The parameters of the inbuilt digital communicator are set in this menu.
The proper functioning of the communicator requires, when sending messages about events, adjustments to be made at addresses 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 and 7.7.
The parameters of the CA824 Alarm System can be programmed from a remote location. The adjustments needed for the proper performance of this mode are described in Item 7.8.

1)Tel. numbers
1)Ctrl. Station1

7.1. Telephone numbers

The telephone numbers for connecting to the central monitoring station can be set in this menu.
The specific telephone numbers must be requested from the respective security organization.
It is not obligatory to define a telephone number. The maximum number of telephone numbers, which can be defined, is four.
The system maintains up to four different telephone numbers.
The following symbols are used to set telephone numbers:
- the figures from 0 to 9;
- P for pulse dialing;
- T for tone dialing (defaults);
- D for 2 second pause while dialing.

Telephone numbers cannot contain more than 16 symbols.

tel. N./Symbols

7.1.1. Central station 1

Enter telephone number 1.

tel. N./Symbols

7.1.2. Central station 2

Enter telephone number 2.

tel. N./Symbols

7.1.3. Central station 3

Enter telephone number 3.

tel. N./Symbols

7.1.4. Central station 4

Enter telephone number 4.

2)Account number
A. XX - Area Name

7.2. Account number

An individual identification number for each of the areas in the system can be set in this menu. This number is used to transmit messages to the central station and to identify which message was generated where.
The I.D. numbers consist of 4 digits.
An area can be selected by going through the list of areas with the help of the arrows, or by keying in the number of the area. Press ENT to select the area.

enter four digit
for A. ID : 9999

7.2.xx. Account number area xx

Introduce the identification number for the area.
The specified number can be confirmed by pressing ENT.

3)Report options
* Arm/Disarm

7.3. Report options

Transmission of messages to the central station is allowed or disallowed in this menu. The messages are allocated to seven flows. Permission to transmit messages from a given flow is valid for all system areas. System events are listed and explained in Table 12.
Use the arrows to move through the list of event flows for transmission.
Keying in 1 will allow transmission of messages from the respective flow. The display will indicate this by the "*" symbol.
Keying in 0 will disallow transmission of messages from the respective flow. The display will indicate this by the "-" symbol.
Press ENT to confirm the introduced settings.

Areas: 12345678
0/1 : --------

7.4. Group Report

The areas, which are permitted to transmit the types of messages indicated in Item 7.3, are defined in this menu.
Use the arrows to position the cursor below the number of the selected area.
Keying in 1 will allow transmission to the respective area. This is indicated on the display by the "*" symbol.
Keying in 0 will disallow transmission to the respective area. This is indicated on the display by the "-" symbol.
Press ENT to confirm the introduced settings.

5)Enable Dialer
OFF

7.5. Enable Dialer

Allows or disallows inbuilt digital communicator function.
Keying in 1 will allow inbuilt digital communicator function. This is indicated on the display by the sign ON.
Keying in 0 will disallow inbuilt digital communicator function. This is indicated on the display by the sign OFF.

6)DialerProtocol
Ademco contactID

7.6. Dialer Protocol

Selects a protocol for transmission along the telephone line.
Two protocols are possible: Ademco contact ID or SIA. The selection is done with the help of the arrows and is confirmed with the ENT button.

7)Wait dial tone
OFF

7.7. Wait dial tone

Enables or disables the wait dial tone before dialing.
If enabled to wait for a dial tone, the system will not begin to dial until it detects the dial tone from the telephone line. If the dial tone is not detected within 5 seconds, the system will discontinue and will attempt again after 20 seconds to detect the dial tone.
If wait dial tone is disabled, the system will initiate dialing by the 5th **second after engaging the telephone line.**
Keying in 1 enables wait dial tone. The display shows ON.
Keying in 0 disables wait dial tone. The display shows OFF.

Table 12

Event	Inbuilt Digital Communicator Function
Arm/Disarm	ON - Upon occurrence in any arbitrary area of any of the events: - User Open disarm area with code No. - User Close - arm area with code No. - Key Switch Open disarm area in zone Key Switch type No. - Key Switch Close arm area in zone Key Switch type No. - Quick Arming arm area using One Touch Arming method - Zone Bypass bypass zones with Number - Cancel interrupted bell time with code Number the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
Alarm/Restore	ON - Upon occurrence in any arbitrary area of any of the events: - Burglary Alarm alarm in Entry, Follow, Instant or 24h Burglary type zone - Panic Alarm alarm in Panic type zone - Duress introduce duress code Number - 24 non-Burglary activation of Technical Alarm type zone the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
Tamper/ Restore	ON - Upon occurrence in any arbitrary area of any of the events: - Tamper Tamper in zone Number - Exp. Module Tamper Tamper in device along system bus Number the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
Trouble/ Restore	ON - Upon occurrence in the system of any of the events: - Exp. Module Fail failure to connect to device along bus Number - System Trouble failure in AUX and PGM fuses - AC Loss power failure - Low system Battery low charge or battery missing - Communication generates message for telephone line failure - This massage is sent when the next message to transmit comes - Fail to Communicate unsuccessful communication via digital communicator the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
Medical/ Restore	ON - Upon occurrence in any arbitrary area of the event: - Medical Alarm alarm in Medical type zone with No. the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
Fire/Restore	ON - Upon occurrence in any arbitrary area of the event: - Fire Alarm alarm in Fire type zone with No. the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station
System	ON - Upon occurrence of any the events: - System Reset for powering the system - Periodic Test report regular test signal to the central station the respective message to the central station is transmitted via the digital communicator OFF - The listed messages are not transmitted to the central station

8)Up/down load
1)PC phone N:

7.8. Up/Down load

Parameters are assigned for remote programming or for reading parameters of the system. This is done via the telephone line connected to the security system.
There are two options for implementing this mode:
- the station responds to the call, exchanges identification passwords with the remote programming station. The programming mode will begin after positive identification.
Adjustments have to be done at addresses 7.5, 7.8.2, 7.8.3, 7.8.4 and 7.8.5. for this mode to be permitted.
- Call Back mode. It is described in details in Item 7.8.5.
Adjustments have to be done at addresses 7.5, 7.8.1, 7.8.2, 7.8.3, 7.8.4 and 7.8.5. for this mode to be permitted.
Disabling remote programming requires for the figure 0 to be introduced at address 7.8.2.

tel. N./Symbols

7.8.1. PC phone number

The telephone number of the station for remote programming is assigned. This number can be used to perform the Call Back function, described in Item 7.8.5.

2)NumberOf rings
01 . . 08 :

7.8.2. Number of rings

The number of rings, following which the system can switch over to remote programming mode, are defined, provided this function is enabled. If, following a twenty-four hour period, the DownLoad, Number of Rings function has not been accomplished, the number of rings becomes 0 and access will be impossible. In case this function was carried out, Number of Rings will not be altered. If blocked access after twenty-four hours is undesirable, a PC phone number should be indicated. The twenty-four hour access is permitted after RESET.

enter four digit
for P. ID : 1234

7.8.3. Panel ID number

The identification number of the CA864 system for remote programming is assigned.

enter four digit
for PC ID : 1234

7.8.4. PC ID number

The identification number of the station for remote programming is assigned.

5)Call Back
0/1 : OFF

7.8.5. Call Back

Allows or disallows a call back function.
When a call back function is enabled, the system will exchange identification passwords with the remote programming station and the connection will be terminated. When identification is positive, the CA864 system will connect the station for up/down loading at the telephone defined in menu 7.8.1.
When the call back function is

disallowed and the identification is positive, the system will switch over to up/down load mode.
Pressing 1 allows call back function. This is marked on the display by ON.
Pressing 0 disallows call back function. This is marked on the display by OFF.

7.8.6. Answer machine

6)Answer machine
0/1 : OFF

Allows or disallows the answer machine function. An answer machine is an intelligent device that can deal with telephone calls: fax, answering machine, etc.
When the answer machine function is enabled, the system will ignore the first call, thus giving the answer machine a chance to take on the conversation. If there is a new incoming ring pulse within three minutes, the system will take on the conversation at the first ring pulse. The number of ring pulses, set in menu 7.8.2, must exceed the number of ring pulses set for the answer machine.
When the answer machine function is disabled, the system will answer after detecting the number of ring pulses set in menu 7.8.2.
Pressing 1 allows answer machine function. This is marked on the display by ON.
Pressing 0 disallows answer machine function. This is marked on the display by OFF.

Table 13. Messages in Contact ID protocol, transmitted from CA864

CONTACT ID codes transmitted from CA824 to Central Station			
100	MEDICAL ALARM	311	BATTERY MISSING/DEAD
110	FIRE ALARM	333	EXPANSION MODULE FAILURE
120	PANIC ALARM	350	COMMUNICATION
121	DURESS	354	FAIL TO COMMUNICATE
137	TAMPER	401	OPEN/CLOSE BY USER
130	BURGLARY	406	CANCEL
145	EXPANSION MODULE TAMPER	408	QUICK ARM
150	24 HOUR NON-BURGLARY	409	KEYSWITCH OPEN/CLOSE
300	SYSTEM TROUBLE	570	ZONE BYPASS
301	AC LOSS	601	MANUAL TEST REPORT
305	SYSTEM RESET	602	PERIODIC TEST REPORT

8)System edit
0)Device config

8. System edit

Adjustments to the system at module (device) level can be carried out in this menu.
Each system device has its own identification number, set by the producer. When starting the system for the first time, all devices connected to the bus are recorded in the main module. The detected devices then have to be adapted to the system – configure their inputs and outputs, identify the areas where the keyboards will indicate the problems, which arise in the devices.
A relief procedure can be used to connect new devices to the system if it needs to be expanded.

0)Device config
DD Name Status

8.0. Device config

The devices included in the system can be configured in this submenu.
A number has to be defined for the device, which is to be configured. This can be done by going through the list of devices with the help of the arrows, or by keying in the number of the device.
The following information can be derived for every device on this list:
- DD – device number in the list of devices;
- Name – device name;
- Status – shows device status;

DD Name Status
SNo:000512389050

—> unused - no device assigned to this number;
—> used – a device included in the system and an assigned area keyboard to indicate device troubleshooting;
—> removed – a device, removed from the system software;
—> disabled – a device, which has been temporarily removed from system.
- Sno – device serial number.

SNo:000512389050
0)Inputs config

0)Inputs config
Inp.01=Zn.: 00

8.0.xx.0. Inputs config

Configures inputs of selected device, if any.
Every available input is assigned a zone number, which identifies it within the system. This number is singular and cannot be assumed for two different inputs.
Inputs, which will not be used, are assigned 00.
A detailed list of module inputs is available in the Physical and Logical System Level Section, located on page 6.

1)Outputs config
Out.01=PGM: 00

8.0.xx.1. Outputs config

Configures outputs of selected device, if any.
Every available output is assigned a number, which identifies it within the system. Several outputs can hold one and the same number.
Outputs, not to be used, are assigned 00.

2)Assign trouble
to Area N: 01

8.0.xx.2. Assign trouble

A number is assigned to an area with a keyboard, which displays problem reports in the selected devices.
This is usually the area that the system LCD keyboard is attached to.

3)Disable
disable?

8.0.xx.3. Disable

Temporarily disables the system to work with a selected device. This option is used when replacing a troubleshooting device with a new one of the same type. The parameters/configurations of the selected device are stored in the memory of the system.
Pressing ENT will temporarily cut off the selected device from the system.
The device, subject to this procedure, cannot be connected to another system, as it will interfere with the performance there.

4)Enable
enable?

8.0.xx.4. Enable

Enables the system to work with a device, which has been temporarily disabled.
Note: The same device, which was disabled, has to be connected to the bus.
Pressing ENT will connect the selected device to the system again.

5)Remove
remove?

8.0.xx.5. Remove

This procedure logically removes the module from the system. After it is accomplished, the device can be physically removed from the communication network. Press ENT to confirm.
The communication network represents the physical connection between the devices.
The xx in the 8.0.xx.5 sign designates the number of the module within the list of devices, for which this function will be carried out. All settings, which may have been defined to it, will be retained. However, the very number, assigned to it by the system, for participating in the process of communication, is removed.
This procedure has to be carried out in order for the singular number to be deleted and for the device to be connected to another system and to function properly.
The following has to be done if the device to be removed was damaged and needs to be replaced:
- it should be replaced by another of the same type;
- a Remove procedure is done for the old module;
- the old module is removed from the communication bus;
- the new module is connected to the communication bus;
- function 8.1. Add Hardware is performed. Thus, the new device will retain the same properties as the old one.

Where several devices have to be replaced, the procedure described above will be repeated for the first device, then for the second, etc.

1)Add hardware
start PnP?

8.1. Add hardware

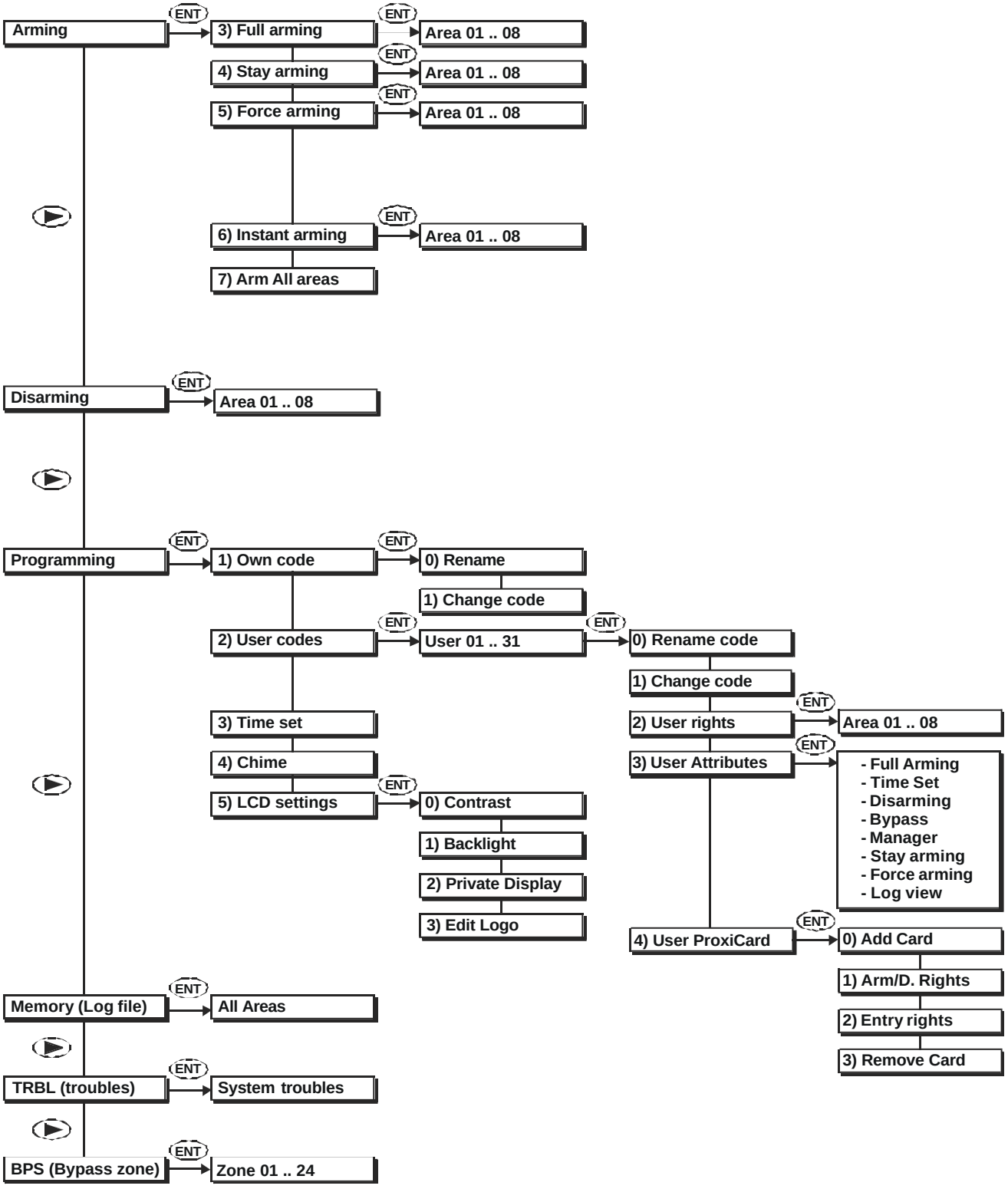
Begins a procedure to detect new devices connected to the bus. After the procedure is completed the new devices are added to the list of system devices and are marked as used.

9)Engineer out
good bye?

9. Engineer out

Exit Programming mode by pressing ENT to confirm.

Supplement A: USER PROGRAMMING MENU CHART



Supplement B: TROUBLESHOOTING

All table addresses belong to CA824 engineer programming, unless explicitly stated otherwise.
Call the manufacturer's service station where the provided recommendations are of no avail.

Problem	Suggested remedy
No siren sound signal during keypad indication of an area alarm event.	There are two programme options for PGM siren control. The first programming option applies to a common system siren. In this case a SIREN event can be programmed at address 5.x.x.1, where x.x. is the number of the respective PGM. The second siren programming option requires the areas, for which the alarm events are to be reported, to be specified. This is done by marking the respective areas at address 5.x.x.5, where x.x. is again the number of the respective PGM. The zone, which causes the alarm, must further be checked for a preset AUDIBLE ALARM configuration. This can be done at address 4.1.z.z.4., where z.z. is the number of the respective zone. Programming PRG must observe the function between the programmed arming events, which is OR, i.e. no matter whichever function occurs the exit will be activated and will remain armed until the dismissal of the latter. The configurations of the respective area with a PANIC, TAMPER, MEDICAL, or TECHNICAL type zone, must also be checked out. The respective ?????? parameter must be configured according to the zone type, at address 6.1.a.a.2., where a.a. denotes the area number. Finally, the programmed BELL CUT-OFF time must be verified at address 2.3. This time shall be other than 0.
The reader built-in output cannot arm the system programmed proximity card.	The following programmes must have been implemented in order for the proximity card to activate the reader built-in output: - the numbers of those areas that will have their doors opened, shall be marked at address 3.1.c.c.4.2., where c.c. denotes the number of the respective code; - the numbers of the areas that this reader will function with, shall be recorded at address 6.2.d.d., where d.d. denotes the number of the respective proximity-reader; - the code does not need to be assigned rights to work with those areas that will have their doors opened. Such programming will authorize the code to control the security of the respective areas, which shall be undesirable in most cases.
The system programmed proximity card cannot control area security.	A proximity card used to control the security of an area can be written to any code in the system. This function can be programmed as follows: - the right to work with an area or areas can be programmed as user code at address 3.1.c.c.2., where c.c. denotes the respective user code; - FULL ARMING and/or DISARMING rights can be programmed as user code at address 3.1.c.c.3. - the number of the area, whose security will be controlled at address 3.1.c.c.4.1., can be programmed for the proximity card as the user code. The availability of a code combination and a proximity card are admissible for user code.
The communicator does not function.	The following settings have to be programmed for the communicator: - at least one telephone number for communicating with the central station. The telephones can be programmed at address 7.1.1, 7.1.2, 7.1.3 and 7.1.4. - the ID number of the respective area can be set at address 7.2.a.a. - no less than one group of events can be permitted to be transmitted at address 7.3. - a periodic text signal for at least one area shall be allowed to be transmitted at address 7.4. - the respective communication protocol for transmitting messages to address 7.6 must be set. There is a Contact ID and SIA option available. - the built-in communicator can be allowed to function at address 7.5.

Supplement B: TROUBLESHOOTING cont.

Problem	Suggested remedy
The communicator engages the telephone line but disengages it in about 5 seconds without having accomplished any dialling.	It is possible that the DIAL TONE signal contains unusual settings. In such case the DIAL TONE detector can be turned off at address 7.7. If still the monitoring centre perceives no messages, the control panel must be serviced at the manufacturer's service station.
The panel does not properly detect the zones during programmed coupling of the zones.	Twice the number of inputs is indicated in the module input lists when programming the DOUBLE ZONES function. The correspondence of the listed inputs to the actual inputs can be determined by the following formulae: - IN (x) – where ? is within the interval from 1 and the actual number of inputs of the module N – corresponds to the group of detectors with a 1 kΩ resistor connected in parallel to its contacts - IN (x+N) – where ? is within the interval from 1 to the actual number of inputs of the module N – corresponds to the group of detectors with a 2.2 kΩ resistor connected in parallel to its contacts **Example:** Inputs numbered 1 to 8 will be seen in the list of inputs for MRI4/8 module. The inputs are allocated as follows: - the inputs numbered IN1 and IN5 on the list are connected to the module IN1 input. - the inputs numbered IN2 and IN6 on the list are connected to the module IN2 input. - the inputs numbered IN3 and IN7 on the list are connected to the module IN1 input. - the inputs numbered IN4 and IN8 on the list are connected to the module IN1 input. If zone numbers are programmed for IN1=01 and for IN5=02, then: - the detector outputs, connected to a 1 kΩ resistor, will arm 01 zone - the detector outputs, connected to a 2.2 kΩ resistor, will arm 02 zone
How to programme arming of an area with minimum user actions.	An area can be programmed to be armed by pressing a single button without the need to enter a user code. The following programming is required: - the option ONE TOUCH ARMING is programmed at address 5.1.a.a.2. for an area numbered ?.?. Depending on the settings, two arming scenarios are available with the keyboard: - the keyboard is programmed to work with only one area in the system – single press the ARM button - the keyboard is programmed to work with more than one area in the system – single press the ARM button and position the arrows over the selected area. Confirm the selection by single pressing the ENT button. It is possible to programme area arming by entering a user code and then pressing a single button. The respective user code has to be programmed to work only with the specific area and to be allowed only FULL ARMING and DISARMING parameters. The keyboard sequence operations are: - enter user code and press ARM. This sequence does not depend on the programming of the keyboard in the system.
Is it possible to arm all system areas by one command? Is it possible to disarm all system areas by one command?	It is possible to arm all areas that a given user code is authorized to work with. The sequence is as follows: - introduce a user code with programmed rights for at least two types of arming - single press ARM - select number 7 from the list of possible arming modes – ARM ALL AREAS. No.

Supplement B: TROUBLESHOOTING cont.

Problem	Suggested remedy
The system sirens turn on when leaving engineer programming.	The system has 24 hour armed zones. Most frequently these are module or detector tampers. The cause for the alarm must be verified in the list of events. System module alarms contain the number of the module with a tamper – d03, which means tamper in module 3. Either the tamper in the module should be removed, or its indication must be prohibited at address 8.0.d.d.ENT.2, where the value of 00 is introduced.
No connection to the programming computer even though all remote programming parameters have been programmed.	One reason could be the incorrect setting of the identification numbers on the panel and the programming computer at the respective addresses 7.8.3. and 7.8.4. Check the settings for NUMBER OF RINGS at address 7.8.2. It must not be 0. Check the settings for the CALL BACK function at address 7.8.5. If it has been allowed, introduce the telephone number of the programming computer at address 7.8.1. Check the settings of the ANSWERING MACHINE function at address 7.8.6. If it has been allowed to operate with the programming computer, it has to observe the algorithm of this function as prescribed in the Programming Guide. Where all settings have been correctly programmed, check the settings of the programming computer. If these are correct, the control panel must be serviced in the manufacturer's service station.
Newly programmed zones or outputs in the system are not visible at addresses 1.2.2., 1.3. and 1.4.	Any renewal of panel programming is done after leaving engineer programming mode. Therefore, after adding new zones and outputs to the system and prior to their operational verification at address MAINTENANCE leave engineer programming mode.
What is the maximum number of detectors per input.	The reasonable number of detectors for single zoning is 10. This is brought about by the additional resistance, which is induced in the signal line of the detector by the 10 or 15 Ω protective resistors, installed sequentially on the relay contacts in the detectors. In the case of 10 detectors, the additional resistance becomes 100 Ω, and together with the resistance of the signal line (conductor) can cause serious error in detection. The recommended number of detectors for double zoning is up to 2 per zone or 4 per input. The reason for this restriction is the error imported from cable resistances and the protective resistors in the detectors.
A programmable output does not function. What are the probabilities to programme the engineer settings in the system?	The programmable output used must be checked whether it has been programmed for the actual module output in the system. An immediate test of the output can be performed at address 1.4. Position over the output and alternatively change the statutes by pressing buttons 1 and 0. If this test is positive, the programming of the output must be checked at address 5.o.o., where o.o. represents the number of the programmable output. From an LCD keyboard connected to the system. From a servicing LCD keyboard – any LCD824 which can be connected to the system by pressing the PRG button. From a remote programming computer, UDLManager software and a telephone line. No direct contact mode for computer programming is maintained.
A module supplemented to the system does not appear in the list of modules at address 8.0.	It is quite possible for the supplemented device to exceed the system restrictions for modules. The maximum number of modules is 15 (without the control panel). It is more probable that the supplemented module used to be part of a functioning security system. In such case it must have been removed without the ?????????? command to have been fulfilled. Thus, the settings of the previous system have remained in its power autonomous memory, which now impede its unification with the new one. There are three solution to this situation: - incorporating the module into the old system and performing a REMOVE command - connecting the module to a control panel and an LCD keyboard, resetting the system and performing a REMOVE command - resetting the security system.

Guarantee

During the guarantee period the manufacturer shall, at its sole discretion, replace or repair any defective product when it is returned to the factory. All parts replaced and/or repaired shall be covered for the remainder of the original guarantee, or for ninety (90) days, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship, which written notice must in all cases be received prior to expiry of the guarantee.

International Guarantee

Foreign customers shall enjoy the same guarantee rights as those enjoyed by any customer in Bulgaria, except that manufacturer shall not be liable for any related customs duties, taxes or VAT, which may be payable.

Guarantee Procedure

This guarantee will be granted when the appliance in question is returned. The manufacturer shall accept no product whatsoever, of which no prior notice has been received.

Conditions for waiving the guarantee

This guarantee shall apply to defects in products resulting only from improper materials or workmanship, related to its normal use. It shall not cover:

- § Damages resulting from transportation and handling;
- § Damages caused by natural calamities, such as fire, floods, storms, earthquakes or lightning;
- § Damages caused by incorrect voltage, accidental breakage or water; beyond the control of the manufacturer;
- § Damages caused by unauthorized system incorporation, changes, modifications or surrounding objects:
- § Damages caused by peripheral appliances (unless such peripheral appliances have been supplied by the manufacturer:
- § Defects caused by inappropriate surrounding of installed products;
- § Damages caused by failure to use the product for its normal purpose; Damages caused by improper maintenance;
- § Damages resulting from any other cause, bad maintenance or product misuse.

In the case of a reasonable number of unsuccessful attempts to repair the product, covered by this guarantee, the manufacturer's liability shall be limited to the replacement of the product as the sole compensation for breach of the guarantee. Under no circumstances shall the manufacturer be liable for any special, accidental or consequential damages, on the grounds of breach of guarantee, breach of agreement, negligence, or any other legal notion.

Waiver

This Guarantee shall contain the entire guarantee and shall be prevailing over any and all other guarantees, explicit or implicit (including any implicit guarantees on behalf of the dealer, or adaptability to specific purposes), and over any other responsibilities or liabilities on behalf of the manufacturer. The manufacturer does neither agree, nor empower, any person, acting on his own ***behalf, to modify or alter this Guarantee, nor to replace it with another guarantee, or another liability with regard to this product.***

Unwarranted Services

The manufacturer shall repair or replace unwarranted products, which have been returned to its factory, at its sole discretion under the conditions below. The manufacturer shall accept no products for which no prior notice has been received.

The products, which the manufacturer deems repairable, will be repaired and returned. The manufacturer has prepared a price list and those products, which can be repaired, shall be paid for every repaired appliance.

The closest equivalent product, available at the time, shall replace the products manufacturer deems unrepairable. The current market price shall be charged for every replaced product.

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