EXPANDABLE MULTIFUNCTION CONTROL PANEL

KYO 320

INSTALLATION MANUAL - Vol.1

ISO 9001 9105.BNT1 ISO 9001 IT-52587 ISO 14001 9191.BNT2 ISO 14001 IT-52588 OHSAS 18001 9192.BSEC OHSAS 18001 IT - 60983

BENTEL SECURITY

This system can be programmed using the respective **KYO320** Software Application 5.4.3 or higher.

Installation of the system must be carried out strictly in accordance with the instructions described in this manual, and in compliance with the local laws and bylaws in force.

The **KYO320** Control panels have been designed and manufactured to the highest standards of quality and performance.

The **KYO320** Control panels have no user-friendly components, therefore, should be serviced by authorized personnel only.

BENTEL SECURITY shall not assume the responsibility for damage arising from improper application or use.

The manufacturer recommends that the installed system should be completely tested at least once a month.

Hereby, Bentel Security, declares that **KYO320** Control panels comply with the essential requirements and other relevant provisions of Directive **1999/5/EC**.

ATTENTION
The control keypads of KYO320 control panel are the CLASSIKA and PREMIUM LCD keypads. All previous Bentel LCD keypads (Alison-S, Alison-DVP, Mia-S, Mia-D) continue to be supported by the KYO320 Control panel. For a correct functionality of PREMIUM and CLASSIKA LCD keypad, the KYO 320 control panel must have a firmware rev. 2.06 or higher (see page 85, 86).

Kyo320 control panel supports both the new key readers of the ECLIPSE2 serie that the previous versions of ECLIPSE serie.

Recycling information

BENTEL SECURITY recommends that customers dispose of their used equipments (panels, detectors, sirens, and other devices) in an environmentally sound manner. Potential methods include reuse of parts or whole products and recycling of products, components, and/or materials.

For specific information see:
www.bentelsecurity.com/en/environment.htm

Waste Electrical and Electronic Equipment (WEEE) Directive

In the European Union, this label indicates that this product should NOT be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

For specific information see:
www.bentelsecurity.com/en/environment.htm

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About the System

The full-featured KYO320 security systems have been especially designed to satisfy all security needs, from residential to advanced industrial applications.

The objective of the KYO320 is to make end-user operation simple and help the Installer improve efficiency. This is achieved by reduced complexity software and firmware, and remote programming and diagnostic facilities.

This system provides impressive application flexibility and many interesting features such as monitoring facilities and telephone access (refer to "**Telephone functions**").

KYO 320 has 8 Input zones expandable to 328, and 6 Outputs expandable to 102.

Partitions KYO320 manages 32 independent Partitions — all with Stay/Away control. Each Partition (group of zones) can be programmed with its own Entry/Exit and Auto-Arm/Disarm Times, etc., and can be controlled by digital Keys/Cards, Codes and/or Input zones.

Events and Actions KYO320 manages over 3000 events . The factory default settings have been purpose programmed to require few or no changes for standard applications. However, the programming flexibility of the Events and Actions (Output, Digital communicator and Voice Dialler Actions) will allow you to fully customize the system.

Telephone Functions The Telephone Communicator manages 50 telephone number. Up to 8 telephone numbers can be assigned to the Digital Communicator. Each Communicator number can have its own Customer Code and Reporting format (usually assigned by the Central station).

The **Bentel Security Suite** Software and **B-Mod2** Modem (accessory items) reduce on-site time to a minimum by allowing you to provide **Teleservice** (on-line Customer enquiry and assistance facilities).

The **Teleservice** function can also be used for uploading, downloading and diagnosis. Up to 4 telephone numbers can be assigned to this function.

Voice Board The K3/VOX2 Voice Board (accessory item) manages 64 recordable Voice messages and 32 telephone numbers for the Answerphone, Dialler, Memo and Ambient-sound recording facilities.
The answering device can function even if the K3/VOX2 Voice Board is absent, but in this case there aren't voice messages.
Voice communications to and from the Control panel allow operations such as: Listen-in; Talk/Listen-in (2Way Audio); Input status enquiry (with Voice answer); Remote control of appliances (Turn ON/OFF); Arm/Disarm Partitions; Alarm Reset and Inhibit Calls.

Access to all the "over-the-phone" features requires a Telephone Access Code — which can be disabled immediately after use.

Scheduler The Scheduler can be setup to Arm/Disarm Partitions automatically (on a daily or weekly basis), and to control 64 daily timer events for KYO320.

Wireless Devices the **VRX32-433** and **VRX32-868** receivers (optional) may be used to "connect" up to 32+32 radio sensors and up to 16+16 radio keys to this control unit.
The **VectorRX-8** receiver (optional) may be used to "connect" up to 8+8 radio sensors and up to 8+8 radio keys.

Programming This system can be programmed from the Keypad, or via the KYO320 Software Application and a computer. The Software Application (runs under Windows) provides real-time supervisory facilities (via connection to an RS232 Interface or Teleservice), and will allow you to make the fullest use of all the system features.

General Features

The KYO320 Control panel

- ❒ Up to 328 Alarm zones: 8 zones on the Main Board; 192 on 32 **M-IN/OUT** Expanders programmed as Inputs (6 zones each) ; 64 on 32 **PREMIUM** Keypads (2 zones per keypad); and 64 Wireless zones.
- ❒ Up to 102 Outputs: 6 Outputs on the Main Board (3 Relays and 3 Open-Collectors); 96 on 16 **M-IN/OUT** Expanders programmed as Outputs (6 zones each)
- ❒ Up to 32 backlit LCD Keypads (**PREMIUM**, **CLASSIKA**) for system control
- ❒ Up to 32 Digital Key/Card Readers
- ❒ 195 User Codes with programmable 'View' option, priority and functions
- ❒ 10000 Event Log with date and time details
- ❒ Up to 8 power stations
- ❒ 4 wire Bus (protected against short-circuit) for peripherals
- ❒ Dual branch bus for protection against tamper
- ❒ Programmable Balance, Operating mode and Alarm type — for all zones
- ❒ Input zones can be programmed to send specific commands to the Control panel
- ❒ Outputs can be programmed as bistable or cyclic with programmable cycle times and standby status
- ❒ 32 programmable partitions — each with own zones, keypads, readers, outputs and times
- ❒ 195 User Codes with programmable priority and functions
- ❒ 500 programmable Digital Keys/Cards
- ❒ 16 character labels (ID) for the partitions, zones, keypads, readers, codes, keys/cards, etc. — the assigned label will be shown on the keypad display during the user operations
- ❒ 10000 Event Log — provides details of the operation type, time and user
- ❒ RS232 Interface for system programming and monitoring
- ❒ Software (runs under Windows) for Control panel Programming, Teleservice and Monitoring

Telephone Facilities

- ❒ Pulse and Touch-tone (DTMF) dialling
- ❒ 50 Telephone numbers for Telemonitoring, Teleservice and Voice Calls
- ❒ Integrated Digital Communicator: supports Pulse, DTMF and FSK Reporting formats
- ❒ 6 Instant Alarm calls from each Keypad
- ❒ Programmable Test call
- ❒ Double Call
- ❒ Line sharing with other Telephone devices
- ❒ 1200 baud FSK integrated Modem for Teleservice management

Telephone facilities with K3/VOX2 optional Voice Board

- ❒ Dialler function: sends recordable voice messages to up to 32 Telephone numbers
- ❒ Remote Inquiry with Voice answer (requires Access Code)
- ❒ Remote control of Outputs, Arm/Disarm operations, Alarm Reset (requires Access Code)
- ❒ Remote Listen-in and multipoint Telephone communication (Talk/Listen-in)
- ❒ Answerphone function

Scheduler function

- ❒ Daily, Weekly and Monthly scheduling
- ❒ Holiday and Daylight Saving (BST) changeover management
- ❒ Overtime and Arming delay management
- ❒ 4 Arm and 4 Disarm operations per day per Partition
- ❒ 64 independent daily Timer events for KYO320.

Event print-out using optional K3/PRT2 Board

- ❒ Prints Events on parallel printer
- ❒ Real-time and/or Event Log printout from specified date to last Event
- ❒ Event filter

The System and Accessories

The Control panel The Control panel is the core of the system. It has 8-zones (KYO320 expands to 328); 6 Outputs (KYO320 expands to 102;) and a 3,6A Switching Power Supply (5,4A accessory item).

M-IN/OUT The **M-IN/OUT** is an Input/Output Expander which allows the number of zones and outputs of the Control panel to be increased. It can be programmed to function as: 6-zone Input Expander; Output Expander with 6 Outputs; Input/Output Expander with 4 zones and 2 Outputs; Input/Output Expander with 2 zones and 4 Outputs. In this manual the term **Input Expander** will be used to refer to the **M-IN/OUT** programmed to function as an Input Expander or Input/Output Expander; the term **Output Expander** will be used to refer to the **M-IN/OUT** programmed to function as an Output Expander or Input/Output Expander. The Control panel supports up to 32 Input Expanders and up to 16 Output Expanders.

☞ *An **M-IN/OUT** programmed as an Input/Output Expander contributes both to the number of Input Expanders and to the number of Output Expanders connected to the Control panel.*

The zones of the M-IN/OUT can operate in normal mode, for connecting movement detectors, or as an interface for connecting contacts for Roller blinds. The M-IN/OUT's Outputs are of open-collector type, i.e. floating or connected to Earth. The M-IN/OUT is connected to the 4-wire bus (on the Control panel), through which it communicates with the Control panel itself and receives a feed for its own operation. The M-IN/OUT is provided with a plastic container for flush or surface mounting and equipped with Anti-tamper and Anti-snatch devices (excludable).

Control Devices The **KYO320** accepts up to 32 **ECLIPSE2** and/or **PROXI** Digital Key/Card Readers, and/or up to 32 **PREMIUM** and/or **CLASSIKA** LCD Keypads.

The operating principles of the ECLIPSE2 and PROXI Readers are the same, except:

- **ECLIPSE2** are for indoor use (unless mounted inside weatherproof boxes) and accepts SAT Keys, PROXI-cards and Miniproxi;
- **PROXI** Readers have weather strips, and can be installed indoors or outdoors (IP34 Protection Class) and accept SAT Keys, PROXI-cards and Miniproxi.
- **ECLIPSE2** and **PROXI** Systems operate without contacts, therefore, are highly resistant to oxidization and wear.
- The operating principles of the **PREMIUM** and **CLASSIKA** Keypads are the same, with a large display (2 lines and 16 columns; only PREMIUM Keypads has on-board a **PROXI**;

☞ *The control keypads of KYO320 control panel are the CLASSIKA and PREMIUM LCD keypads. All previous Bentel LCD keypads (Alison-S, Alison-DVP, Mia-S, Mia-D) continue to be supported by the KYO320 Control panel. For a correct functionality of PREMIUM and CLASSIKA LCD keypad, the KYO 320 control panel must have a firmware rev. 2.06 or higher (see page 85, 86).*

K3/VOX2 The K3/VOX2 Voice board (accessory item) can be used for Voice Messages, and Telephone Access.

K3/PRT2 The K3/PRT2 Printer Interface (accessory item) can be used for real-time and/or Event Log printout.

Power station The Power station has been especially designed for Security system applications. The tamper protected box (protected against delinquency and forced removal) can house a backup battery for power supply during black-out. This control panel supports up to eight BXM12/30-B 3,6A Power Stations and/or BXM12/50-B 5,4A Power stations.

Management Software The management software (runs under Windows) provides full Programming, Customer Database and real-time Supervisory functions, and will allow you to make the fullest use of all the system features.

The B-Mod2 Modem The **B-Mod2** Modem will allow you to **Upload/Download** from/to the remote system and carry out **Teleservice** operations (remote diagnosis and maintenance). The **B-Mod2** will allow you to **Upload/Download** from/to the remote system and carry out **Teleservice** and **Telemonitoring** (send/receive real-time transmissions).

Technical Specifications

The following table contains the technical Specifications of the KYO320.

Voltage	**110-230 V~ ±10% 60-50 Hz**
Maximum current draw	**1.1-0.65 A(1)**
Insulation Class	**Class I**
Power Supply/Battery Charger	**13.8 V⎓ ±1% 3.6 A (2)**
Maximum Current available for Peripherals	**2.4 A (3)**
Battery (Brand and Type)	**12 V - 7 Ah or 12 V - 17 Ah YUASA NP 7-12 FR or NP 17-12 FR or similar Case Flame Class UL94-V2 or higher**
Random Digital Key/Card Codes	**4.295.000.000**
Operating Temperature	**5 - 40 °C**
Dimensions (W x H x D)	**339 x 488 x 108 mm**
Weight (without battery)	**5.55 Kg**

(1) **1.7-0.8 A** with BAW75T12 switching Power Supply.

(2) **5.4 A** with BAW75T12 switching Power Supply.

(3) **4.2 A** with BAW75T12 switching Power Supply.

The following chart shows the current draw (**I (mA)** column) and size of the accessory components.

Component	I (mA)	Size (WxHxD mm)
KYO320 *Main Board*	**250**	**—**
PREMIUM *Keypad with PROXI enabled* *with* ***PROXI*** *disabled*	**60** **50**	**134x114x28,5**
CLASSIKA *Keypad*	**50**	**144,5x116x27,5**
ECLIPSE2 *Reader*	**30**	**—**
PROXI *Proximity Reader*	**30**	**78 x 108 x 22**
M-IN/OUT *Programmable Input/Output Expander*	**20**	**108 x 101 x 34**
Omnia4R *4 Relay Module*	**120**	
K3/VOX2 + VOX-REM *Voice Board + Microphone -Loudspeaker Board*	**20**	**—**
K3/PRT2 *Printer Interface*	**40**	**—**
BXM12/30-B *Power Station*	**10**	**—**
BXM12/50-B *Power Station*	**10**	**—**

■ Accessory Items

The following chart shows the Control panel accessory items, and certifications.

PREMIUM	*Backlit LCD Keypad+PROXI*
CLASSIKA	*Backlit LCD Keypad*
M-IN/OUT	*Programmable Input/Output Expander*
K3/VOX2	*Voice Board*
K3/PRT2	*Printer Interface*
VOX-REM	*Microphone + Loudspeaker for Listen-in function*
MINI-BOX	*Microphone + Loudspeaker box*
PROXI	*Proximity Reader*
PROXI-CARD	*Proximity Card*
ECL2-UKR	*Universal Module Insertion*
ECLIPSE2	*Flush-mounted insertion device-Contactless*
ECL2-C	*Cover for Universal Module InsertionModulo ECL2-UKR*
ECLIPSE3	*Flush-mounted insertion device*
SAT	*Digital Key,* ***Contactless****—for Key and Proximity Readers*
OMNIA/4R	*4-Relay module for the M-IN/OUT Expanders programmed as Outputs*
BXM12/30-B	*3,6 A Power Station*
BXM12/50-B	*5,4 A Power Station*
BAW75T12	*Power supply 13,8 V - 5,4A*
B-MOD2	*Teleservice and telesurveillance Modem*
CVSER/9F9F	*Serial cable for computer link*
ADSER/9M25F	*25 pin adapter for serial ports*
SECURITY SUITE	*Management Software*
VECTOR/RX	*Wireless Receiver*
VRX32-868	*868 MHz Wireless Receiver*
VRX32-433	*433 MHz Wireless Receiver*
VECTOR/RX-8	*433 MHz Wireless Receiver*
KMD20 - 20NP	*868 MHz Wireless PIR Detector*
KMC10-20-30	*868 MHz Wireless Magnetic Contact*
KRC10	*868 MHz Wireless Digital Key*
KRP10	*868 MHz Wireless Digital Key*
KSD20	*868 MHz Wireless Smoke Detector*
AMD20	*433 MHz Wireless PIR Detector*
AMC30	*433 MHz Wireless Magnetic Contact*
ARC20	*433 MHz Wireless Digital Key*
ASD20	*433 MHz Wireless Smoke Detector*
ASNC	*Seize microswitch for Keypads*
ASNC-MINI	*Seize microswitch for Proximity Readers*
KST	*Thermal Probe*

■ KYO320 features Table

Readers	**32**
Input/Output Expander	**32** Input Expanders **16** Output Expanders
Power Station	**8**
LCD Keypads	**32**
LCD keypads supported	PREMIUM LCD, CLASSIKA LCD (MIA-D, ALISON-DV, ALISON-S with firmware 1.30 or higher ONLY) ALISON-DVP,ALISON(B029)
RX Wireless Receiver	**yes**
Zones on-board	**8**
Zones on Keypad	**64+16**
Zones on Exp-In	**192**
Wireless Zone	**32+32**
Total Zones	**328**
Supervised Relay Outputs	**3**
On-board Relay Outputs	**3**
Open-drain Outputs on-board	**3**
Open-drain Outputs on- Exp-out	**96**
Total Outputs	**102**
Partitions	**32**
Total User Codes	**195**
DTMF User Codes	**64 (su195)**
Installer Codes	**5**
User Code Types	**16**
Installer Code Types	**3**
Keys/Cards	**500**
Keyfobs (Wireless Keys)	**16+16**
Events in Log	**10000**
Total Events-Actions	**3418**
Customizable Events	**32**
Timers	**64**
Voice Messages	**64**
K3/VOX2 Voice Board	**yes**
K3/PRT2 Printer Board	**yes**
Numbers in Phonebook	**50**
Telephone Dialler Actions	**50**
Digital Communicator Actions	**100**

Please read this section carefully to get an overall view of the main components of the system and LEDs.

The numbers in boldface (used in this text) refer to the descriptions in the tables and figures in this section.

The components are generally numbered in clockwise order. The outlined numbers refer to the common hardware components of the BPI devices and are described once only — when first encountered.

■ **About the Control panel**

Figure 1 shows the maximum configuration of the KYO320, therefore, some of the components may not be present on this system.

No.	DESCRIPTION
1	*Frontplate screws (2)*
2	*Loudspeaker (supplied with K3/VOX2 Voice Board)*
3	*Tamper microswitch*
4	*Main Board (see fig. 2)*
5	*Backplate anchor screw locations (4x Ø 5 mm)*
6	*K3/VOX2 Voice board (accessory item)*
7	*K3/PRT2 Printer Interface (accessory item)*
8	*Switching Power Supply (see fig. 3)*
9	*Thermal probe (accessory item)*
10	*Housing for 12V – 17Ah max. Battery (not supplied)*
11	*Cable entry*
12	*Seize microswitch*
13	*Seize microswitch bracket*
14	*Loudspeaker Connector*
15	*Future use connector*
16	*Terminal board for Telephone line connection*
17	*K3/VOX2 Voice Board connector*
19	*K3/PRT2 Printer Interface connector*
20	*Flash Memory chip*
21	*Memory Jumper (M) — if inserted, it will allow the system to save the programmed parameters during black-out:*  *= parameters will be deleted (at default);*  *= parameters will be saved*
22	*Switching power Supply connector (connected)*
23	*RAM chip battery holder*
24	*Serial Port RS232*
25	***MICRO** LED(RUN):* *OFF or ON = Microprocessor blocked* *Flickering = Microprocessor OK*
26	***BPI** LED:* *OFF = BPI Bus OK* *ON = BPI Bus Trouble*
27	***MAINS** LED (POW):* *ON = Control panel powered by Mains;* *OFF = Mains Failure—the Control panel will be powered by the backup Battery during blackout*
28	***RESET** LED (RES):* *OFF = Microprocessor OK* *ON = Microprocessor resetting*
29	*Self-recover termic Fuse*
30	*Connector for backup Battery (The control panel shuthdown the backup Battery due to voltage drop (Safety threshold 9,6V), because this condition can damage the battery)*
32	*Terminal board (KEY BUS) for VectorRX, VRX32-433 and VectorRX-8 Receiver connection*
33	*Terminal board (BPI bus) for BPI device connections*
34	*Self-recover termic Fuse*
35	*Self-recover termic Fuse*
36	*Self-recover termic Fuse*
37	*Self-recover termic Fuse*
38	*Connector for PREMIUM LCD, or CLASSIKA Keypad*
39	*Microprocessor*
40	*Terminal board for Tamper Line and Input device connections (Detectors, etc.)*
41	*Seize connector (connected)*
42	*Self-recover termic Fuse*
43	*Self-recover termic Fuse*
44	*Self-recover termic Fuse*
45	*Self-recover termic Fuse*
46	*Self-recover termic Fuse*
47	*RAM chip*
49	*Terminal board for Output device connections (Sirens, etc.)*
50	*STOP ALARM Jumper: can be used to disable Outputs no. 1, 2 and 3 (terminals +N1, +A1, C1-NC1-NA1, +N2, +A2, C2-NC2-NA2, +N3, +A3, C3-NC3-NA3):*  *= Output Enabled (at default)*  *= Output Disabled*
51	*Tamper microswitch connector (connected)*
53	*Stranded wires: connect the Switching Power Supply to the Main board (connected)*
54	*Fine Adjustment Trimmer*
55	*Auxiliary power terminals (13.8 V)*
56	*Mains terminals*
57	*Switching Power Supply screw*

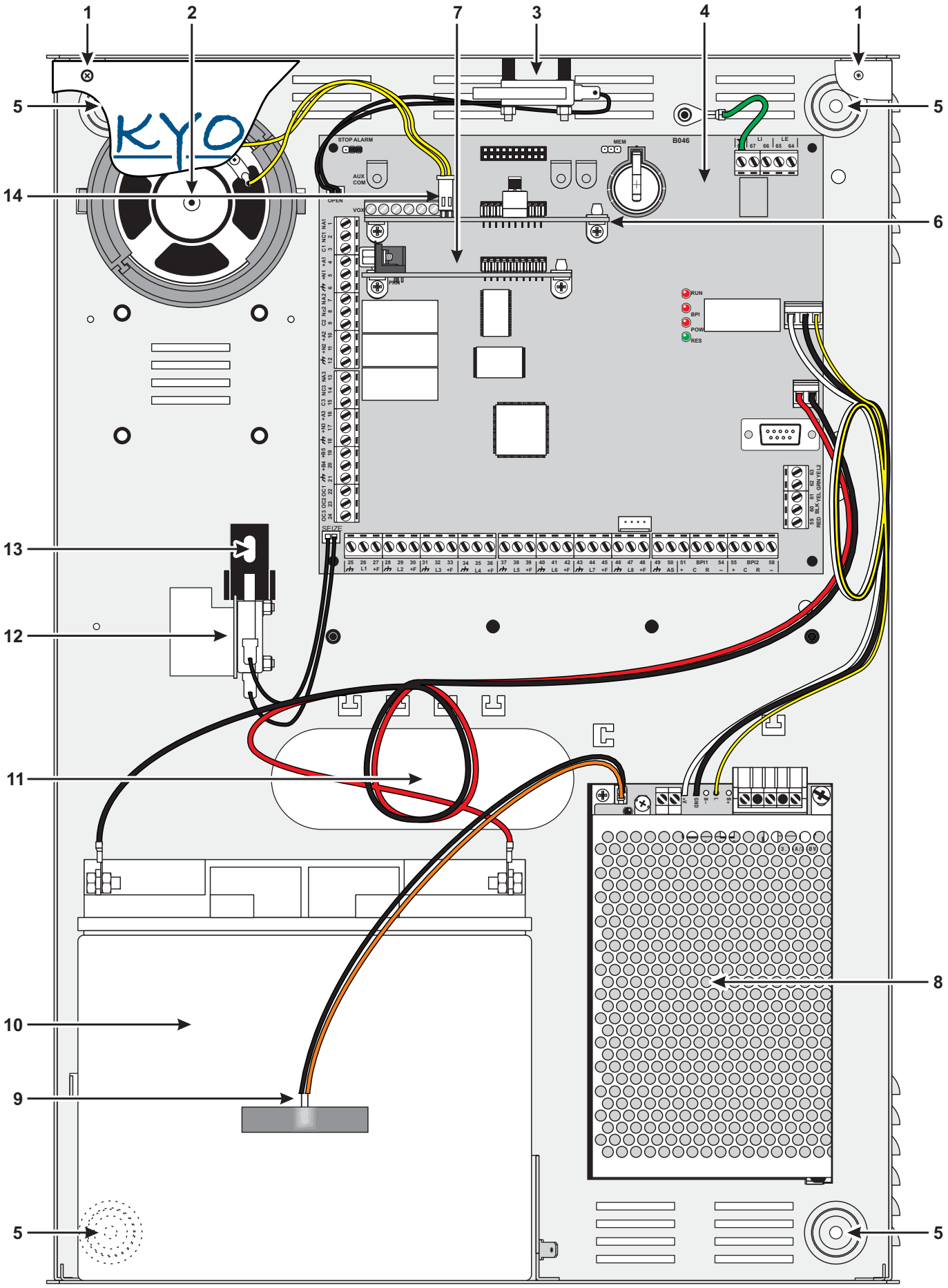


Figure 1 *Kyo320 Control panel components (maximum configuration)*

No.	DESCRIPTION
58	*Fuse — protects against overload (F 3.15A 250V)*
59	*Rivet*
60	*Fuse — protects against Battery polarity inversion (F 6,3A 250V)*
61	*Mains LED*
62	*Switching Power Supply connector to connect the probe **9***

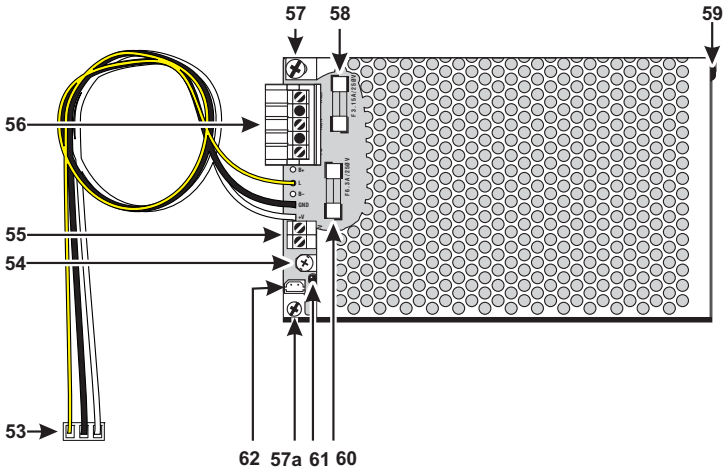


Figure 3 *Switching Power Supply components*

■ PREMIUM and CLASSIKA Keypads

ICON	DESCRIPTION
	Partitions Armed
	Alarms in Memory
	Trouble and Zone in Test status
	Message in Memory
	Open Panel
	Tamper Alarm
	BPI Device Tamper
	False Key/Card at Reader
	BPI Device Missing
	Teleservice enabled
	Answering device enabled
	Telephone line engaged

No.	DESCRIPTION
63	*Backlit LCD, 2 rows x 16 columns*
64	*Buzzer*
65	*Keypad Clips*
66	*Tubular bubble (PREMIUM Keypad ONLY)*
67	*Down flip*
68	*Microprocessor*
69	*BPI Level Jumper: = 12 V (at default); = 5 V*
69a	*Terminal label*
70	*Cable entry*
71	*Board Supports (4)*
72	*Terminal board*
73a	*Strip to connect terminal board*
73	*BPI Level Jumper : 12V 5V = 12 V (at default) 12V 5V = 5 V*
74	*Screw locations*
75	*Tamper microswitches (2)*
76	*Screw locations (2) for mounting to mod. **503** outlet boxes or similar*
77	*Keypad backplate*
78	*PCB Clip*
79	*Slot to open keypads*
80	*Address DIP Switches*

No.	DESCRIPTION
81	*Board Supports (2)*
82	*Seize microswitch bracket location*

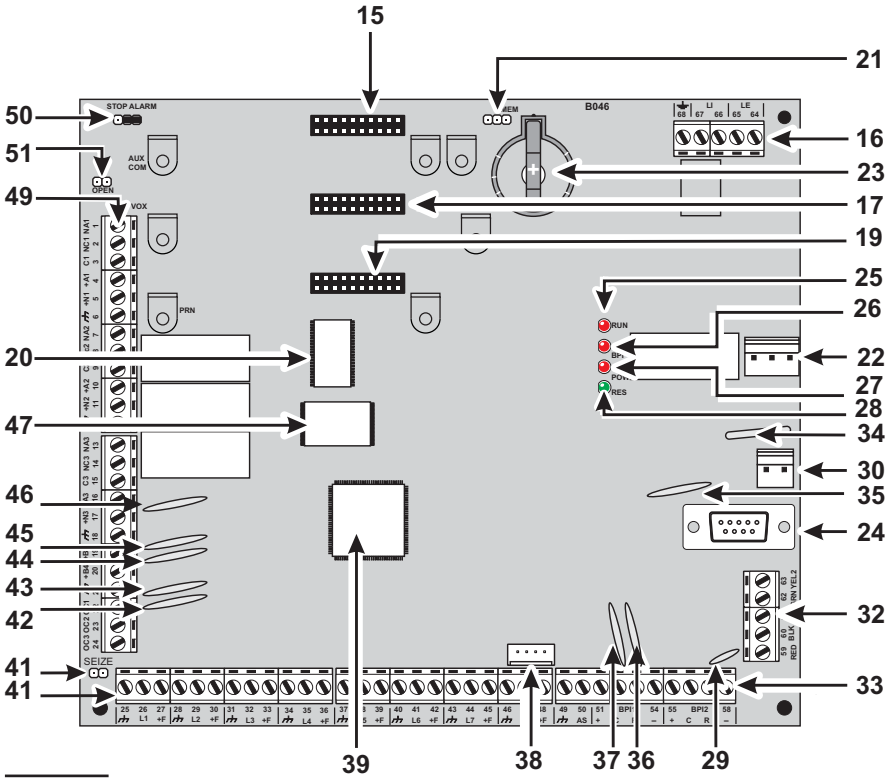


Figure 2 *Kyo320 Main board components*

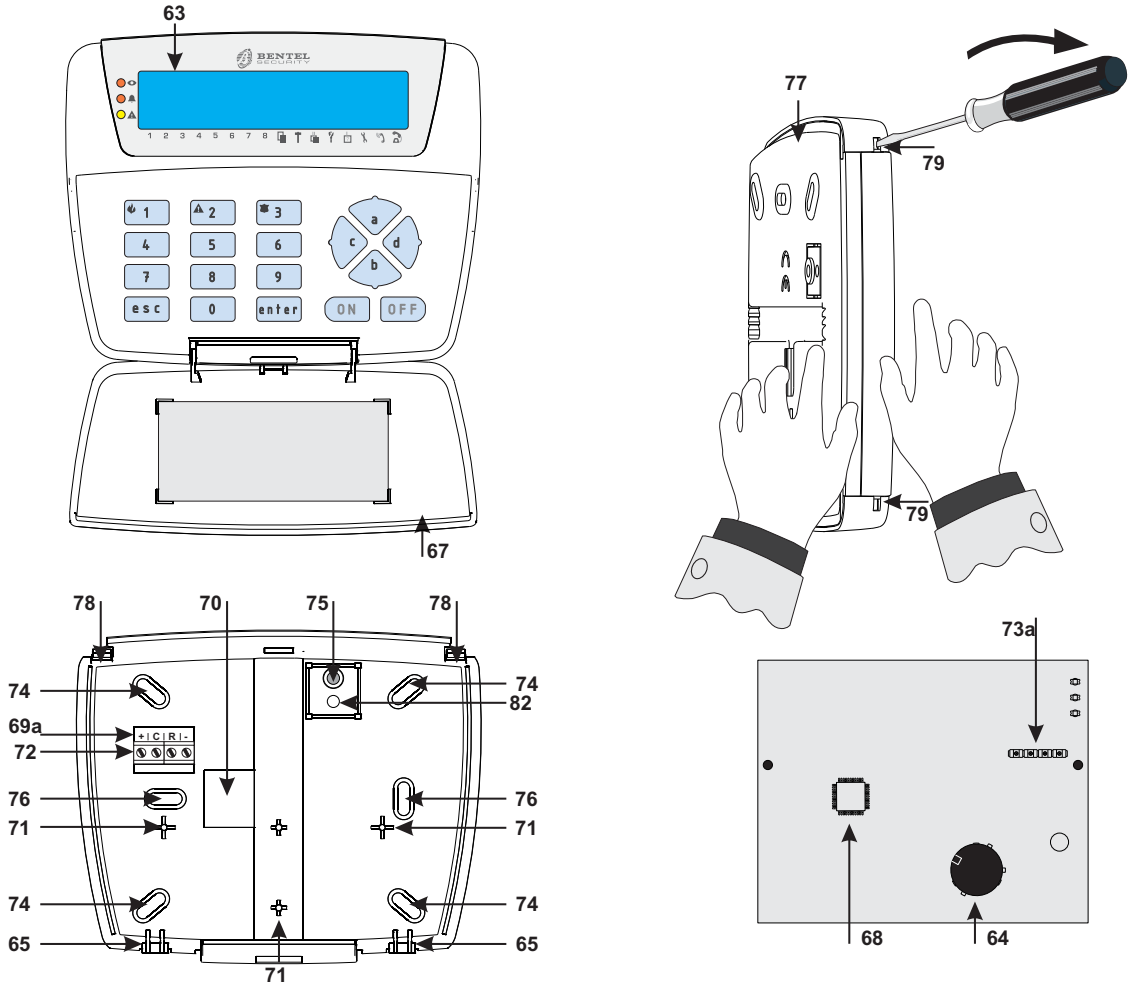


Figure 4 *Parts of CLASSIKA LCD Keypad.*

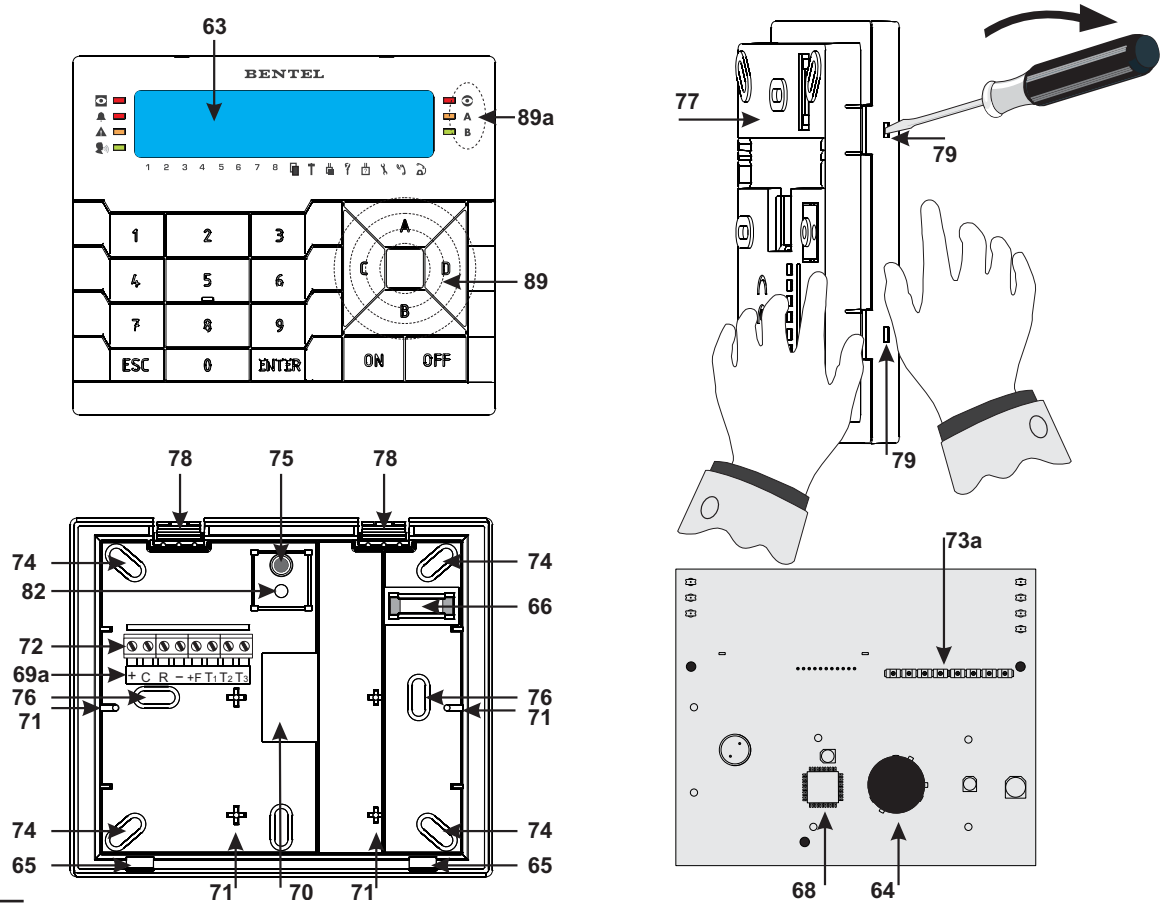


Figure 5 *Parts of PREMIUM LCD keypad*

■ Readers and Digital Keys

No.	DESCRIPTION
83	*Backplate anchor screw locations (2)*
84	*Microprocessor*
85	*Connection wires: red = **+**; white = **C**; blue = **R**; black = **–***
86	*Seize microswitch connector*
87	*Seize microswitch (accessory item)*
88	*Seize microswitch location*
89	*Sensitive field*
89a	*PROXI reader LEDs*
90	*Cover screw*
91	*The notch shows how the cover ECL2 must be inserted in the Universal Module Insertion ECL2-UKR*
92	*Command button*
93	*Snap catch*
94	*Cable entry*
95	*Tamper microswitch*

LED	DESCRIPTION
red	*Status of Reader Partitions*
👁	*OFF = ALL the Reader Partitions are DISARMED; **ON** = AT LEAST ONE of the Reader Partitions is ARMED.* *__Slow blinking__ = AT LEAST ONE of the Reader Partitions has AT LEAST ONE Alarm or Tamper memory, and all Partitions are DISARMED.* *__Fast blinking__ = AT LEAST ONE of the Reader Partitions has AT LEAST ONE Alarm or Tamper memory, and AT LEAST ONE Partition is ARMED.*
amber	*A Mode Arming:*
A	*OFF = the status of the Keypad Partitions DOES NOT MATCH the A Mode Arming configuration; **ON** = the status of the Keypad Partitions MATCHES the A Mode Arming configuration.*
green	*B Mode Arming:*
B	*OFF = the status of the Keypad Partitions DOES NOT MATCH the B Mode Arming configuration; **ON** = the status of the Keypad Partitions MATCHES the B Mode Arming configuration.*

☞ *These descriptions are not valid when a key is present at the Reader.*

☞ *If ALL THREE LEDs blink, the system HAS NOT RECOGNIZED the Key/Card (false Key/Card). If ONE LED blinks, one or more of the Partition zones is already in Alarm status.*

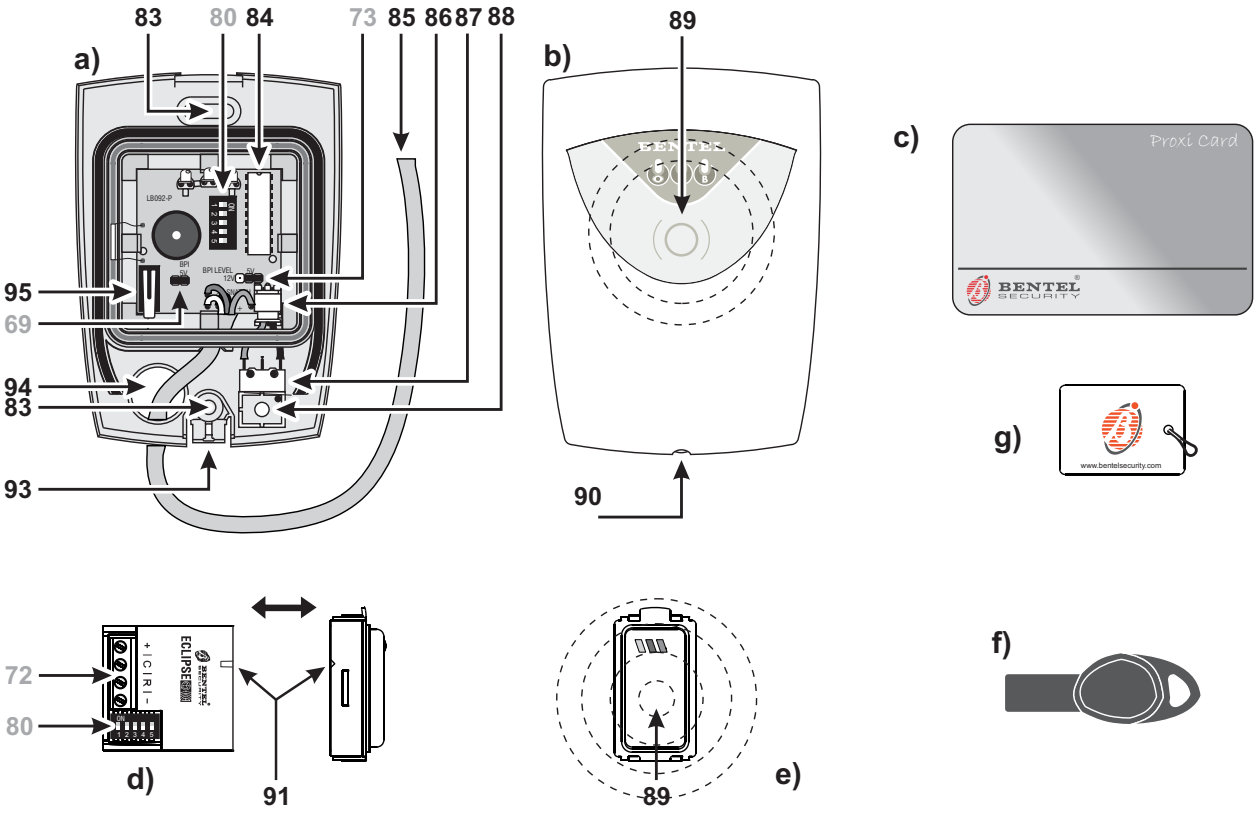


Figure 6 *Readers and Digital Key: PROXI Proximity Reader — internal view (**a**) external view (**b**); PROXI-CARD for Proximity Reader and ECLIPSE2 (**c**);ECLIPSE2 Contactless Reader with 5 DIP Switches , Magic Version - side view (**d**) front view (**e**); SAT Key for ECLIPSE2 and PROXI Readers (**f**), Miniproxi for Proximity Reader and ECLIPSE2 (g).*

■ M-IN/OUT Programmable Input/Output Expander

No.	DESCRIPTION
96	*Snatch microswitch contact on printed circuit (solder side)*
97	*Jumper for excluding snatch microswitch and tamper switch contacts:*  *= Contacts Active (default);* *= Contacts Excluded*
98	*Tamper switch contact on printed circuit (component side)*
99	*Terminal Board*
100	*Frontplate screw locations (4)*
101	*Programmable Input/Output Expander*
102	*Expander screws (2)*
103	*Cable entry*
104	*Screw locations (2) for mounting to **503** outlet box or similar*
105	*Cable duct entry*
106	*Surface mounting screw locations (2)*
107	*Hole for fixing snatch microswitch bracket*
108	*Conductive pin on the inside of the cover for closing the tamper switch contact*
109	*Conductive pin on the snatch microswitch bracket for closing the snatch microswitch contact*

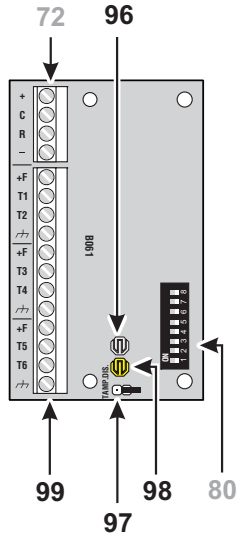


Figure 7 *Parts of the M-IN/OUT Input/Output Expander*

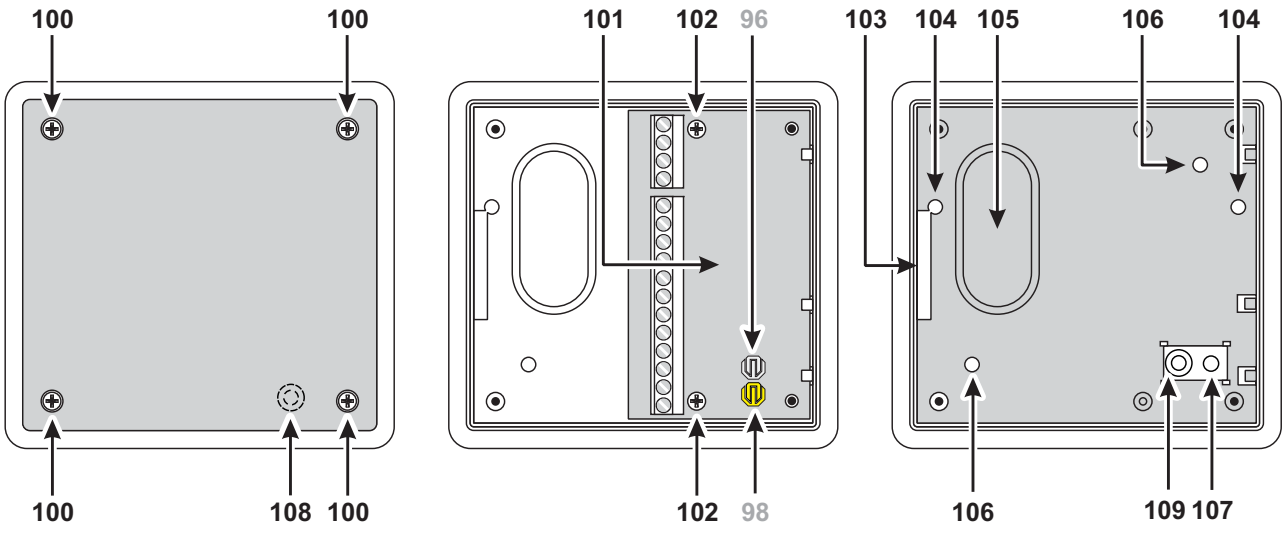


Figure 8 *Module and Expander box*

Mounting the Main Unit

Please read this section carefully to get an overall view of the steps involved in installing the KYO320 Main Unit. The KYO320 Main Unit should be located in a safe, dry place that is far from sources of interference.

Once you have selected a suitable place, create a layout of all the system peripherals (Keypads, Readers, Detectors, etc.) and ensure that you will be able to connect the Main power, peripherals, and if necessary, the telephone line to the KYO320 without difficulty. Allow at least 5 cm of free space around the Main Unit for air flow.

⚠ **The Main Unit must be at least 2 metres from GSM and radio relay systems.**

Work carefully through the following steps (see Figure on page 10).

1. Remove the screws **1** and frontplate.
2. Install add-on modules and boards (K3/VOX2, etc.), refer to the respective paragraphs for instructions.
3. Drill the holes for the cabinet and Seize microswitch bracket anchor screws **(5** and **13** respectively).
4. Pull the connection wires through the wire entry **11** then attach the cabinet and Seize microswitch bracket to the wall.

☞ *DO NOT over tighten the screws as this may damage the Seize microswitch bracket.*

5. Complete the connections — DO NOT connect the MAINS until all other wiring has been completed.
6. Connect the Mains Power (refer to “Connecting the Mains Power”).
7. Program the system (refer to the “PROGRAMMING” section and the “PROGRAMMING FROM KEYPAD” Guide for instructions).

■ Connecting Keypads

Keypads should be located in places where full control of the system is required: **PREMIUM LCD**, **CLASSIKA LCD**, Keypads can be surface mounted on Mod. 503, outlet boxes or similar.
PREMIUM keypad can be mounted on a suitable box (accessory item) see Premium keypad manual.

☞ *Keypads should be mounted at eye level for easy viewing.*

Work carefully through the following steps (see Figure 5 on page 12) and/or respective manuals.

CAUTION - Before removing the CLASSIKA keypad cover, open the down flip (67) COMPLETELY.

1. If the Keypads are closed, insert a little flat screwdriver in the slot **79** (see Figure 4) and rotate in the direction of the arrow. Open the keypad slightly (see the position of the hands, Fig 4, 5); one part will be composed of the cover with the mounted PCB and on the other hand, the backplate with the terminal board.
2. If you are surface mounting the Keypad: drill the holes for the backplate anchor screws **76 (74)**, and if required, for the seize microswitch bracket screw **82**.
3. If you are surface mounting the Keypad on a suitable box: drill the holes for the seize microswitch bracket screw **82**.
4. Fix the keypad base in place.
5. Run the connection cables through opening **70**.
6. Connect the wires to the terminal board **72**.
7. Replace the keypad cover, before using the hooks **65** then block it with a slight pressure till the snaps **78** are clicked.

■ **Connecting Readers**
Readers can be located in places where limited control of the system is required (Arming, A and B Mode Arming, Disarming and Stop Alarm operations).

This system supports Digital Key and Proximity Card Readers.

Key Readers Key Readers can be flush mounted to most standard domestic light-switch/plug-socket outlet boxes. Ask your dealer or go to the available covers on site www.bentelsecurity.com.

☞ *Digital Key Readers must be at least **10 cm** apart.*

To install Key Readers, work carefully through the following steps (see Figure on page 13).

1. Assign the Reader Address, then set the BPI Level and complete the connections on the terminal board (refer to “Connecting BPI Peripherals” for instructions).

2. Fit the Reader in its placement (use the standard procedure for fitting domestic light-switches and plug sockets).

Proximity Readers Proximity Readers can be surface mounted, or mounted to Mod. 503 outlet boxes or similar. Proximity Readers are fitted with weather strips (Protection Class **IP34**), therefore, are suitable for outdoor use.

☞ *Proximity Readers must be at least **50 cm** apart.*

To install Proximity Readers, work carefully through the following steps (see Figure on page 13).

3. Remove the screw **90** (if fitted), then using a screwdriver or similar tool push down on the catch **93** to release the frontplate.

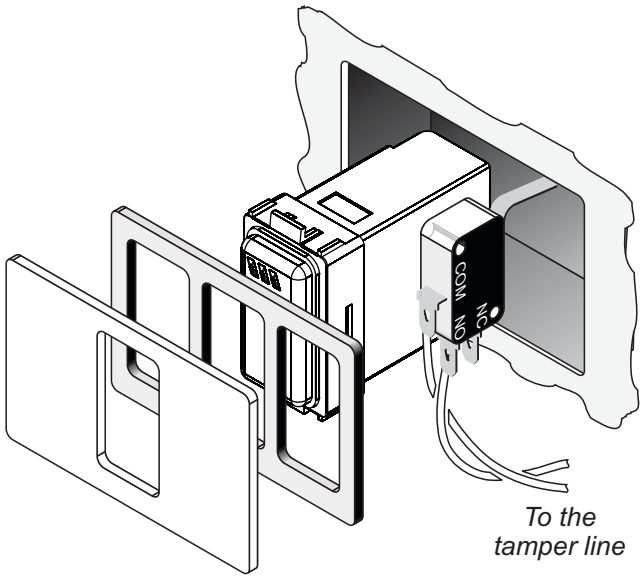


Figure 9 *Mounting Key Readers ECLIPSE2 Magic type*

4. Drill the holes for the backplate and Seize microswitch bracket anchor screws (**83** and **88** respectively).

5. If you are fitting a Seize microswitch (Order Code: ASNC-MINI), push it firmly into its location (**87** in Fig. 6) then connect it to the connector **86**. Ensure that the Seize microswitch lever is held firmly in position by the bracket tooth.

6. Secure the Reader and Seize microswitch bracket to the wall.

7. Assign the Reader Address, set the BPI Level and complete the connections on the terminal board (refer to “Connecting BPI Peripherals” for instructions).

8. Reattach the frontplate.

■ **M-IN/OUT Programmable Input/Output Expander**
Fix the M-IN/OUT Input/Output Expander as close as possible to the devices to which it is to be connected.

The Expander is provided with a plastic container for visible (surface) mounting or flush mounting, as described in the following instructions (see Figure on page 14).

1. Remove the knockout (**103** or **105** as required).

2. – *Surface mounting:* drill the holes for the backplate and Seize microswitch bracket anchor screws (**106** and **107** respectively).
   – *Flush mounting to Mod. 503 outlet box or similar:* drill the hole for the Seize microswitch bracket anchor screw **104**. No other drilling is required for Flush mounting.

3. Pull the wires through the wire entry.

4. Secure the back box and Seize microswitch bracket to the wall.

☞ *Position the snatch microswitch bracket as shown in figure 8 on page 14, with the conductive pin **109** on the back of the container. The pin is designed to close the snatch microswitch contact **96** on the printed circuit (solder side).*

5. Replace the PCB inside the box.

6. Set the Address of the device and carry out the connections on terminal board **72**, as described in the paragraph "Connecting the BPI devices".

7. Set the operating mode for the tamper switch and snatch microswitch using jumper **97**:
   = Tamper and Snatch switches enabled ;
   = Tamper and Snatch switches disabled.

8. Set the operating mode using microswitches 6 and 7 on DIP switch **80** as shown in the following table:

Microswitch No. 6	Microswitch No. 7	OPERATING MODE
OFF	**OFF**	*Input Expander with 6 Inputs*
ON	**OFF**	*Input Expander with 4 Inputs + Output Expander with 2 Outputs (T1 and T2 Outputs; T3, T4, T5 and T6 Inputs)*
OFF	**ON**	*Output Expander with 4 Outputs + Input Expander with 2 Inputs (T1, T2, T3 and T4 Outputs; T5 and T6 Inputs)*
ON	**ON**	*Output Expander with 6 Outputs*

9. Set the operating mode of the Inputs using microswitch 8 on DIP switch **80** as shown in the foll owing table:

Microswitch No.8	OPERATING MODE FOR INPUTS
OFF	*All Inputs operate in Normal mode*
ON	*All inputs operate in Normal mode and function as interface for Roller blind contact. Zone will trigger alarm according to programmed sensibility or if 5 pulses will be noticed, in the time of two minutes*

10. Replace the frontplate.

☞ *The Roller-blind attribute can only be reset via hardware, through microswitch n.97, and not by software, through the package Bentel Suit (the Roller-blind attribute, for the M-IN/OUT expander zones, is blocked).*

☞ *Be careful about the position of conductive pin **108**, located inside the cover: it must close the Tamper switch Contact **98** on the PCB (component side).*

Terminals

This section describes the Main Unit and BPI device terminals.

The layout of Terminal Description table is as follows:
- the **Ter.** column shows the terminal identifier;
- the **DESCRIPTION** column provides a brief description of each terminal;
- the **v(V)** column shows the terminal voltage (the hyphen "–" indicates that the voltage cannot be specified for the terminal concerned);
- the **I(A)** column shows the maximum current (in Amperes) that can circulate on the terminal (the hyphen "–" indicates that the current cannot be specified for the terminal concerned);
- the numbers in brackets refer to the following notes.

(1) The total current draw of Main Unit terminals [+A3], [+N3], [+A2], [+N2], [+A1], [+N1], [+B4], [+B5], [+F], [+F1], [+] and [RED] must not exceed **3.8A** for **KYO320**.

(2) The current draw of BPI device [+] terminals is:

- Keypad = 0.06 A for **PREMIUM** (with Proxi enabled), and 0.05 A (with Proxi disabled), 0.05A for **CLASSIKA**
- Reader = 0.03 A
- **M-IN/OUT** Input/Output Expander = 0.02 A.

☞ *These values refer to the current draw of the BPI devices with no loads.*

(3) The sum of the currents absorbed by the terminals [+F] of an M-IN/OUT Input/Output Expander must not exceed **0.4 A**.

(4) The terminals **T** of M-IN/OUT Expander can switch up to 0.1 A. To switch higher currents use the CNM004R Relays card.

■ **Main Unit**

Ter.	DESCRIPTION	v(V)	I(A)
NA3 NC3 C3	*Programmable Output no. 3 (changeover switch contacts)*	**–**	**3**
+A3	*Programmable Output no.3 (positive), protected by fuse*	**13.8**	**3(1)**
+N3	*Programmable Output no. 3 (intrinsic security), protected by fuse*	**13.8**	**3(1)**
NA2 NC2 C2	*Programmable Output no. 2 (changeover switch contacts)*	**–**	**3**
+A2	*Programmable Output no. 2 (positive), protected by fuse*	**13.8**	**3(1)**
+N2	*Programmable Output no. 2 (intrinsic security), protected by fuse*	**13.8**	**3(1)**
NA1 NC1 C1	*Programmable Output no. 1 (changeover switch contacts)*	**–**	**3**
+A1	*Programmable Output no. 1 (positive), protected by fuse*	**13.8**	**3(1)**
+N1	*Programmable Output no. 1 (intrinsic security), protected by fuse **46***	**13.8**	**3(1)**
+B4	*Positive power supply to peripherals, protected by fuse (will be powered by the battery during Mains failure)*	**13.8**	**3(1)**
+B5	*Positive power supply to peripherals, protected by fuse (will be powered by the battery during Mains failure)*		**3(1)**
⏚	*Negative*	**0**	**–**
OC1	*Programmable Output no. 4 (Open-Collector)*	**0**	**1**

Ter.	DESCRIPTION	v(V)	I(A)
OC2	*Programmable Output no. 5 (Open-Collector)*	**0**	**1**
OC3	*Programmable Output no. 6 (Open-Collector)*	**0**	**1**
AS	*10 KΩBalance Tamper Line*	**–**	**–**
L1 : L8	*Programmable Input Line*	**–**	**–**
+F	*Power supply to detectors (**positive**), protected by fuse (will be powered by the battery during Mains failure)*	**13.8**	**3(1)**
BPI1	*1° branch of the BPI bus for the BPI peripherals:* ***+** = positive protected by fuse* ***C** = Command* ***R** = Response* ***–** = Negative*	**13.8**	**3(1)**
BPI2	*2nd branch of the BPI bus for the BPI peripherals:* ***+** = positive protected by fuse* ***C** = Command* ***R** = Response* ***–** = Negative*	**13.8**	**3(1)**
RED **BLK** **YEL** **YEL2** **GRN**	*KEY BUS:* *positive protected by fuse* *negative* *Receiver 1* *Receiver 2* *data*	**13.8**	**0.5 (1)**
⏚	*Earth Terminal*	**0**	**–**
LE	*External telephone line terminals*	**–**	**–**
LI	*Line-sharing devices terminals (for Answerphone, telephone, fax, modem, etc.)*	**–**	**–**

■ **BPI Peripherals**

The terminals shown in the following table are common to all BPI peripherals.

Ter.	DESCRIPTION	v(V)	I(A)
+	*Power supply: **positive***	**13.8**	**(2)**
C	*Command*	**–**	**–**
R	*Response*	**–**	**–**
–	*Power supply: **negative***	**0**	**–**

Keypad Keypad have the common BPI bus connection terminals, and **PREMIUM** keypad only the following terminals.

Ter.	DESCRIPTION	v(V)	I(A)
+F	*Power supply to Detectors (**positive**), protected by resettable fuse*	**13.8**	**0.4**
T1	*Programmable Input or output Line (according to M-in/out expander functioning)*	**–**	**–**
T2	*Programmable Input or output Line (according to M-in/out expander functioning)*		
T3	*Programmable Input or output Line (according to M-in/out expander functioning)*		

Input Expanders The **M-IN/OUT** Input/Output Expander has the following terminals (besides the terminals for connecting to the BPI).

Ter.	DESCRIPTION	v(V)	I(A)
+F	*Power supply (**positive**) protected by a self-resetting fuse*	**13.8**	**(3)**
T1 : T6	*Input or Output zones depending on the operating mode of the Expander*	**–**	**–**
⏚	*Power supply (**negative**) for the devices connected to the Expander*	**0**	**0,15**

Output Expanders Output Expanders have the common BPI bus connection terminals, and the following terminals.

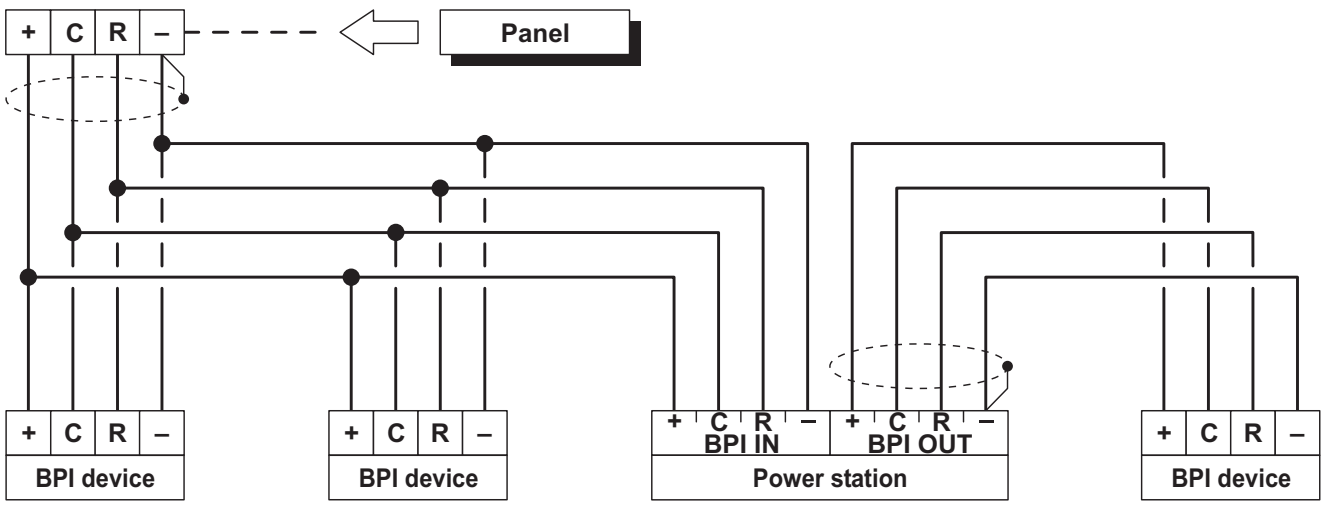


Figure 10 *Connection of 4 BPI Devices*

Ter.	DESCRIPTION	v(V)	I(A)
⏚	*Power supply (**negative**) to the peripherals connected to the Open-Collector Outputs*	**0**	**–**
+F	*Power supply (**positive**) to the peripherals connected to the Open-Collector Output, protected by resettable fuse*	**13,8**	**(3)**
OC1 : OC6	*Programmable Open-Collector Output*	**0**	**0.15**

Wiring

The section describes how to wire the Main Unit, BPI bus peripherals and various security devices.
Each wiring diagram refers to a specific type of device (BPI bus devices, Detectors and Signalling devices).

☞ *Use shielded cable for all connections, with one end connected to negative and the other floating.*

⚠ **The end of the stranded conductor must not be soft soldered in places where it is subject to contact pressure.**

⚠ **The Mains wiring must comply with the rules for double or reinforced insulation.**

☞ *Use an adhesive cable grip to secure the wires to the terminal boards.*

The wiring diagrams show some of the many tailored solutions this system provides.

About the Wiring Diagrams The locations of the terminals in the wiring diagrams may be different to those on the board.

- The Zone terminals may belong to the Control panel, the Keypads or the Input/Output Expanders;
- The Output terminals may belong to the Control panel or the Input/Output Expanders;
- the Input zone and the Open-Collector Output terminals (in the wiring diagrams) can be found on the Main Unit or Expanders;
- only the terminals required for the connection are shown in the wiring diagrams.

Connecting BPI Bus Devices

The BPI bus supports the following devices:
- up to 32 Keypads
- up to 32 Readers
- up to 32 Input Expanders
- up to 16 Output Expanders
- up to 8 Power stations
- up to 16 LED Keypads

Electrical Connections The BPI bus devices must be connected in parallel to terminals [+], [C], [R], [–] on the Main Unit, as shown in Fig. 10.

The Power Station has two groups of terminals for the BPI bus connection: the **BPI-IN** group — for the Power Station; and the **BPI-OUT** group — for the BPI devices connected downstream of the Power Station.
The two groups of terminals are electrically isolated, therefore, all the cables and devices connected downstream of the Power Station will not load the Control panel BPI bus.
Refer to the Power Station Instructions leaflet for further details.

☞ *Only one Power Station can be connected to each shunt of the Control panel BPI bus (see Fig. 11).*

Dual Branch Bus The Control panel BPI bus has two independent branches:
Branch 1 (BPI1) — terminals no. 51, 52, 53 and 54;
Branch 2 (BPI2) — terminals no. 55, 56, 57 and 58.
Each Branch is protected by its own fuse, therefore, short-circuit on one branch will not impair the operating capacity of the other.

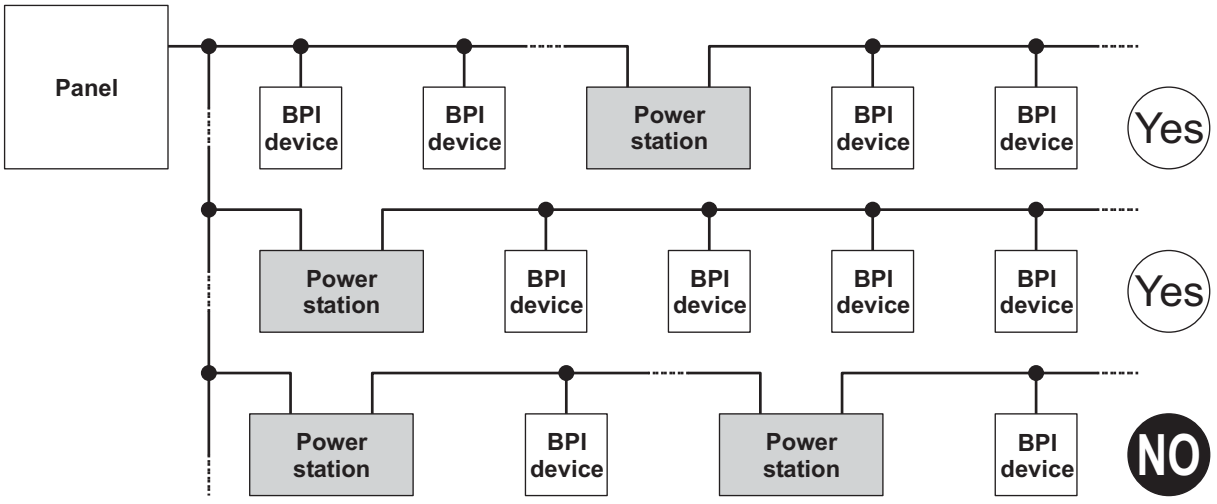


Figure 11 *Connecting a Power Station*

☞ *The **Outdoor** Control panel BPI bus peripherals should be connected to one Branch of the BPI bus, and the **Indoor** peripherals to the other. In this way, tamper on one branch will not impair the operating capacity of the other.*

Assigning Addresses You must assign an Address to each of the BPI bus devices. The assigned Address will allow the Control panel to distinguish one device from another. The Peripheral devices are divided into types: Keypads, Readers, Input/Output Expanders and Power Stations.
Devices of the same type (e.g. two Readers) must have **different Addresses**.
Devices of different types (e.g. a Keypad and a Reader) are intrinsically different, therefore, may have the **same Address**. The BPI bus peripheral Addresses can be assigned in any order, using the DIP switches **80** (refer to Table 1).

☞ *Input/Output Expanders programmed to function as **Output Expanders** can be assigned **ONLY the first 16 addresses.***

☞ *Refer to the Power Station Instructions leaflet, and the keypads Instructions leaflet, for the Address setup. Power Stations can be assigned to Addresses **no. 1 through no. 8 ONLY**. The position of DIP switch no. 1 in uninfluential.*

Setting the BPI Level The BPI Level determines the maximum voltage the BPI bus can carry. Some BPI devices have 5V and 12V options.

☞ *This Control panel operates at 12V, therefore, all the peripheral devices must be set at **12 V.***

Using the Jumpers **69** and **73**, set the BPI Level as follows:

BPI Level	Jumper 69	Jumper 73
5 V	 5 V	12 V  5 V
12 V	 5 V	12 V  5 V

☞ *Refer to the Power station Instructions leaflet for the BPI Level setup.*

☞ *The BPI level of the Input/Output Expander is 12 V and is NOT modifiable.*

PREMIUM LCD ASSIGNING ADDRESSES
PREMIUM LCD is a special keypad that also incorporates a Proximity Reader and an Input/output Expander. To assign the addresses to the PREMIUM keypad, the Proximity reader and the Input/output Expander work carefully through the following step:

☞ *NOTE (PREMIUM-CLASSIKA) – The first time it is switched on, the keypad will AUTOMATICALLY enter its programming phase, and will remain in that mode until the address has been programmed.*
– Every time a keypad which has already been programmed is powered, a keypad tamper alert will be generated.
–The keypad exits the programming phase one minute after the last button was pressed

1.Press and hold the keys 1 and OFF for at least 3 seconds after which it enters in the programming phase: the display will show in the first line the name of the keypad (PREMIUM) and the current address (for example, 1)

☞ *When you assign the address using the numbers, the 2-digit numbers are stored only if the second number is pressed in a time of less than 1 sec. after the first. If you enter a wrong address, wait at least 2 seconds before trying again.*

2.**Assign an Address to the Keypad** Enter the address you want to assign (1 to 32) or use the arrow keys C and D to scroll through the addresses: the address will be displayed in the upper right. Press ENTER to confirm the address displayed and go to the next step or press ESC to cancel the change and return to previous step.

3.**Proxi Reader Programming** Press ON to enable the Proxi Reader, and then digit the address you want to assign to the Proxi Reader (1 to 32) or use the Keys C and D to scroll through addresses, and then press ENTER to confirm and go to next step or, press OFF to disable the Proxi Reader, and then press ENTER to confirm and go the next step, or press ESC to cancel the changes and return to the previous step.

4.**Input Expander Programming** Press ON to enable the Input Expander, then digit the address you want to assign the Input Expander (1 to 32) or use the Keys C

No.	ADDRESS COMBINATIONS																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**
2 (1)	off	off	off	off	off	off	off	off	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	off	off	off	off	off	off	off	off	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**
3 (2)	off	off	off	off	**ON**	**ON**	**ON**	**ON**	off	off	off	off	**ON**	**ON**	**ON**	**ON**	off	off	off	off	**ON**	**ON**	**ON**	**ON**	off	off	off	off	**ON**	**ON**	**ON**	**ON**
4 (3)	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**	off	off	**ON**	**ON**
5 (4)	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**	off	**ON**

Table 1 *Expander Module and Power Station Addresses. The **No.** column shows the DIP switch number (1 through 5 for devices with 5 DIP switches, and 1 through 4 in brackets for devices with 4 DIP switches).*

and D to scroll through addresses, and then press ENTER to confirm and go to the Zones Programming, or press OFF to disable the Input Expander, and then press ENTER to confirm and go the next step, or press ESC to cancel the changes and return to the previous step.

☞ *The zones corresponding to terminals L4, L5 and L6 of the Keypad Input Expander, although appearing on the application/display, CANNOT be used.*

⚠ **WARNING – If the Input Expansion function is enabled, every time the keypad is connected to the power supply, an Input Expansion tampering signal will be generated, in addition to the normal device disconnection messages.**

5.**Output Expander Programming** Press ON to enable the Output Expander, then digit the address you want to assign the Output Expander (1 to 16) or use the Keys C and D to scroll through addresses, and then press ENTER to confirm and exit the Programming phase, or press OFF to disable the Output Expander, and then press ENTER to confirm and go to the next step, or press ESC to cancel the changes and return to the previous step.

☞ *The outputs corresponding to terminals OC4, OC5 and OC6 of the Keypad Output Expander, although appearing on the application/display, CANNOT be used.*

☞ *You can enable ONE of the two Expander, Input or Output Expander. If you do not want to use any Expander, set the value OFF for both.*

CLASSIKA LCD ASSIGNING ADDRESSES Once connected to the Control Panel, insert the programming address of the keypad as follows:
1) Press and hold the keys 1 and OFF for at least 3 seconds after which the display will show in the first line the name of the keypad (CLASSIKA) and the current address (example 3).
2)Digit the address (1 to 32) or use the arrow keys C and D: the address is displayed in the upper right.
3) Press the ENTER key to confirm or the ESC key to cancel and exit the programming phase .

☞ *For more informations about Premium and Classika LCD keypad see the dedicated manuals.*

■ **BPI bus Wiring Limitations**
Due to Voltage drops and stray capacitance caused by the Control panel BPI bus connections, the following wiring limitations must be respected:
- the maximum wire length between the ***Control panel*** and the BPI peripheral must not exceed **500** metres;
- the overall wire length of each branch of the ***Control panel*** BPI bus must not exceed **1000** metres.

In order to allow the BPI peripherals to operate properly, **11.5V** or more must be present across terminals [+] and [–]. If a lower voltage is present, it can be boosted by:
- increasing the wire section that supplies the Control panel BPI device (the wires that connect [+] and [–] of the Control panel to terminals [+] and [–] of the BPI device);
- connecting some of the BPI peripherals downstream of a Power Station (these devices will be powered by the Power Station, therefore, will not load the Control panel BPI bus);
- using a Power Station to provide the voltage for the BPI peripheral load.

☞ *The cable length downstream of a Power station should not to be included the overall wire length for each branch of the Control panel BPI bus.*

Due to Voltage drops and stray capacitance caused by the Power Station BPI bus connections, the following wiring limitations must be respected:
- the maximum wire length between the ***Power Station*** (BPIOUT terminals) and the BPI peripheral must not exceed **500** metres;
- the overall wire length between the ***Power Station*** (BPIOUT terminals) and the BPI bus peripherals must not exceed **1000** metres.

Connecting Detectors

The KYO320 system has 8 zones, expandable to 328 zones by means of the M-IN/OUT Programmable Input/Output Expander, **PREMIUM LCD**, **CLASSIKA LCD** and the **VectorRX**:

8 Zones *on the Main Unit*
64 Zones *on 32* ***PREMIUM LCD*** *Keypads (2 Zones per Keypad)*

	BALANCE TYPES					
R	**NO**	**NC**	**10 K**	**10 K ALARM**	**DOUBLE**	**GLASS BREAK**
∞	STANDBY	ALARM	ALARM	ALARM	TAMPER	TAMPER
10 K	ALARM	STANDBY	STANDBY	STANDBY	ALARM	STANDBY
5 K	ALARM	STANDBY	SHORTED	ALARM	STANDBY	ALARM
0	ALARM	STANDBY	SHORTED	ALARM	SHORTED	SHORTED

Table 2 *Balance Types: the* ***R*** *column shows the resistance across the Zone terminal and the Negative during the corresponding status (∞ indicates that the terminal is open;* ***0*** *indicates that the terminal is shorted to negative)*

192 Zones *on 32 M-IN/OUT Expanders programmed as Input Expanders (6 zones per Expander)*
64 Zones *on the Wireless Receivers*
328 Zones *Total*

The Receiver zones (wireless zones) are for the wireless detectors. The Main Unit, Keypad and Input/Output Expander zones (hardwired zones) are for the hardwired detectors.

This section describes the connection of hardwired detectors.

The terminals of the Main Unit and Keypad are marked [L1], [L2], etc., while the terminals of the Input/Output Expanders are marked [T1], [T2] etc.

The following terminals can be used for the power supply to the detectors:

either [+F] and [⏚] (negative) ***or*** [+F1] and [⏚] (negative), **for each zone on the Main Unit**.

13.8 V positive is present on Main Unit [+F] and [+F1] terminals — protected by fuses 37 and 36 (F 1.85A).

[+F] and [⏚] (negative) for each pair of zones on **Keypads** and the **Input/Output Expanders**.

13.8 V positive is present on Keypad and Input/Output Expanders [+F] terminals — protected by resettable fuse (0.4 A).

Each zone can support several detectors. However, if more than one detector is connected, the Control panel will be unable to identify the detector in the event of an Alarm.

This system can detect Alarm, Tamper and Short-circuit on hardwired zones:

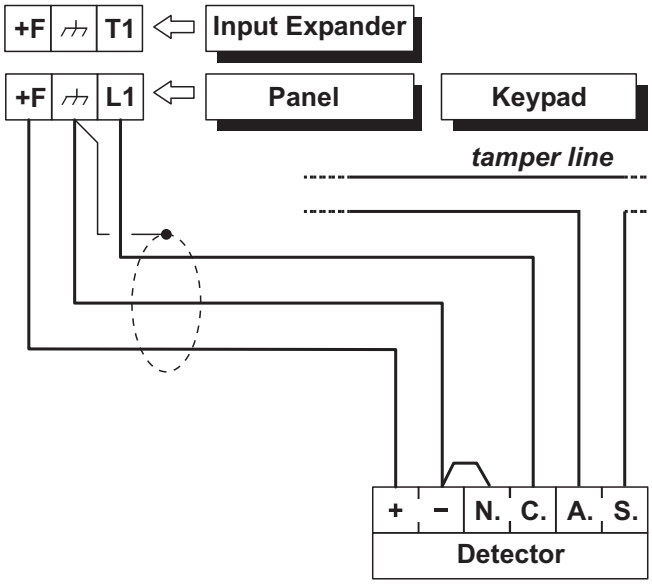


Figure 12 *Connecting a Detector to a zone with Normally Closed balance*

- Zone Alarm will be signalled by an **Alarm on zone no.** event;
- Zone Tamper will be signalled by a **Tamper on zone no.** event;
- Short-circuit will be signalled by a **Tamper on zone no.** event.

The Zone status depends on several parameters (refer to “Hardwired Zones” in the “PROGRAMMING FROM PC” section). This section refers to the Balance type. If only this parameter is considered, the zone status will depend on the resistance between its terminal and negative, as shown in Table 2.

The following paragraphs describe the connections of various types of detectors.

☞ *The 10 KΩ resistors are included in the Resistor pack.*

The 10 KΩ resistors have brown, black, orange and gold bands. The last band (gold) indicates the tolerance, and therefore, may be a different colour.

■ Connecting Motion Detectors
Most Motion detectors have Normally-Closed Contacts (**NC** in the wiring diagram), and Normally-Closed Tamper Contacts (**AS** in the wiring diagram).

The zone balance can be programmed as:
– Normally Closed
– Normally Open
– 10 K
– 10 K Alarm
– Double
– Glass Break
The connection type depends on the selected balance.

In Figures 12, 13 and 14 the:
- [+] and [–] terminals represent the positive and negative terminals;

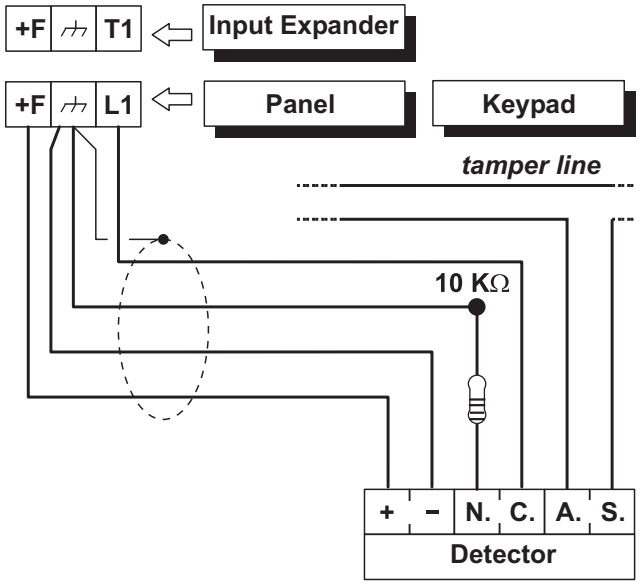


Figure 13 *Connecting a Detector to a zone with 10 K or 10 K Alarm only balance*

- [NC] terminals are the Normally Closed Alarm Contacts of the detector;
- [AS] terminals are the Normally Closed Tamper Contacts of the detector.

Normally Closed The wiring diagram in Fig. 12 illustrates the connection of a detector to a zone with Normally Closed balance.
Normally Closed balance will allow the Control panel to detect Alarm status on the zone:
– the zone will hold Standby status whilst connected to negative;
– the zone will trigger Alarm under all other conditions.
To provide Tamper detection: connect the Tamper contact of the detector to the Control panel Tamper Line, or to a 24h zone (refer to "Connecting Tamper Contacts").

10 K The wiring diagram in Fig. 13 illustrates the connection of a detector to a zone with 10 K, or 10 K Alarm Only balance.

⚠ **The 10 KΩ resistor must be connected to the last detector of the zone.**

10 K balance will allow the Control panel to detect Alarm and Short-circuit on the zone:
– the zone will hold Standby status when connected to negative via a10 KΩ resistor;
– the zone will trigger short-circuit when connected to negative;
– the zone will trigger Alarm under all other conditions.
To provide Tamper detection: connect the Tamper contact of the detector to the Control panel Tamper Line, or to a 24h zone (refer to "Connecting Tamper Contacts").

10 K Alarm Only The wiring diagram in Fig. 13 illustrates the connection of a detector to a zone with 10 K, or 10 K Alarm Only balance.

⚠ **The 10 KΩ resistor must be connected to the last detector of the zone.**

10 K Alarm Only balance will allow the Control panel to detect Alarm status on the zone:
– the zone will hold Standby status when connected to negative via a10 KΩ;
– the zone will trigger Alarm under all other conditions.

Double The wiring diagram in Fig. 14 illustrates the connection of a detector to a zone with Double balance.
This type of zone will allow the Control panel to detect zone Alarm, Tamper and Short-circuit:
– the zone will hold Standby status whilst connected to negative via a 5 KΩ resistor (i.e. using two 10 KΩ resistors connected in parallel);
– the zone will trigger short-circuit when connected to negative;
– the zone will trigger Tamper when open;
– the zone will trigger Alarm under all other conditions.

☞ *Zones with Double balance can detect and signal Alarm and Tamper by means of just two wires.*

To provide Tamper detection on zones with Normally Closed or 10 K balance:
either connect the detector tamper contact to the Control panel Tamper Line — this type of connection does not provide identification of the tampered detector;
or connect the detector tamper contact to a 24h zone — this type of connection requires two zones — one for Alarm detection, and the other for Tamper detection (refer to "Connecting Tamper Contacts").

■ Glass Break Detectors
Fig. 15 illustrates the connection of 3 Glass Break detectors to a zone with Glass Break balance.

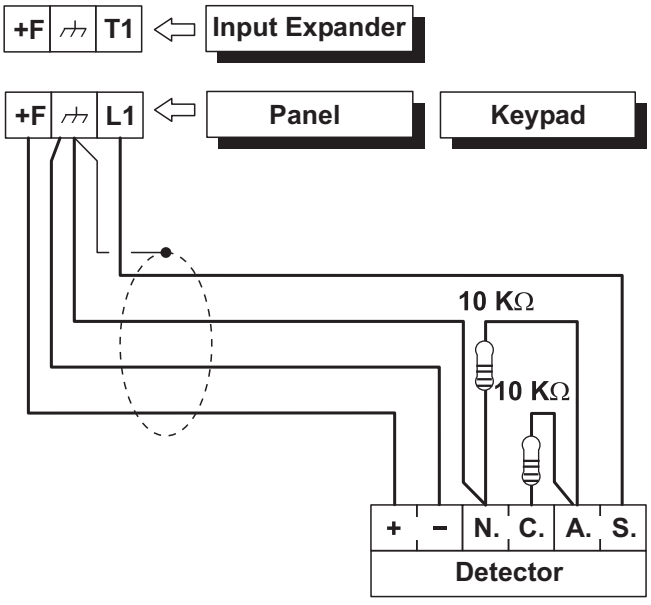


Figure 14 *Connecting a Detector to a zone with Double balance*

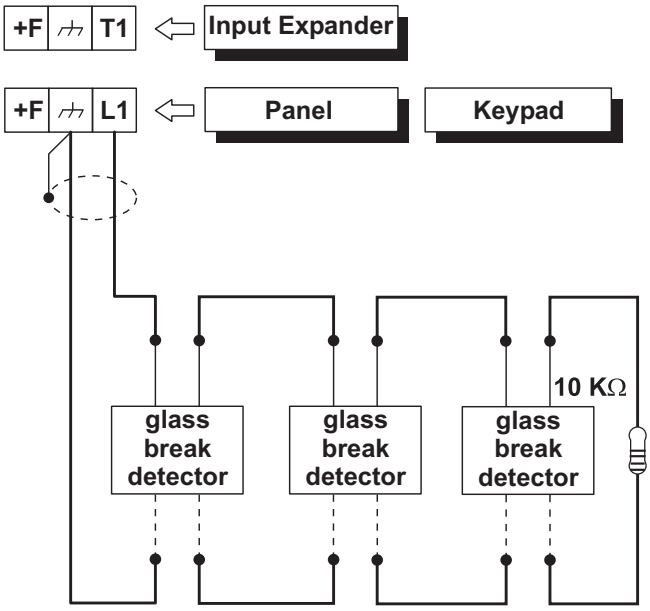


Figure 15 *Connecting 3 Glass Break Detectors to a zone with Glass Break balance*

⚠ **Glass Break zones accept up to 20 detectors.**

The continuous lines in the wiring diagram represent the soft-soldered conductors of the detector, and the broken lines represent the copper wires.
Connect the Glass Break detectors in parallel between the zone and negative, and a 10 kW resistor in parallel to the last detector.

This balance type will allow the Control panel to detect Alarm, Tamper and Short-circuit on the zone:
– the zone will hold Standby status whilst connected to negative via a 10 KW resistor;
– the zone will trigger short-circuit when connected to negative;
– the zone will trigger Tamper when open;
– the zone will trigger Alarm under all other conditions.

■ **Connecting Roller-Blind and Vibration Detectors**
Zones 1 through 8 of KYO320 support Roller-blind and Vibration detectors. The zones must be programmed respectively with either the Vibration or Roller-blind attribute (refer to the 'PROGRAMMING', Hardwired zones, in this Manual), and can be set up as Normally Closed *(***N.C.**) or Balanced 1K ohm (**BAL**) or **Customized** (for NC or NO Balanced zones only, and in this case the Threshold Voltage must be in Standby status). The wiring diagram in Figure 18 shows a typical connection. The 1 K ohm Balance Resistor must be connected to the last device.
The Roller Blind contacts can also be connected to the zones of the **M-IN/OUT** programmed as Input Expander. To do this, microswitch no. 8 of DIP switch **80** must be moved to the ON position, as described in the paragraph "M-IN/OUT Programmable Input/Output Expander".

☞ *ONLY the contacts for the Roller Blind can be connected to the zones of the M-IN/OUT, whereas vibration detectors CANNOT be connected.*

⚠ **The length of cable between Roller-Blind and M-IN/OUT Expander should NOT be higher than 50 m. The alarm line cut will not be detected, if you set a number of pulses exceeding 1 for the zone which is connected to the Roller-Blind.**

Test vibration If the system has an LCD Keypad, it will be possible to Test the sensitivity of the '**Vibration**' zones.

☞ ***IMPORTANT -*** *For the most reliable results, the 'Vibration' attribute must be disabled on all zones except the one being tested.*

■ **Connecting Fire Detectors**
The KYO320 can also manage Fire detectors that can operate with a supply voltage of 12 V and are equipped with alarm repeat outputs (such as BENTEL SECURITY 600 series/ZT100PL Smoke Detector).The Fire detectors can be connected using the MUB-RV relay base.Alternatively:
a) Connect the Alarm Repeat outputs of the Fire detectors [R]/[3] to an Input Zone programmed as **Fire (Normally Open and 24h)**, inserting a diode in series as shown in figure 16a (600 series ONLY). Connect the detector positive [L1]/[2] to terminal [+F], and connect the detector negative [L]/[5] to an open-collector output;
b) Connect the Alarm Repeat outputs of the Fire detectors [R]/[3] to an Input Zone programmed as **Fire (Normally Open and 24h)**, connect the detector positive

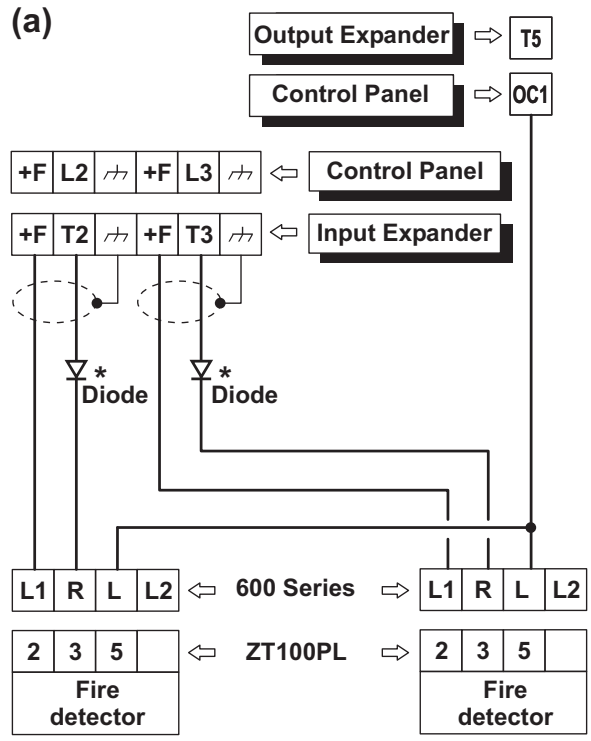


Figure 16(a) *Connecting 2 Fire Detectors to a Zone with Normally Open balance (* with serie 600 ONLY)*

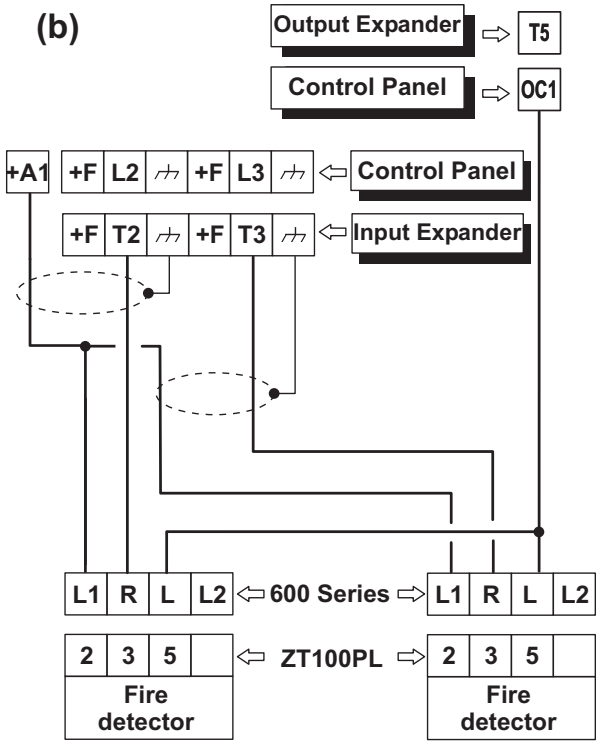


Figure 17(b) *Connecting 2 Fire Detectors to a Zone with Normally Open balance (without Diode)*

[L1] / [2] to the terminal [+A1] and connect the detector negative [L]/ [5] to an open-collector output as shown in figure 16b. Program the corresponding output to terminal [+A1] as: **Monostable**, **Normally Closed**, **20 seconds ON Time**. Assign the Output to an event that will reset the Fire Detectors (e.g. Control Panel Reset or Partition Reset).
In both cases the open-collector output must be programmed as **Monostable**, **Normally Closed** or **20 seconds ON Time** and assigned to an event that will reset the Fire Detectors (e.g. Control Panel Reset or Partition Reset). The connections described result in the power supply to the Fire Detectors being cut off for 20 seconds each time the event occurs, thus allowing the Detectors to reset.

Connecting Alarm Signalling Devices

Alarm Signalling Devices, such as: Self-Powered Sirens, Indoor Sirens, Telephones Diallers, etc., can be classified as follows:

- **Intrinsic Security Devices** (e.g. Self-Powered Sirens) activated by voltage failure on the respective terminal;
- **Positive Alarm Line** devices (e.g. Indoor Sirens) activated by positive (12 V) on the respective terminal.
- **Negative Alarm Line** devices activated by negative positive on the respective terminal.
- **Balance Alarm Line** devices activated by impedance unbalance on the respective terminal.

The KYO320 is equipped with 6 Outputs expandable to 102 by means of the programmable Input/Output Expander:

6 Outputs *on the Main Unit*

96 Outputs *on 16 M-IN/OUT Expanders programmed as Output Expanders (6 zones per Expander).*

102Outputs *Total*

The three Outputs on the Main Unit (no. 1, 2, and 3) comprise terminals:

- +N1, +A1, C1-NC1-NA1
- +N2, +A2, C2-NC2-NA2
- +N3, +A3, C3-NC3-NA3

The other Outputs on the Control Panel are made up of terminals OC1, OC2 etc. The Outputs from the Input/Output Expander are marked [T1], [T2], etc.

The Standby status of the Outputs can be programmed as follows:

- [+N] terminals can be connected to positive (13.8 V) or can be open, and therefore can be used to activate **Intrinsic Security** Devices;
- [+A] terminals can be open or connected to positive (13.8 V), and therefore can be used to activate **Positive Alarm Line** devices;
- [C] terminals can be connected to their respective terminals [NC] or [NA], and therefore, can be used to activate all types of signalling devices;
- [OC] terminals (terminals [T] for the M-IN/OUT Expanders programmed as Outputs) can be open or connected to negative, and therefore, can be used to activate **Negative Alarm Line** devices

☞ *The OC terminals on the Control Panel can switch a maximum of 1 A, whereas terminals T on M-IN/OUT Expanders can switch a maximum of 0.15 A. To switch larger currents use the **Omnia/4R** Relay Board.*

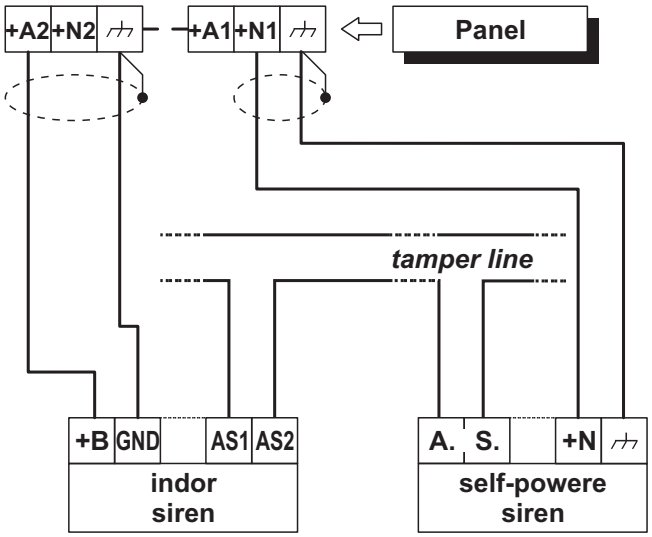


Figure 17 *Connecting a Self-powered Siren and an Indoor Siren to Main Unit Outputs no. 1 and no. 2*

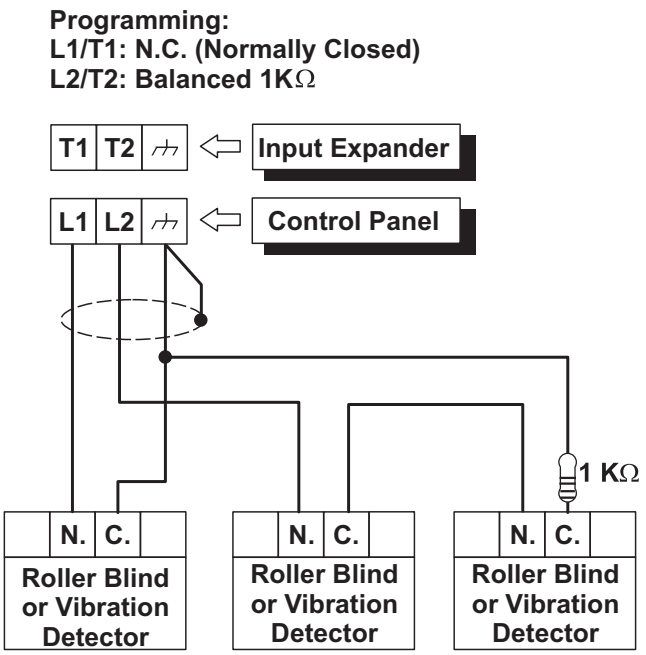


Figure 18 *Connecting Vibration Detectors (for Control panel zones only) and Roller Blind contacts: connecting one detector to a N.C. zone and connecting two detectors to a 1K balanced zone*

The activation/restoral of Outputs depends on various parameters (refer to "Outputs" under "PROGRAMMING FROM PC").
The wiring diagram in Fig. 17 illustrates connection of a Self-powered Siren and an Indoor Siren to Outputs no. 1 and no. 2 on the Main Unit:

- Outputs no. 1 and no. 2 on the Main Unit are programmed as Normally Closed;
- **[+N]** is the positive power and Input of the Self-powered Siren. The Siren will activate when positive (13.8 V) fails on the [+N] terminal;
- **[+B]** is the positive power and Input of the Indoor Siren. The Siren will activate when positive (13.8 V) is applied to the [+N] terminal;
- **[⏚]** and **[GND]** are the negative power terminals of the Self-powered Siren and Indoor Siren;
- **[A.S.]** and **[AS1-AS2]** are the Normally Closed Tamper contacts of the Self-powered Siren and Indoor Siren.

To provide Tamper detection: connect the Signalling device Tamper contact to the Control panel Tamper Line or to a 24h zone (refer to "Connecting Tamper Contacts").

■ **Supervised Outputs**

Outputs no. 1, 2 and 3 can be set up as Supervised Outputs. This type of output must be programmed as Normally Closed (refer to "Attributes" under "Outputs" in the "PROGRAMMING" section). The Control panel can detect short-circuit and Connection interrupt to terminals +A of Outputs with this attribute. The wiring diagram in Fig. 19 illustrates the connection of an Indoor Siren to a Supervised Output using a 2.2 KΩ across terminals +A and negative. Sieze Tamper Microswitch
The two 2.2 KΩ resistors (included in the package) have 3 **red** bands and a **gold** band. The last band (gold) indicates the tolerance, therefore, it may be a different colour.

☞ *The 2.2 KΩ resistor must be connected to the last device on the Output, otherwise it will have no effect.*

Short-circuit and connection interruption to terminal +A of Supervised Outputs, will be signalled by:

- **Tamper on supervised output** — relative to the Output;
- flashing on the 🔔 indicator on the Keypads.

☞ *The 🔔 indicator will flash until the cause of Alarm is cleared (memory). The 🔔 indicator will stop flashing when the Control panel resets.*

Connecting Tamper Terminals

The Tamper contacts of the security system devices can be connected to the 19 K Balance 24h Tamper Line.

The Tamper Line terminal is marked **ASB**:

- The Tamper Line will hold Standby status when connected to negative via a 10 KΩ resistor;
- The Tamper Line will trigger an Alarm under all other conditions.

Alarm on the Tamper Line will be signalled by:

- a **Tamper on Main unit** event**;**
- flashing on the **T** indicator on Keypads.

☞ *The **T** indicator will flash until the cause of Alarm is cleared (memory). The **T** indicator will stop flashing when the Control panel resets.*

The wiring diagram in Fig. 20 illustrates the connection of 3 Tamper contacts to the Main Unit Tamper Line:

- connect the device tamper contacts in series;
- connect a 10 KΩ resistor in series to the last Tamper contact;
- connect one end of the series to the [ASB] terminal and the other to the [⏚] terminal.

⚠ **The 10 KΩ resistor must be connected to the last device on the Output.**
If the Tamper line is not used, connect a 10 KΩ resistor across terminals [ASB] and [⏚].

☞ *If several contacts are connected to the Tamper Line, the tampered device will be unidentifiable.*

To identify tampered devices:

- select **Double Balance** for Motion detector connections (refer to "Double Balance" under "Connecting Motion Detectors");
- connect each Tamper contact to a 24h zone with 10 K or 10 K ALARM ONLY balance (see Fig. 21).

☞ *Tamper contact zones can be programmed with Normally Closed balance, in which case, the 10 KΩ resistors must not be connected.*

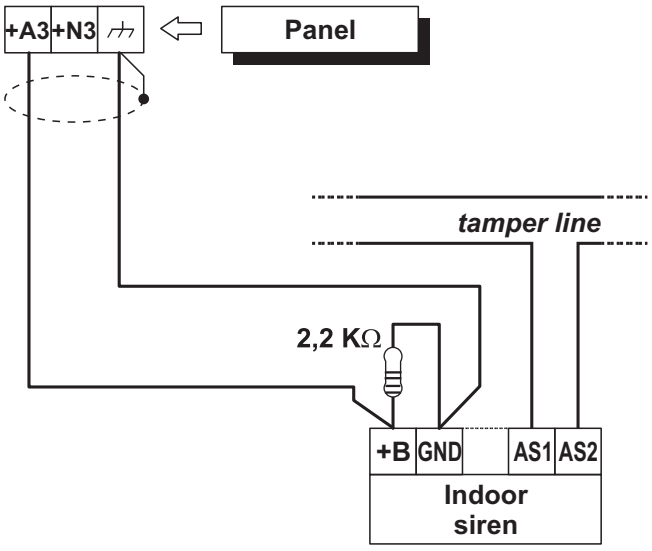


Figure 19 *Connecting an Indoor Siren to a Controlled Output on the Main Unit*

Connecting the Telephone Line

In order to allow use of the Dialler, Digital communicator and Teleservice facilities, the telephone line must be connected to terminals [LE], as shown in Fig. 22.
This Control panel can detect Telephone line trouble (Line down), which will be signalled when the voltage on the [LE] terminals drops below 3 V for over 45 seconds.

Telephone line trouble will be signalled by:
- the **Line-down** event;
- ON status of the ⚠ indicator on Keypads;
- flashing on the 🕭 indicator on Keypads.

The Control panel will signal restoral when the voltage on the [LE] terminals returns to 3 V for over 15 seconds.

☞ *If the telephone line **IS NOT CONNECTED** to the Panel, the **Telephone line check** option must be **DISABLED**. If it is not Disabled, the Control panel will signal Line-down status persistently (refer to "Telephone" in the "PROGRAMMING" section).*

Connect Line-sharing devices (Fax, Answerphone, etc.) to the [LI] terminals. This will allow the Control panel to take priority ONLY in the event of an alarm. Connect the [⏚] terminal to the Mains Earth — this will protect the PCB against surges from the Telephone line.

⚠ **Ensure that the Mains Earth is fully intact and operating properly before connecting the Telephone line.**

Connecting a Power Supply

In order to comply with the Safety regulations in force, the Mains must be equipped with a bipolar isolating device for protection against over voltage and short-circuit to Earth (e.g. automatic isolating switch).

The KYO320 is powered from the Mains through a Switching power supply, located inside the cabinet. The cabinet can also house a backup battery (not included) for power backup during Mains failure. Programmed data will be protected at all times by the RAM battery.

Mains failure will be signalled by the:
- OFF status of indicator **28** on the Main board;
- ON status of the ⚠ indicator on Keypads;
- **Warning Mains failure** event.

☞ *The **Warning Mains failure** event will be signalled after the programmed delay (refer to "Filter Times" in the "PROGRAMMING FROM PC" section).*

The Control panel will monitor the battery at all times, (refer to **Static Test** and **Dynamic Test**).

Static Test The **Static** Test monitors the battery charge during Mains failure. **Low battery** status (below 11.4 V) will be signalled by the:

- **Low battery** event;
- **ON** status of the ⚠ indicator on Keypads.

If this occurs, the Mains power must be restored before the battery empties, otherwise, the system will shutdown.

Low battery restoral (over 12.3 V) will be signalled by:
- the end of the **Warning low battery** event;
- OFF status of the ⚠ indicator on Keypad.

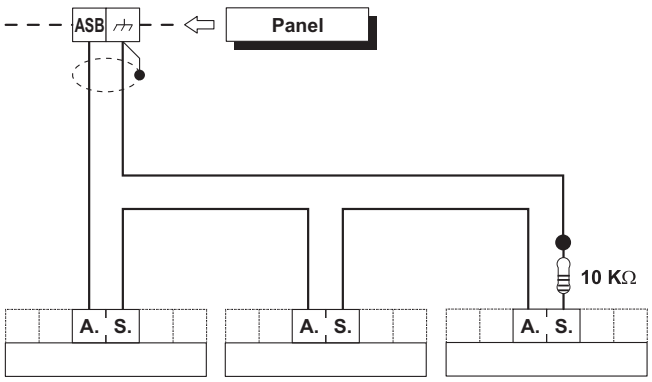


Figure 20 *Connecting 3 Tamper contacts to the Main Unit Tamper Line — the [A.S.] terminals represent the Normally Closed Tamper contacts of the device*
Connecting 3 Tamper contacts to the Main Unit Tamper Line — the [A.S.] terminals represent the Normally Closed Tamper Contacts of the device

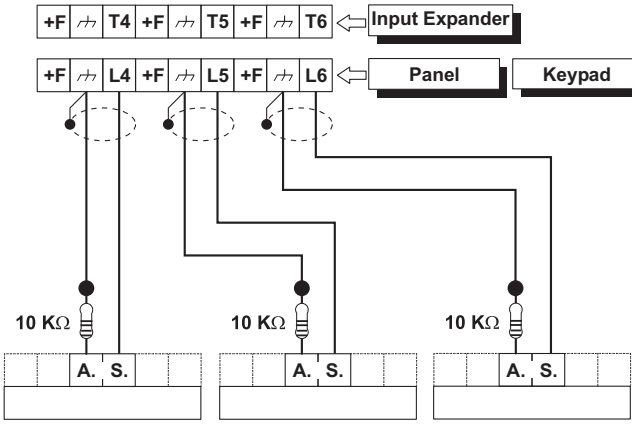


Figure 21 *Connecting 3 Tamper contacts to three 24h Zones with 10 K or 10 K ALARM ONLY balance — the [A.S.] terminals represent the Normally Closed Tamper Contacts of the device*

☞ *The control panel shuthdown the backup Battery due to voltage drop (Safety threshold 9,6V), because this condition can damage the battery*

Dynamic Test The **Dynamic** Test monitors the operating capacity of the battery. Failed Test (battery does not meet the Test requirements) will be signalled by the:

- **Warning power trouble** event;
- **ON** status of the ⚠ indicator on Keypads.

If this occurs, the backup battery must be replaced immediately, otherwise, the system will be unable to function in the event of Mains failure (black-out).

Battery trouble restoral will be signalled by the:
- end of the **Warning power trouble** event;
- Off status of the ⚠ indicator on Keypads.

■ Connecting the Mains

Work carefully through the following steps (refer to "Parts Identification").

1. Locate the backup battery in its housing **10**.

2. Using the connector **30**, connect the backup battery, and using the connector **22** the Switching Power Supply.

3. Connect the **Earth** wire to the [⏚] terminal on the terminal board **56**.

4. Connect the Neutral wire to terminal [N], and the Line wire to terminal [L] on the terminal board **56**.

☞ *The Main Unit Tamper Microswitch is enabled by the initial closure of the Control panel. Therefore, it cannot trigger a **Tamper on Panel** event on first power up. Likewise, if the Panel is opened during a programming session (via Keypad or computer), the Tamper microswitch will be inhibited thus unable to trigger a **Tamper on Panel** event until the Programming session ends, and the Panel is closed again.*

■ Note about Switching Power Supply

KYO320 control panel supports **BAW50T12** Switching Power Supply (factory default).
If it is necessary more Power Supply/Battery charger the **BAW75T12** is avaible (accessory item). In this case it is necessary to remove the BAW50T12 from the backplate of control panel and so work carefully through the following steps.

1. Disconnect the BAW50T12 from Main Board;
2. remove the screw (57a) and pull the BAW50T12 from the hook on the backplate of control panel;
3. Before installing cut the two BAW75T12 wires for connecting battery;
4. Insert the BAW75T12 in the same location of BAW50T12 (Figure 1): before in the hook and then secure the screw (57a).
5. Connect the connector (53) on Main Board and if scheduled the termal probe (KST), connector (62); Otherwise KYO320 control panel can manage BXM12/30-B and BXM12/50-B Power Stations (see page 7).

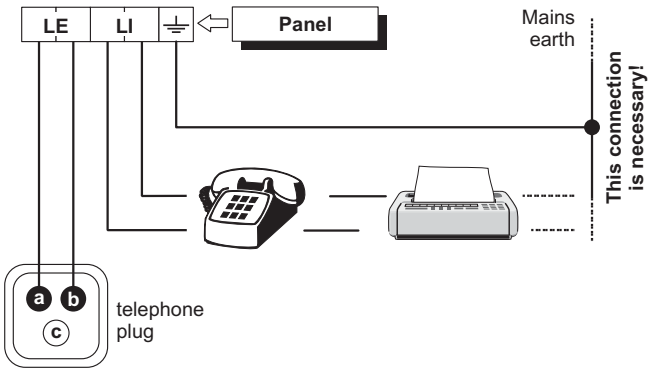


Figure 22 *Connecting the Telephone Line to the Main Unit*

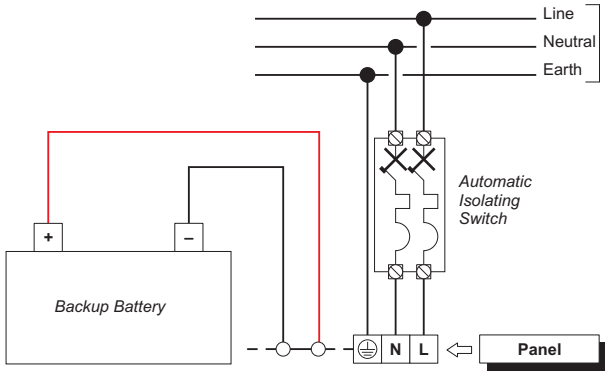


Figure 23 *Connecting the Mains power*

■ **Auto-configuration**
On first power up, the Control panel will carry out an Auto-configuration. During this phase the Control panel will enroll the BPI Bus peripherals. The auto-configuration can be changed during the programming session.

The Auto-configuration phase takes approximately 15 seconds. Termination of this phase will be indicated on the LCD Keypads as follows:

```
00:00 01/01/2000
DDDDDDDD
```

Connect the jumper **21 (**M) to enable the RAM battery.

■ **RAM Battery (see page 11)**
The RAM must be powered by a 3 V **GLD CR2032** Lithium battery or similar. This battery will allow the system to store the programmed parameters for 71 days of total black-out (Mains and Battery).

The RAM battery will last approximately 2 years, after which time it must be replaced.

Empty RAM battery will be signalled by the:
- **ON** status of the ⚠ indicator;
- **Warning Generic** event.

☞ *The ON status of the ⚠ indicator, and the **Warning Generic** event signal many types of Trouble events. The Trouble details can be found on the LCD Keypads (in View Mode). If the trouble is related to the RAM battery the **Warn. Lithium batt** message will be shown.*

To Install a Fresh RAM Battery:

1. Ensure that the Control panel is powered by the Mains or backup battery, otherwise, all the programmed parameters will be cleared when the **21** (M) Jumper is removed.

2. Remove the jumper **21** (M).

1. Using a flat screwdriver, remove the battery from its location **23**.

⚠ **DO NOT TOUCH the PCB with the screwdriver or Battery, as this may provoke short-circuits.**

2. Insert the fresh Battery in the battery location **23** (positive to the top).

⚠ **ONLY use 3 V GLD CR2032 Lithium batteries or similar, as there is a serious risk of EXPLOSION if other types are used. When disposing of used batteries follow the instructions and precautions printed on the battery.**

3. Reinsert the Jumper **21** (M).

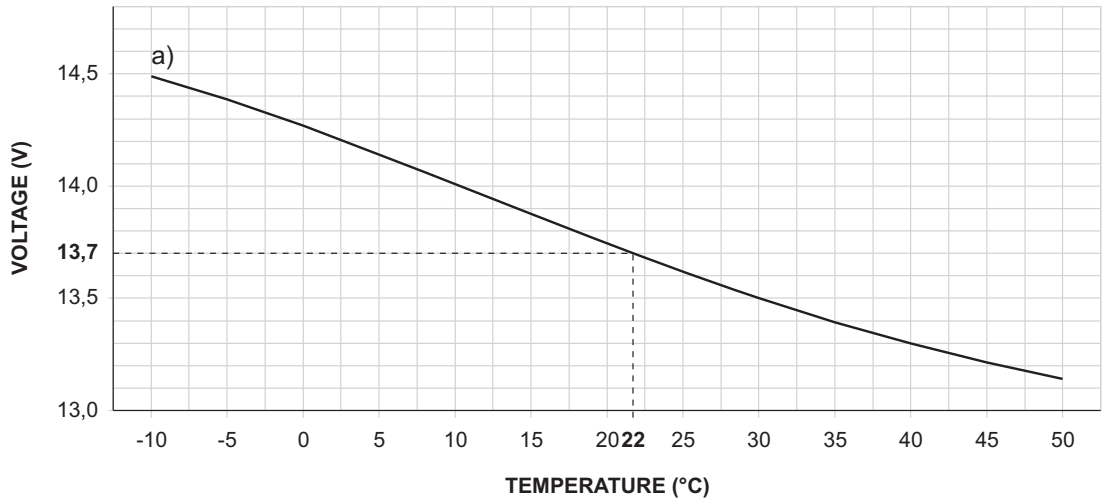


Figure 24 *Switching Power Supply Output Voltage graph. To find the Output Voltage using the graph: — indicate the Probe temperature on the **TEMPERATURE (°C)** axis; draw a line from the temperature value point up to the curve **a)**; draw a line from the intersection point across to the **VOLTAGE (V)** axis; adjust the Output Voltage of the Switching Power Supply to the resultant value. For example, if the Probe temperature is 22 °C, the Output Voltage of the Switching Power Supply must be set at 13.7 V.*

TEMPERATURE (°C)	-10	-5	0	5	10	15	20	25	30	35	40	45	50

Table 3 *Switching Power Supply Output Voltage chart. To find the Output Voltage using the chart: — select the nearest value to the Probe temperature on the **TEMPERATURE (°C)** row; read the corresponding value on the **VOLTAGE (V)** row; adjust the Output Voltage of the Switching Power Supply to the indicated value. For example, if the Probe temperature is 22 °C, the Output Voltage of the Switching Power Supply must be set at 13.7 V.*

■ Thermal Probe

This Control panel has an on-board connector **31** for a **KST** thermal probe (accessory item). The probe will optimize the backup battery charge process, by regulating the charge voltage in accordance with the temperature of the backup battery.

Work carefully through the following instructions (refer to the figure on page 10):

1. Connect the probe **9** to the connector **62** (PTC) on the Switching Power supply.

2. Attach the probe to the backup battery, in such a way as to obtain optimum heat transfer.

3. Connect the connector of backup battery **53** on the PCB.

4. Measure the Probe temperature.

5. Using the graph in Figure 24 and/or Table 3, find the value (in accordance with the battery temperature) that the Switching Power supply output voltage will be based on.

6. Using the trimmer **54**, adjust the voltage on the terminal board **55** to the required value.

You can program the system using a LCD Keypad, or using the **KYO320** downloading software from the Bentel **Security Suite** Software package (accessory item).

☞ *The following options and parameters CANNOT BE programmed from Keypads:*
*the **Scheduler** parameters — except for the **Max. no. overtime requests** and **Overtime Request**;*
— the Timers.
— Enable Keypad Codes (LCD keypads) and/or Keys /Cards.
The following operations CAN BE DONE from Keypads ONLY:
*— Record and playback of **Voice Messages**;*
*— Enable and Program **Key/Card Codes**;*
— Request Log Printout;
— Enrol/Unenrol the Network PCB module.

If you are programming the system from a Keypad, refer to the instructions in the "PROGRAMMING FROM KEYPAD" manual.

☞ *This section provides information on the system parameters, and should be referred to also when programming from a Keypad.*

Read this section thoroughly to learn how to install and use the **KYO320** software application.

1. Install the **KYO320** software application as described in the **Security Suite** manual.

2. Run the **KYO320** application.

3. Select the Control panel **Type** (refer to the **Customer data** paragraph) and the **Firmware Release** (refer to the **Options** paragraph in the **Security Suite** manual).

4. **NOTE:** When programming the KYO320, select **File > INIT** then setup the Panel Type and **Firmware Release** in the **Parameters** window.

5. Program the parameters (refer to the respective paragraphs for instructions).

6. Download the programmed parameters (refer to the respective paragraph: **On-site Programming via Computer** or **Remote Programming via Computer**).

☞ *The programmed parameters can be saved on hard or floppy disk, and downloaded to the Control panel via modem or on-site. The programmed parameters can be renamed and reused for different Customers (refer to "**Save**" and "**Open Customer" in the "Bentel Security Suite" Manual).*

The system parameters are organized in Pages. The **Programming Pages** in this section are congruent with the **KYO320** software structure.

Configuration (Enrolling Devices)

On startup the Control panel will automatically enrol all the BPI Bus peripherals (refer to "Power supply connection" under "INSTALLATION"). Any changes after automatic enrollment must be made by the Installer.

During the polling process, the Control panel will **match** the interrogation result with the stored configuration and, in the event of mismatch, will generate the respective warning.

☞ *If the Control Panel is connected to a computer, it will be possible to view the configuration by loading the Configuration page.*

The Configuration section is divided into pages — one for each type of device (Keypads, Input Expanders, Output Expanders, Readers, Power Supply Stations and Accessories).

The following programming instructions refer to parameters common to all BPI devices. For instructions on how to program the parameters of a specific device, refer to the relevant paragraph.

✓ The devices connected to the BPI Bus must be Selected, otherwise the system will be unable to enrol them.

☞ *The **Select** button (on the bottom of the page) will allow you to select/deselect **all** the devices on the page at once.*

The Control panel cannot manage unenrolled peripherals.

If a peripheral device has not been connected properly to the BPI bus, or fails to respond (Device Lost) due to Trouble or Tamper, an X will be shown above the icon on the Keypad, and the Control Panel will generate the respective event, as follows:

➢ **Warning Readers = Lost Device**

- **Warning BPI Input Expander** = Lost Input Expander[1]
- **Warning Keypads** = Lost Keypad
- **Warning Output Expanders** = Lost Output Expander[1]
- **Warning Power Stations** = Lost Power Station

☞ *The event will be recorded in the Log (refer to **ID.TYPE** for the* `BPI Device Lost` *event).*

No. This field shows the Identifier number of the device. The Identifier number of a BPI Device is also the device Address (refer to "Assigning Addresses" under "Connecting BPI Devices" in the "INSTALLATION" section).

Description This editable field (maximum 16 characters) is for the device label (e.g. Entrance, Kitchen, etc.). This Description will identify the Device in all the operations it is involved in.

■ Keypads Page

The Keypads page will allow you to set up Keypads. The Page layout is as follows.

☞ *For information regarding the ✓, **No.** and **Description** parameters, refer to the "Configuration" section.*

Enabled on Partitions Select the Keypad Partitions. The Keypad will be able to control (Arm, Disarm, etc.) ONLY the Enabled Partitions.

☞ *Keypads need not necessarily be enabled on Partitions, and can be used for programming, viewing and other non-command related purposes.*

The **Partitions** button (bottom of the window) will allow you to deselect the Partitions (**None)**, select all the Partitions (**All**), or invert the current setting (**Toggle**).

Quick Arm Code Select the Code that will be used for Quick Arming (refer to "Quick Arm" in the USER MANUAL).

Memo Keypads with this attribute will be able to record and play back Voice Messages.

Quick viewing of Partition status If this option is enabled, it will be possible to view the status of ALL the Keypad Partitions by pressing the ON key (refer to "Fast Status Enquiry" in the USER MANUAL).

☞ *If Partition Alarm or Tamper is present the respective character will blink.*

Alarm/Tamper Beep If this option is enabled, the Keypad will emit an audible signal (beep), when Alarm or Tamper is detected on any of its Partitions.

Display Panel Alarm Memory If this option is enabled, the 🔔 LED will signal the presence of Panel Alarm memory.

Display Partition Alarm Memory If this option is enabled, the 🔔 LED will signal the presence of Partition Alarm and/or Tamper memory.

Also LED keypads provide the Display Panel Alarm Memory and Display Partition Alarm Memory options.

Comp. EN50131 If this option is enabled, in standby mode the keypad will hide the control unit and zone display status (this is necessary to achieve EN50131 certification). To display this information, you will have to enter your own access code first. In the event of a malfunction, indicator light ⚠ will be illuminated, but in order to view malfunction information you will have to enter your own access code.

Viewable Partitions Select the Partitions (1 through 32) that will be shown on the Keypad concerned. At default, the first eight characters on the second line of the display correspond to Partitions 1 through 8.

☞ *The Partitions must be selected in successive order, therefore, if Partition no. 5 is selected first, Partitions no. 1 through no. 4 cannot be selected.*

■ LED Keypads

The **LED Keypads** page will allow you to set up LED Keypads.

☞ *For information regarding the ✓, **No.** and **Description** parameters, refer to the "Configuration" section.*

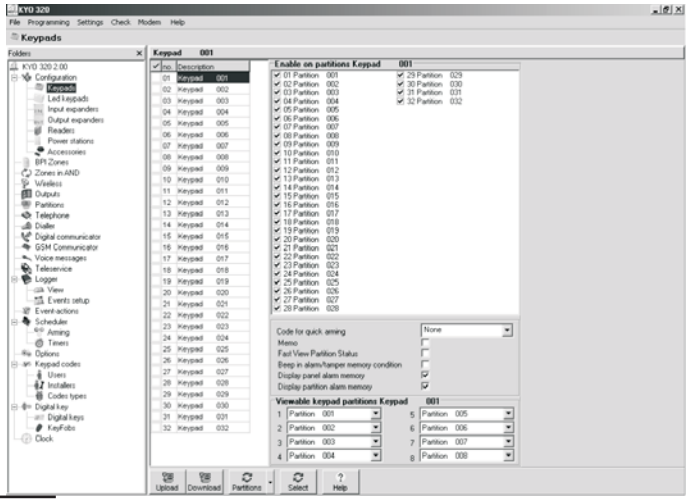


Figure 25 *Keypads page*

1 *The M-IN/OUT Expander is seen as an Input Expander and/or as an Output Expander, depending on how it is programmed (see "**M-IN/OUT Programmable Input/Output Expander**" in the "**INSTALLATION**" chapter).*

■ **Input Expanders**
The Inlet Expanders page will allow you to set up the **M-IN/OUT** Expanders which have terminals programmed in Input mode[2].

☞ *For information regarding the ✓, **No.** and **Description** parameters, refer to the "Configuration" section.*

■ **Output Expanders**
The Outlet Expanders page will allow you to set up the **M-IN/OUT** Expanders which have terminals programmed in Output mode[2].

☞ *For information regarding the ✓, **No.** and **Description** parameters, refer to the "Configuration" section.*

■ **Readers**
The Key/Card Readers will allow Users to:
- Arm Partitions
- Disarm Partitions
- Arm in A and B Mode
- Stop Partition Alarms

☞ *Commands will affect ONLY the Partitions common to both the Reader and Key/Card in use.*

For example, if you attempt to Arm the system at a Reader that is enabled on Partitions no. 1 and no. 2, with a Key/Card that is enabled on Partitions no. 1 and no. 3, ONLY Partition no. 1 will Arm (Partition no. 1 is common to both the Reader and Key/Card). The **Readers** page will allow you to set up the Readers, as follows.

☞ *For information regarding the ✓, **No.** and **Description** parameters, refer to the "Configuration" section.*

M This attribute will enable the Reader for **Monitoring** purposes (i.e. To signal specific events — to be programmed by the Installer).

☞ ***Monitoring Readers** (Readers with the **M** attribute) CANNOT be used for system control purposes but will be able to generate **Valid Key**, **Key at Reader** events and Valid Key on Partition.*

The **Expand** button at the bottom of the page will open the **Readers** table.

If you are programming **System Control Readers**: select the Reader Partitions, and set up the **A** and **B** Mode Arming configurations (refer to the following paragraphs).
If you are programming **Monitoring Readers**: select the Events to be monitored (refer to the following paragraphs).

RED spot This row will allow you to assign (✓) the Reader to the Partitions (01 through 32).

To view the Partition Description: click the **Description** button (bottom of page) then position the cursor on the Partition check box.
To highlight a Reader: hold down the SHIFT key and click anywhere on the Reader table, then release the SHIFT key.
To highlight a group of Readers: hold down the SHIFT key and click anywhere on the tables of the first and last Readers of the group, then release the SHIFT key.

To assign the Reader Partitions (quick mode): highlight the Reader concerned, click the **Partitions** button then select:
None — to **Disable** the highlighted Readers on all Partitions;
All — to **Enable** the highlighted Readers on all Partitions;
Toggle — to invert the current status of the highlighted Readers.
To Copy data (Enabled Partitions, **A** and **B** Mode Arming configuration): highlight the Reader to be copied; right click the mouse; select **Copy** from the pop-up menu; highlight the Readers to be pasted; right click the mouse, then select **Paste** from the pop-up menu.

YELLOW spot This programming section will allow you to set up the **A Mode** Arming configuration. If an **A Mode** Arming request is made at a Reader, the Partitions will Arm/Disarm in accordance with the programmed configuration, as follows:

- **D** — the corresponding Partition will Disarm
- **N** — the status of the corresponding Partition will remain unchanged (None)
- **A** — the corresponding Partition will Arm
- **S** — the corresponding Partition will Arm in Stay mode (i.e. Zones with the **Internal** Attribute will be Bypassed).
- **I** — the corresponding Partition will Arm in Instant Mode (Stay with zero Entry Delay)

GREEN spot As per the YELLOW spot but for **B Mode**.

Display Panel Alarm in Memory If this option is enabled (Default setting), the RED LED will signal the presence of Panel Alarm memory.

Display Partition Alarm in Memory If this option is enabled (Default setting), the RED LED will signal the presence of Alarms and/or Tamper memory relative to the Keypad partitions.

2 *The M-IN/OUT Expander is seen as an Input Expander and/or as an Output Expander, depending on how it is programmed (see **"M-IN/OUT Programmable Input/Output Expander"** in the **"INSTALLATION"** chapter). If the M-IN/OUT Expander is programmed as an Input and Output Expander, it must be configured as an Input Expander and as an Output Expander. For example, if you have programmed an M-IN/OUT Expander as an Input Expander and Output Expander, and assigned it address no. 1, you must configure Input Expander no. 1 and Output Expander no. 1.*

☞ ***Monitoring Readers*** *(Readers with the* ***M*** *attribute) CANNOT be used for system control purposes.*

Buzzer on entry time If this option is enabled, the buzzer inside the reader will emit a series of beeps for the duration of the entry time period.

Buzzer on exit time If this option is enabled, the buzzer inside the reader will emit a series of beeps for the duration of the exit time period.

Comp. EN50131 If this option is enabled, in standby mode the indicator lights on the reader will always remain off, regardless of the control unit status.

Event no. This programming section will allow you to set up the **Monitoring Readers** events will be able to signal. Enter the Identifier Number of the Event that is to be signalled on the LED, or double-click and select the Event from the Events list, then click OK.

☞ *The* ***Event no****. section is for* ***Monitoring Readers ONLY*** *(Readers with "M" attribute)*

■ **Power station**

The **Power stations** page will allow you to setup the system Power Stations.

☞ *For information regarding the ✓,* ***No.*** *and* ***Description parameters, refer to the "Configuration" section.***

Mains fault warning delay This programming field will allow you to set the Mains fault warning delay (in seconds). Interruption of the Mains power supply to the Power station will trigger the programmed delay. If power is not restored before the delay expires, the Control Panel will signal Mains fault.

Low battery delay This programming field will allow you to set the **Low battery** delay (in seconds). If the Power station battery voltage drops below 11.4 V, the Control Panel will trigger the programmed delay. If the Voltage is not restored before the delay expires, the Control Panel will signal **Low battery.**

Valid entries: 1 through 3932 seconds (60 min. 32 sec.).
Default setting: 180 seconds

The Control Panel can detect and signal:
- forced opening or removal of Power stations
- interruption of power supply to the Power stations
- the status of Power station batteries
- the status of Power supply modules
- the status of Power station Outputs

Forced opening or removal will be signalled by:
- the **Tamper Power stations** event (refer to "**Events-Actions" section)**
- an **X** above the icon on the Keypad
- the Event details in the log
  TYPE — Tamper BPI
  EVENT ID. — The Power Station label (Description)

Mains power failure (interruption) will be signalled by:
- the **Warning mains failure on Power station event (refer to "Events-Actions" section)**
- the ON status of the ⚠ LED on the keypads, and the `AC Mains Failure` message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — AC Mains Failure
  EVENT ID. — The Power Station label (Description)

Low Battery (below 11.4 V — refer to "Static Test" under "Connecting Power supplies" in the "INSTALLATION" section) will be signalled by:
- the **Warning low battery on Power station** event (refer to "Events-Actions" section)
- the ON status of the ⚠ LED on the keypads, and the `Low Battery` message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — Low Battery
  EVENT ID. — The Power Station label (Description)

Battery Trouble (refer to "Dynamic Test" under "Connecting Power supplies" in the "INSTALLATION" section) will be signalled by:
- the **Warning power trouble on Power station event (refer to "Events-Actions" section)**
- the ON status of the ⚠ LED on the keypads, and the `Troub. pow. syst.` message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — Troub. pow. syst.
  EVENT ID. — The Power Station label (Description)

Disconnected Battery[3] will be signalled by:
- the **Battery not connected on Power station event (refer to "Events-Actions" section)**
- the ON status of the ⚠ LED on the keypads, and the `Batt. disc. pw.s` message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — Batt. disc. pw.s
  EVENT ID. — The Power Station label (Description)

Power supply module trouble[4] will be signalled by:
- the **Battery charger trouble on Power station event (refer to "Events-Actions" section)**
- the ON status of the ⚠ LED on the keypads, and the `Fault chrg.pw.s` message (refer "View Trouble Mode" in the USER MANUAL)

3 *If the battery voltage drops below 10.2V, the Power station will disconnect it automatically. This operation will prevent damage to the battery.*

4 *The Power supply module of the Power station will be considered "out-of-order" if its output voltage reaches 0.5V above, or drops to 0.5V below the preset value. If the Power station is not equipped with a Thermal probe, the output voltage will be 13.8V. If the Power station is equipped with a Thermal probe, the output voltage will depend on the probe temperature.*

- the Event details in the Log
  TYPE — Fault chrg.pw.s
  EVENT ID. — The Power Station label (Description)

Disconnected Power supply module[5] will be signalled by:

- the **Switching not connected on Power station** event (refer to "Events-Actions" section)
- the ON status of the ⚠ LED on the keypads, and the Swtch.disc.pw.s message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — Swtch.disc.pw.s
  EVENT ID. — The Power Station label (Description)

Current draw of a Power station output that exceeds the maximum will be signalled:

- the **Short circuit output ½/3 on Power Station** event (refer to "**Events-Actions" section)**
- the ON status of the ⚠ LED on the keypads, and the Out. short pw.s message (refer "View Trouble Mode" in the USER MANUAL)
- the Event details in the log
  TYPE — Out. short pw. s
  EVENT ID. — The label (Description) of the respective Power Station
  AGENT: Output number

■ **Accessories**

The Accessories page will allow you to set up the Wireless Receiver, Auxiliary Communicator, Voice boards and Printer interface.

Wireless module The **Present** option MUST BE ENABLED, if a VectorRX Receiver is connected to the Control Panel KEY bus.

☞ *The **Wireless module** option must be enabled manually, otherwise, it will be impossible to program the wireless devices (refer to "Wireless").*

Transmission trouble between the Control Panel and Receiver (due to Fault or Tamper) will be signalled by an X above the icon on the Keypad, and by the **Warning wireless device** event.

☞ *Receiver Trouble and Lost BPI devices will be signalled in the same way (X above the icon on the Keypad. If the signal is due to Receiver Trouble, the Keypad will display the Receiver Lost message in the TYPE field in the Events Log (refer to "Events Log" in the KEYPAD PROGRAMMING MANUAL).*

Disable the **Present** option to clear the R*eceiver* Trouble warnings.

Time Supervision Zones This programming field will allow you to program the supervisory time for the Supervised Wireless Zones (refer to "Supervised" under "Wireless"). Each wireless zone should send a supervisory signal within a programmed interval. If the Receiver does not receive the signal it will generate a **Lost wireless zone** event.
Valid entries: 2 hours and 30 minutes (at default) to 24 hours (in 15-minute steps).

Zone control time Set this option for the Supervised Wireless Zones ONLY(refer to "Supervised" under "Wireless"). When the **Zone control time** is elapsed from when the Receiver has received the signal that Each wireless zone should send the control panel does not allow the arming if the **"Disable arming on wireless zones fault"** option is enable (See Option, page 75).
Valid entries: 15 minutes (at default) to 2 hours (in 15-minute steps). When a LCD keypad is arming, the zones, that haven't sent signals in the programmed time (Wireless delinquency Zones), are shown.

GSM Communicator Not present-Present-FUTURE USE.

Disable Jamming If the system detects RF jamming, and this option is **DISABLED** (at default), it will be signalled by an X above the icon on the Keypad, and by the **Tamper wireless device** event.

☞ *Jamming and BPI Device Tamper will be signalled by X above the icon on the Keypad. Jamming and Receiver Tamper will be signalled by the **Tamper wireless device** event. If the signal is due to Receiver Tamper (jamming, opening or removal) the WLS Tamper event will be logged.*

VOX board The Control Panel will enrol the Voice board as soon as it is connected to the Keybus. Transmission trouble between the Control panel and Voice Board (due to Fault or Tamper) will be signalled on the ⚠ LED (ON).

☞ *The ⚠ LED signals several different Trouble events. If the signal is due to loss of the Voice Board, the Keypad (in View Trouble Mode) will show the Vox Board Lost message (refer to "View Trouble Mode" in the USER'S MANUAL).*

Disable the **Present** option to clear the *Voice board* Trouble warnings.

Print Log If this option is enabled the Control panel will printout the events as they occur (real-time printout).

5 *The Power station will disconnect the Power supply module if its output voltage reaches 0.5V above the preset value.This operation will prevent damage to the peripherals. The power to the peripherals will be provided by the Power station battery. If the Power station is not equipped with a Thermal probe, the preset output voltage will be 13.8 V. If the Power station is equipped with a Thermal probe, the output voltage will depend on the probe temperature.*

☞ *This feature is provided by the optional K3/PRT2 Printer Interface (refer to "K3/PRT2 Printer Interface" in the APPENDIX).*
Only Enabled events can be printed (refer to "Log — Event settings").

Add line feed Enable this option, if there are overlapped lines on the printout. Disable this option, if there are empty lines between events.

Hardwired Zones

The hardwired Zones can be used for system monitoring (Alarm Zones), or management (Control Zones).

Alarm Zones If Alarm conditions are detected, the Alarm Zones will generate the respective event (refer to "Type"). The **Events-Action** page will allow you to associate each event with one or more actions (activation of Hornstrobes, Digital Communicator, Dialler, etc.). The system cannot generate an Alarm event until the Partitions the Zone is assigned to Arm[6] (refer to "Partitions").

☞ *This does not apply to **24h** and **Fire** Zone events, as these events do not depend on Partition status.*

If the zone is NOT an **Exit Delay** or **Last Exit** Zone (refer to "Type") the Control Panel will start monitoring as soon as the Partitions the Zone is assigned to Arm[5], otherwise, it will start monitoring when the longest **Exit Time** of the Armed Partitions the Zone is assigned to ends (refer to "Partitions").
The system will generate an Alarm when the voltage on the Zone terminal falls within the **Alarm** voltage range (refer to "Voltage Ranges") for the programmed number of times and/or length of time (refer to "Sensitivity").
Each Alarm Zone can generate the Zone Alarm event for the programmed number of times (refer to "Cycles").

Command Zones Each Command Zone can be programmed to activate one of the following actions:

- Switch Partition status
- Arm and Disarm Partitions
- Arm Partitions only
- Disarm Partitions only
- Reset Partitions
- Reset Control Panel
- Cancel telephone calls
- Not Ready to Arm
- Ready to Arm

The Command Zones will activate when they are unbalanced (refer to "Balance") for the programmed number of times or length of time (refer to "Sensitivity").
The **BPI Zones** page will allow you to program the Hardwired Zones (for Wireless Zones refer to the "Wireless" paragraph).
The chart on the left side of the **BPI Zones** page shows the available hardwired Zones (refer to "Configuration").
If an M-IN/OUT Expander is configured as an Expander with 4 Zones + Expander with 2 Outputs, only the Zones corresponding to terminals L3, L4, L5 and L6 will be usable; if it is configured as an Expander with 4 Outputs + Expander with 2 Zones, only the Zones corresponding to terminals L6 and L7 will be usable.
The following information will be shown for each Zone.

No. This field shows the Zone ID number that will be used (instead of the Zone Description) in some parts of the application (refer to "Description").

Position This field shows the Description of the hardware component the Zone is assigned to. This label can be edited on the **Configuration** page.

☞ *The **Position** of the Control panel Zones (Main Unit) is non-editable.*

Device This field shows the ID number (Address) of the device the Zone is assigned to. A hyphen indicates that the Zone is assigned to the Control Panel.

Ter. This field shows the Zone terminal tag.

☞ *The numbers L1, L2, ..., L6 on M-IN/OUT Expanders programmed as Input Expanders correspond, respectively to terminals T1, T2, ..., T3.*

Description This 16 character field will allow you to assign and/or edit the Zone Description. The label will identify the Zone in all parts of the Software Application.

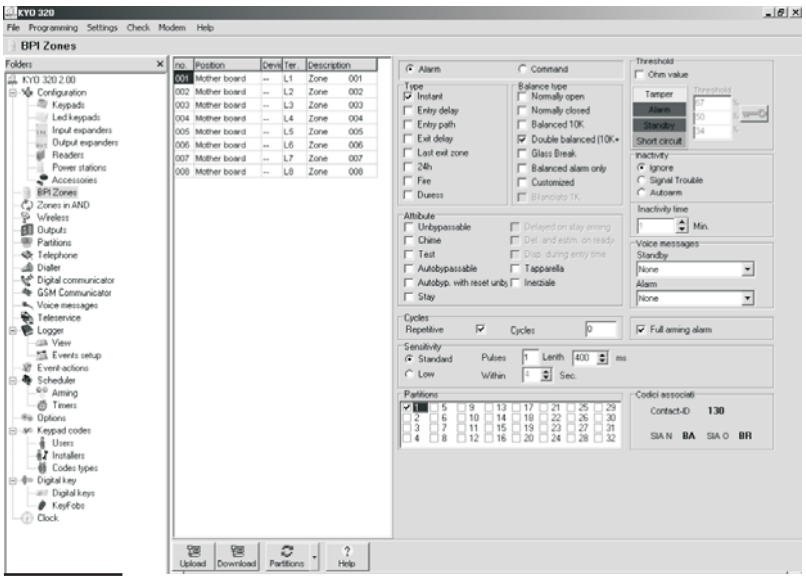


Figure 26 *BPI Zones page*

6 *If the **Full Arming alarm** option is enabled, ALL the Partitions the Zone is assigned to must be Armed.*
*If the **Full Arming alarm** option is disabled, AT LEAST ONE of the Partitions the Zone is assigned to must be Armed.*

The chart on the right-hand side of the **BPI Zones** page will allow you to change the Zone settings. The Zone must be selected from the Zones list.

■ **Type**
The **Type** determines the affect the Armed/Disarmed status of the system will have on the Alarm signals, and whether the Zone will trigger Alarms immediately or after a programmed delay.

☞ *All Zones — other than **Fire** and **24h** — will be classified as Burglar.*

Instant Violation (refer to "Balance", "Voltage Range" and "Sensitivity") of an Instant Zone — that is not Unbypassed or in Test status (refer to "Attributes"); has not run its programmed Cycles (refer to "Cycles"), and whose Partitions are Armed[7] — will generate the following events:

- **Alarm on zone** (related to the Zone concerned);
- **Burglar alarm partition**, **Generic alarm on partition** and **Generic+Tamper alarm on partition** — relative to the Armed Partitions of the Zone;
- **Burglar alarm on panel**, **Generic alarm on panel** and **Generic+Tamper alarm on panel**.

Entry delay Violation of an **Entry Delay** Zone — that is not Unbypassed or in Test status; has not run its programmed Cycles, and whose Partitions are Armed[6] — will trigger the longest **Entry Delay** of all of its Partitions. All the associated Keypads will beep until the delay expires. If the Partitions the Zone is assigned to are not Disarmed[8] before the delay expires, or if the Zone is violated after the Delay, the system will generate the Events associated with the **Instant** Zones.
The first Zone on the path to a Disarm point (Reader or Keypad) should be programmed as an **Entry delay** Zone.

Entry path Violation of an **Entry path** Zone — after violation of an **Entry delay** zone — will trigger the Events associated with the **Instant** Zones, as soon as the programmed **Entry delay** expires.
If the **Entry Time** is not active, or has expired, the system will generate the Events associated with the **Instant** Zones.
The Zones leading to a Disarm point (Reader or Keypad) should be programmed as **Entry path** Zones.

Exit delay Violation of an **Exit delay** Zone — during the **Exit Time** of its Partition — will not trigger any events. In all other cases, the system will generate the Events associated with the **Instant** Zones.
The Zones leading out of a Partition should be programmed as **Exit delay** Zones.

Last exit Violation of a **Last Exit** Zone — during the **Exit Time** of its Partition — will not generate any Events but will clear any residual **Exit Time**, and trigger the programmed **Last Exit Time** of its Partition.
In all other cases, the system will generate the Events associated with the **Instant** Zones.
This feature will allow the system to Arm as soon as the programmed **Last Exit Time** expires.
The last Zone leading out of a Partition should be programmed as a **Last Exit** Zone.

24h Violation of a **24h Zone** — regardless of the status of its Partition (Armed/Disarmed) will generate the following events:
- **Alarm on zone** (relevant to the Zone concerned);
- **24h alarm on partition**, **Generic alarm on partition** and **Generic+Tamper alarm on partition** — relevant to the Partition the Zone is assigned to;
- **Tamper alarm on panel**, **Generic alarm on panel** and **Generic+Tamper alarm on panel**.

24h Zones NEED NOT necessarily be assigned to Partitions. In which case, they will generate only:
- **Alarm on zone** (relevant to the Zone concerned);

24h Zones that are not assigned to Partitions can be used for control applications, such as switching on courtesy lights (using infrared sensors).

☞ ***24h** Zones which are not assigned to Partitions must be programmed as **Repetitive** (refer to "Cycles").*

Fire Violation of a **Fire** Zone — regardless of the status of its Partition (Armed/Disarmed) will generate the following events:
- **Alarm on zone** (relevant to the Zone concerned);
- **Fire alarm on partition**, **Generic alarm on partition** and **Generic+Tamper alarm on partition** — relevant to the Partition the Zone is assigned to;
- **Fire alarm on panel**, **Generic alarm on panel** and **Generic+Tamper alarm on panel**.

Duress Violation of an Unbypassed **Duress** Zone which is not in Test status, and has not run its programmed cycles will generate the following Instant Events[7]:

- **Alarm on zone** (relevant to the Zone concerned);.

Moreover, the Keypad:
- WILL NOT signal Alarms triggered by Duress Zones (the 🔔 indicator WILL NOT blink).
- WILL NOT signal outgoing calls triggered by Duress Zones (⁄ WILL NOT appear above the 🕭 icon).

■ **Command**
If a **Command** Zone triggers an Alarm (see "Balance", "Voltage Range" and "Sensitivity"), the system will generate the programmed Actions. In all other cases (Tamper and Short Circuit) it will operate as an Alarm Zone.

7 *If the **Full Arming alarm** option is enabled, ALL the Partitions the Zone is assigned to must be Armed.*
*If the **Full Arming alarm** option is disabled, AT LEAST ONE of the Partitions the Zone is assigned to must be Armed.*
8 *If the **Full Arming alarm** option is enabled, AT LEAST ONE of the Partitions the Zone is assigned to must be Armed.*
*If the **Full Arming alarm** option is disabled, ALL the Partitions the Zone is assigned to must be Disarmed.*

Command Zones will be active at all times, regardless of the status of their Partitions (Armed/Disarmed).

Arm/Disarm/Toggle If this command is enabled, all the Partitions the Zone is assigned to will change status when the Zone triggers an Alarm — Armed Partitions will Disarm and visa versa (refer to "Partitions").

Arm/Disarm/Bistable If this command is enabled, all the Partitions the Zone is assigned to will Arm — when the Zone triggers an Alarm, and Disarm — when it restores to standby.

☞ *Partitions — Armed by an **Arm/Disarm/Bistable** Command Zone — cannot be Disarmed until all the Zones of that type are in standby status (and CANNOT be Disarmed via Keypad, Reader, Telephone or PC).*

Arm only If this command is enabled, all the Partitions the Zone is assigned to will Arm when the Zone triggers an Alarm.

Disarm only If this command is enabled, all the Partitions the Zone is assigned to will Disarm when the Zone triggers an Alarm.

Partition Reset If this command is enabled, all the Partitions the Zone is assigned to will Reset when the Zone triggers an Alarm.

Panel Reset If this command is enabled, the Control panel will Reset when the Zone triggers an Alarm.

Clear Call Queue If this command is enabled, the Call Queue will be cleared when the Zone triggers an Alarm.

■ **Attributes**

☞ *The following attributes apply to **Alarm Zones** ONLY.*

Unbypassable Zones with this attribute cannot be Bypassed.

Chime Violation of a Zone with this attribute — during Disarmed status of its Partition will generate the **Chime on partition no.** event, and an audible signal (beep) on the assigned Keypads. Violation of a **Chime** Zone — during Armed status of its Partition will trigger the Actions programmed for the **Type** parameter.

☞ *The **Chime** Attribute is ineffective on **24h** and **Fire** Zones.*

Test Violation of a **Zone with this attribute will not generate the Alarm on zone no.** event. However, the *"Alarm - Zone under test"* message will be recorded in the Control panel log. The **Test** phase will allow you to check the functionality of the Zones without triggering Alarm signals. At default, the Control panel will record ONLY the Events that occur during Armed status. However, by means of the respective option, events that occur during Disarmed status can also be recorded (refer to the **Options** page).

☞ *The ⚠ LED on the keypad will blink when there is one or more Unbypassed Zones is in Test status.*

Autobypassable Zones with this attribute will be bypassed automatically, if violated during Armed status of their Partitions. They will be unbypassed when their Partitions are Disarmed.

☞ *The **Autobypassable** attribute is ineffective on **Delayed Exit** Zones.*

Autobypass with Reset Unbypass Zones with this attribute will be bypassed automatically, if violation occurs when their Partitions are Armed. They will be unbypassed when standby is restored.

Stay Zones with this attribute will be bypassed when their Partitions Arm in Stay mode or Stay with Zero Delay mode.

Delayed on Stay Arming This Attribute can be assigned to **Entry Path** Zones ONLY. Zones with this attribute will operate as **Delayed Entry** Zones when AT LEAST ONE of their Partitions is in Stay mode.

Delayed and Estimated on Ready to Arm This Attribute can be assigned to **Delayed Exit** and **Last Exit** Zones ONLY. If a Zone with this Attribute is NOT in standby status when the system receives a command to Arm one of its Partitions, it will generate a **Not Ready to Arm** event.

Display during Entry Time This Attribute can be assigned to **Delayed Entry** Zones ONLY. If a Zone with this Attribute activates the **Entry Time**, or is violated during the **Entry Time**, the description of the Zone concerned will be shown on the Keypad display.

Vibration This attribute must be assigned to Zones used for Vibration detectors. There are two trimmers for sensitivity adjustment in the ' Sens. Vibration' section.
Sensitivity: This trimmer sets the 'Single Shock' threshold. The selected value — minimum 30 (150 ms), maximum 1 (5 ms) — will determine the 'Shock' impact the zone will allow before signalling violation. Set 1 for maximum sensitivity.
Pulse: This trimmer sets the 'Pulse' threshold. The selected value will determine the number of 'Shocks' the zone will allow before signalling violation. Therefore, if the trimmer is positioned on Disable, the corresponding zone will be completely insensitive to Pulses.
For example, a zone with the 'Sensitivity' threshold of 10 and 'Pulse' threshold of 5 will generate an Alarm when:
a) it receives a single Pulse that exceeds the Sensitivity threshold of 10 (the zone will be open for 50 ms at least), or
b) it receives 5 Pulses of low Sensitivity within 30 seconds.

Roller Blind This attribute must be assigned to Zones used for Roller blind contacts. There are two trimmers for sensitivity adjustment in the 'Roller Blind' section.
Pulse: This trimmer regulates the 'Pulse' threshold (1 through 7). The selected value will determine the number of 'Shocks' that the zone will allow before signalling violation. Therefore, if Disable is selected, the corresponding zone will be completely insensitive to Pulses.
Time: This trimmer regulates the 'Time' window. The selected value will determine the 'Pulse' threshold time (i.e. the time allowed for the Pulse counter to reach the programmed threshold).
***For example**, a zone with a 'Pulse' threshold of 4 and a 'Time' window of 2 minutes, will signal violation when its contact generates 4 Pulses **within 2 minutes.** If less pulses than the programmed 'Pulse' threshold are generated during the 'Time' window, the zone will not signal violation, but will refresh the window and carry forward the memorized number of pulses minus one (e.g. 3 pulses memorized = 2 pulses carried forward). The window will be refreshed until there are no pulses to carry forward, at which point, the 'Pulse' threshold and 'Time' window will reset.*
If the trimmer is positioned on '**repetitive**', the number of pulses (if less pulses than the programmed 'Pulse' threshold) will be stored indefinitely. In all cases, the 'Pulse' threshold will reset automatically each time the Control panel disarms.

■ **Balance Type**
The Balance Type determines the electrical state (on the Zone input terminal) that will trigger Alarms.

☞ *The following electrical states must be present on the Zone Input terminals for at least 0.3 seconds.*

Normally Open Zones with this attribute will trigger Alarms when they short to Negative (e.g. Fire detectors).

Normally Closed Zones with this attribute will trigger Alarms when they Open.

1K For **Roller Blind** and **Vibration** Zones. Control panel will consider the Zone in standby status, when the 1 K resistor (1,000 ohm) is connected between the Zone terminal and Negative. If a 1K Zone shorts to Negative, the Control panel will detect Tamper conditions and generate the same following events of 10K Balance Type.

10K If you apply this **Balance Type**, the Control panel will consider the Zone in standby status, when the 10 K resistor (10,000 ohm) is connected between the Zone terminal and Negative. If a 10K Zone shorts to Negative, the Control panel will detect Tamper conditions and generate the following events:
- **Tamper on zone** (relative to the zone concerned);
- **Tamper alarm on partition no.** and **Generic+Tamper alarm on partition no.** relevant to the Partition the Zone is assigned to;
- **Tamper alarm on panel** and **Generic+Tamper alarm on panel**;

In all other cases (Unbalancing, Open, etc.) the Control panel will signal violation (refer to "Type").

Double If you apply this **Balance Type**, the Control panel will consider the Zone in standby status when the two 10 K resistors (10,000 ohm) are connected in parallel between the Zone terminal and Negative.
If one of the resistors disconnects, the Control panel will generate the events associated with the Zone Type (refer to "Type"). In all other cases (Zone Open, Connected to Negative, etc.), the Control panel will detect Tamper conditions and generate the Events associated with 10K Balance Zones.

This Balance Type (using 2 wires) will allow the system to detect open **Alarm** and **Tamper** contacts (refer to "Connecting to a Double Balance zone").

Glass Break You must apply this **Balance Type** to Zones with Glass Break Detectors.

10K Alarm Only If you apply this **Balance Type**, the Control panel will consider the Zone in standby status when the 10 K resistor (10,000 ohm) is connected between the Zone terminal and Negative.
The Control panel will consider all other conditions as violation (Zone open, short-circuit, etc.).
10K Alarm Only Balance Zones will signal Alarm status when shorted.
10K Balance Zones will signal Tamper status when shorted.

Customized You can customize this **Balance Type** to suit the system requirements (refer to "Threshold").

■ **Threshold**
The voltage threshold values will allow the Control Panel to detect and distinguish Zone Alarm, Tamper and Short-circuit conditions.

If you apply **Customized** Balance, you will be able to select the various thresholds (Standby, Alarm, Tamper and Short circuit).

Value in ohm This option will allow you to view the zone terminal voltage values (instead of the threshold % values).

Standby If you enable this option, the Control panel will consider the Zone in Standby status when the voltage on its terminal is below the programmed Standby threshold.

Alarm If you enable this option, the Control panel will consider the Zone in Alarm status when the voltage on its terminal exceeds the programmed Alarm threshold for the programmed interval, and number of times (refer to **Sensitivity)**.

Tamper If you enable this option, the Control panel will consider the Zone in Tamper status when the voltage on its terminal exceeds the programmed Tamper threshold for at least 0.3 seconds (300 ms).

Short-circuit If you enable this option, the Control panel will consider the Zone "Shorted" when the voltage on its terminal exceeds the programmed Short-circuit threshold for at least 0.3 seconds (300 ms).

Thresholds Valid entries: 1% through 98% in steps of 1% (equal to 138 mV with a 13.8V Power supply). The thresholds must be programmed with rising values.

☞ *In order to ensure maximum immunity to voltage changes, the thresholds are expressed in percentage of the Zone power voltage.*

The **Zone Status** option (from the **INSTALLER MENU**) will allow you to view the Zone voltages (refer to "Zone Status" in the "KEYPAD PROGRAMMING MANUAL").

☞ *The Threshold parameter is protected against unintentional changes.*

To change the Threshold values, select the  button.

■ **Inactivity**

This function allows the system to monitor Alarm Zone inactivity (non-detection of motion), when the Partitions are Disarmed. The **Inactivity** function provides protection against the Detector blinding and allows the system to detect Zone malfunction. Under normal circumstances, Users disarm the system when they are on the premises, therefore, the Zones should detect motion (violation) quite frequently. If this does not occur, the system will suppose that the User is unable to move (due to serious illness, accident or delinquency) and as a result will generate a **Delinquency on Partition** event, thus prompting the Central station operator to take the necessary action.

The **Inactivity** function can also be applied to automatic Arming. In which case, if the Zone does not detect motion (violation) for the programmed period the system will suppose that no Users are present and will Arm the Partitions the Zone belongs to.

☞ *The system will monitor Zone **Inactivity** ONLY when **ALL** the Partitions of the Zone are **Disarmed**.*

The **Inactivity** field will allow you to set the Inactivity parameters, as follows:

None If you enable this option, Zone Inactivity will not be signalled. All Zones are disabled at default.

Inactivity If you enable this option, Zone Inactivity will be signalled when the programmed **Inactivity Time** expires.

Zone Inactivity will be signalled by:

- the **Event delinquency on partition** — relating to the Partitions the Zone is assigned to.

☞ *The ⚠ LED (ON) signals several different types of Trouble events. If the signal is due to Inactivity, the Keypad (in View Trouble Mode) will show the* `Inactivity` *message (refer to "View Trouble Mode" in the USER'S MANUAL).*

The following information will be recorded in the Event log:

- TYPE: Inactivity
- ID. EVENT: Description of the Partitions the Zone is assigned to;
- AGENT: None;
- ID. AGENT: Description of the Zone that triggered the Inactivity event.

Zone Inactivity will terminate when the Zone restores standby, or when the Zone triggers an Alarm.

The termination of a Zone **Inactivity event will be signalled on the** ⚠ LED (OFF) on Keypads which are enabled on at least one of the Partitions the Zone belongs to.

☞ *The ⚠ LED switch OFF **ONLY** when there are no Inactive Zone or Trouble signals relating to the Keypad Partitions.*
As the event is a Spot event, the termination of a Zone Inactivity event will not be signalled.

Auto-arm on delay If you enable this option, the Partitions the Zone belongs to will Arm automatically when the programmed Inactivity Time expires (refer to **Inactivity Time/Delay).**

Inactivity Time/Delay This field will allow you to program the Inactivity window (i.e. the time the system will allow the Zone to be inactive).

Valid entries: 1 through 14400 minutes (10 days) 1-minute steps.

At default, the Inactivity Time is 1 minute.

☞ *The programmed **Inactivity Time** will reset when:*
*— ALL the Partitions the Zone belongs to **Disarm**;*
— the Zone is violated;
— the Zone Restores to standby.

■ **Cycles**

This parameter determines the number of times the Zone will be able to trigger the Zone Alarm event.

Valid entries: 0 through 254 or Repetitive:

- If 0 is selected, the Zone will be unable to trigger Zone Alarm events;
- if any number other than 0 is selected, the Zone will be able to trigger the corresponding number of Alarm events;
- if Repetitive is selected, the Zone will be able to trigger an unlimited number of Zone Alarm events.

The Zone Alarm Cycle counter will reset when:

- one of the Partitions of the Zone changes status;
- one of the Partitions of the Zone Resets;
- one of the Partitions of the Zone exits Block Alarm status;

- the programming session ends (i.e. when you exit the Installer Menu or complete downloading via the PC);
- the Zone is Unbypassed.

☞ *A Zone that signals a persistent Alarm condition (e.g. due to Trouble conditions) will generate one Alarm cycle ONLY. It will be unable to generate further cycles until the Alarm counter has been cleared.*

■ **Partitions**
This table will allow you to assign the Alarm and Command Zones to the Partitions.

For Alarm Zones — The selected Partitions will determine which User Codes, Digital Keys/Cards and Operating Times will be associated with the Zone. Each Alarm Zone can be assigned to more than one Partition.

☞ *If the Zone is a Delayed Zone (Entry Delay, Path, Exit Delay or Last Exit Delay), the system will apply the longest Entry Delay, Exit Delay or Last Exit Delay of all its Armed Partitions.*

For Command Zones — The selected Partitions will determine which Partitions the Zone will be able to control. Each Command Zone can operate on more than one Partition.

Full Arming Alarm If this option is enabled, the Zone will be able to generate the **Alarm on Zone** event ONLY when ALL of its Partitions are Armed.
If this option is disabled, the Zone will be able to generate the **Alarm on Zone** event even when AT LEAST ONE of the Partitions it is assigned to is Armed.

■ **Sensitivity**
The system will signal Zone Alarm status when the voltage on the Zone terminal exceeds the Alarm threshold for the programmed interval (**Within**), and/or number of times (**Pulses**). This section will allow you to program amount of time (**Length**) and/or the number of times (**Pulses**), as follows.

Standard This field will allow you to set the number of **Pulses** that will trigger Alarm status.
Valid entries: 1 to 3 pulses from 100 ms (0.1 seconds) through 1000 ms (1 second) in steps of 100 ms (0.1 seconds).
If you set more than 1 Pulse, you will be able to set the **Within** time (i.e. the interval within which the programmed number of Pulses must occur), and select whether the system will signal Zone Alarm *when*:
— Pulses are detected within the set time (**Alarm for** *n* **pulses within** *t* **Sec.**, where ***n*** stands for the number of Pulses and ***t*** the programmed **Within** time), *or when:*
— 1 pulse is detected which is longer than the programmed **Within** time (**OR single pulse with length >** *t* **Sec.**, where ***t*** stands for the programmed **Within** time).

Low This field will allow you to set the minimum **Pulse length**.
If you select **Step 500 ms**, you will be able to set a Pulse length of 0.5 through 32 seconds in 0.5 second steps.
If you select **Step 30 sec.**, you will be able to set a Pulse length of 30 through 1920 seconds (32 minutes) in 30 second steps.

☞ *If you select the **Step 30 sec. option**, the Control panel will round off the Pulse length to the nearest 5 seconds. For example, if you set 30 seconds, the Control panel will trigger an Alarm when it detects a Pulse between 25 and 30 seconds.*

■ **Voice Messages**
This feature is provided by the **K3/VOX2** kit (optional Voice Board + Speaker). If this optional feature is available, you will be able to assign two voice messages to the Zone. These messages will allow the User to make status enquiries (with voice answer) over the phone. The Voice Messages can be recorded, played and deleted at the Keypad (refer to “Voice Messages”).

Standby This field will allow you to select the Message which will be played when the Zone is in Standby status.

☞ *If no message is selected, **Standby** status will be signalled by a **Beep**.*

Alarm This field will allow you to select the Message which will be played when the Zone is in Alarm, Tamper or Short Circuit status.

☞ *If no Voice Message is selected, Zone **Alarm** will be signalled by **two Beeps**.*

Default Code In Contact ID and SIA protocols case, the associated code changes with Alarm Types (See Alarm Zones). In this way, a Fire Zone (for example) will be associated to a particular code that will be different from a Duress Zone or 24h Zone.

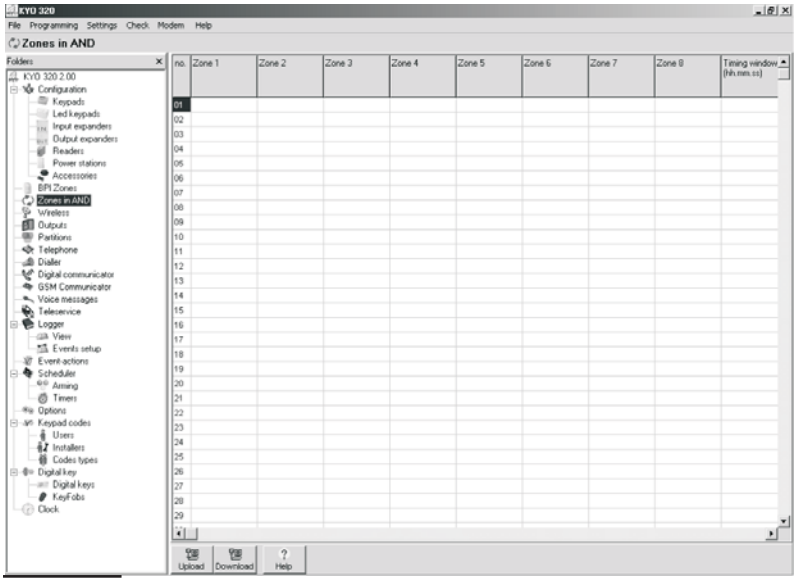


Figure 27 *AND Zones Page*

AND Mode Zones

This option will allow you to set up the system to generate Alarms when violation occurs on a specific group of Zones within a set time.

No. This field shows the Identifier number of the **AND** Zone group.

Window This field will allow you to set the time within which ALL the Zones of the respective group must detect violation.

The **And** Zones page will allow you to set up to 32 Groups, each with:

- up to 8 Zones
- a set time (Window) within which ALL the Zones in the respective Group must detect violation.

From **Standby** status, each Group will operate as follows: violation of any of the Zones in the Group will not generate an Alarm but will start the programmed Window.
If **ALL** the Zones in a specific Group detect violation within the programmed window, the system will generate the respective Zone Alarms, and will indicate the Zones concerned on the Keypad.
If **NOT ALL** the Zones in the Group detect violation within the programmed Window, the system will refresh the window and restore to **Standby**.

After generating a Zone Group Alarm, the system will be unable to generate further Alarm cycles until **ALL** the **AND** Zones concerned restore to **Standby**.

'Reset Partition Alarm', 'Arm/Disarm Partition' or 'Stop Partition Alarm' operations will restore **ALL** the **AND** Zones of the Partition concerned to standby.
The Zones of a Group need not have Partitions in common. **AND** Zones can be set up via PC only.

Wireless Receivers

Systems with two **VectorRX-8, VRX32-433** or **VRX32-868** Receivers can manage up to 64 Wireless Zones and up to 32 keyFobs (with two vectorRX-8 up to 16 Zones and up to 16 KeyFobs). With two VRX32 receivers, up to 64 zones via radio and up to 32 radio keys.

The Wireless Zones support the following Detectors:

- AMD20 / KMD20 / KMD20NP - Wireless Pet-immune Infrared Detector
- AMC30 / KMC10 - Wireless Magnetic Contact
- AGB10 - Wireless Glass Break Detector
- ASD20 / KSD20 - Wireless Optical Smoke Detector

☞ *Wireless Devices other than those listed above are not supported by the* ***Vector Receivers.*** *Read the "APPENDIX" for further information on the listed Devices.*

The system can detect Alarm, Tamper, Low Battery and Lost Wireless Detectors.

When a Wireless Detector (assigned to a Wireless Zone) detects Alarm conditions, the system will generate the respective **Alarm on zone no. - Wireless** event, and other events which depend on the programmed "Type" (refer to "Type" under "Hardwired Zones").

When a Wireless Detector (assigned to a Wireless Zone) detects Tamper conditions, the system will generate the respective **Tamper on zone no. - Wireless** event, and other events which depend on the programmed "Type" (refer to "Type" under "Hardwired Zones").

When the battery of a Wireless Detector (assigned to a Wireless Zone) is Low, the system will generate a **Warning low battery on wireless device** event . This event will not identify the Wireless detector concerned. However, the respective information will be recorded in the log as follows:

- TYPE - Low Battery
- ID. EVENT - Description of the Wireless Zone no.

When a Wireless Detector fails to transmit, the system will generate a **Lost wireless zone** event. The Wireless detector concerned will not be identified. However, the respective information will be recorded in the log as follows:

- TYPE - Wireless Device Disapp.
- ID. EVENT - Description of the Wireless Zone

Wireless keys can Arm in Stay/Away mode and The **Wireless** page will allow you to program the Wireless Zone, as follows.

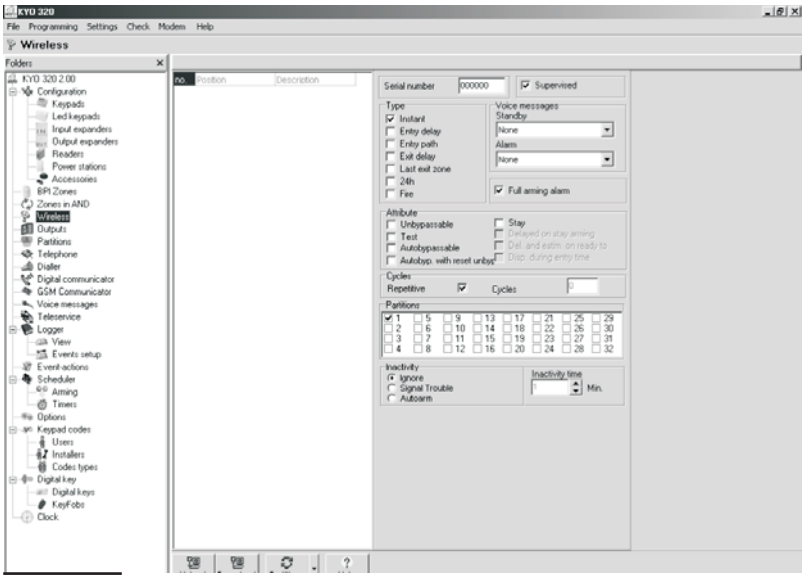


Figure 28 *Wireless Page*

The list on the left side of the page shows the Wireless Zones of the system. The following information is shown for each Wireless Zone.

☞ *If the Wireless Device Receiver option is Disabled (refer to the Accessories page), the left side of the Wireless page will be empty.*

No. This field shows the Wireless Zone which will be used in some parts of the application instead of the Wireless Zone.

Position This field shows the **Description** of the hardware device the Wireless Zone is assigned to.

Description This editable field (16 characters) is for the Wireless Zone (e.g. the detector placement or the name of the Key User). This **Description** will identify the Wireless Detector in all the operations it is involved in.
The right side of the page will allow you to program the parameters of the Wireless Device (to be selected on the left), as follows.

☞ *The right side of the page shows the various parameters for the Wireless Zones.*

Serial Number This editable field is for the ESN (Electronic Serial Number) of the Wireless detector which is assigned to the selected Wireless Zone.

☞ *You cannot program the device parameters until you have entered its ESN.*

The ESN will allow the Control panel to identify the wireless device on the system.
The ESN may comprise hexadecimal digits (A, B, C, D, E and F), in order to lower the risk of duplicate ESNs.

☞ *Some Wireless Devices have 5-digit and 6-digit ESNs (printed on back), use ONLY 6-digit ESNs with this Control panel.*

Supervised If this option is Enabled, the system will be able to signal the loss of the Wireless detector. The Receiver will trigger the **Lost wireless zone** event as soon as the programmed Supervisory time expires (refer to the **Time supervision zones** under "Accessories" in the "Configuration" section). The placement of Wireless detector will not be indicated, however, the respective information will be recorded in the log.

Type Refer to "Type" under "BPI Zones".

Voice Messages Refer to "Voice messages" under "Wired Zones".

Attributes Refer to "Attributes" under "Hardwired Zones".

Cycles Refer to "Cycles" under "Hardwired Zones".

Partitions Refer to "Partitions" under "Hardwired Zones".

Full Arming Alarm Refer to "Full Arming Alarm" under "Hardwired Zones".

Inactivity Refer to "Inactivity" under "Hardwired Zones".

☞ *The **Inactivity Time** of Wireless Zones must not be less that 5 minutes.*

■ **Replacing Wireless Devices**
To replace a Wireless detector (assigned to a Wireless Zone): select the required Wireless Zone, then enter the ESN of the new Wireless detector in the **Serial Number** field.

■ **Enrolling Wireless Devices**
To enrol a Wireless detector: select an empty Wireless Zone, then enter the Wireless detector ESN in the **Serial Number** field.

■ **Unenrolling Wireless Devices**
To unenrol a Wireless detector (assigned to a Wireless Zone): select the required Wireless Zone then enter 000000 in the **Serial Number** field.

Outputs

Control panel Outputs no. 1, no. 2 and no. 3 are 3 A double switching relays. The terminals for these Outputs are:
- Output no. 1 = +N1, +A1, C1-NC1-NA1
- Output no. 2 = +N2, +A2, C2-NC2-NA2
- Output no. 3 = +N3, +A3, C3-NC3-NA3

The Control panel Outputs no. 4, no. 5 and no.6 are 1 A Open-Collectors. The terminals for these Outputs are: OC1, OC2 and OC3.

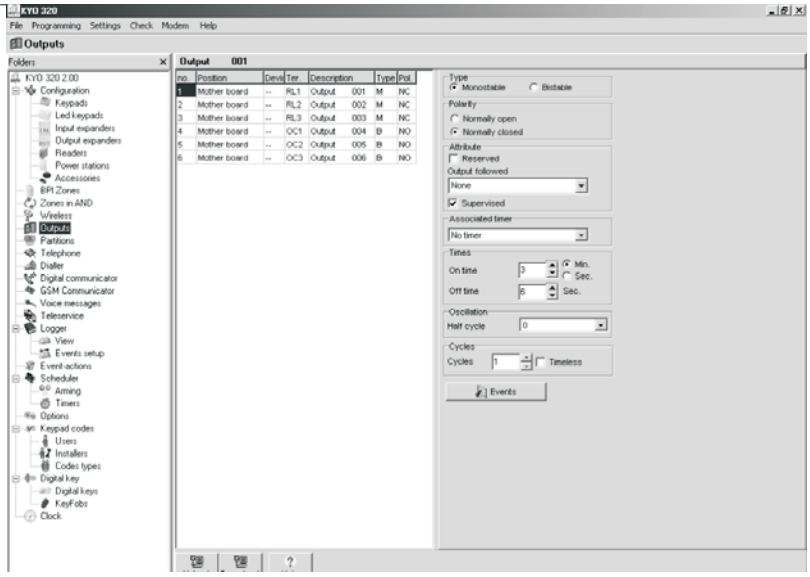


Figure 29 *Outputs page*

The Expander Outputs[9] are 0.15 A Open-Collectors.The terminals for these Outputs are T1, T2, T3, T4, T5 and T6.
The Control Panel Outputs and Expander Outputs[9] can be associated with Events that activate signalling devices (Sirens, Flashers, etc.), or used to provide Operating/Trouble status and device control signals. They can also be used to turn ON/OFF electrical appliances at the Keypad or via telephone (Heating, Garden sprinklers, etc.). The **Outputs** page will allow you to program the Control Panel and Expander Output[9] parameters, as follows. The table on the left side of the **Outputs** page shows the Outputs. The number of available Outputs depends on the system (refer to "Configuration"). The following information will be shown for each Output.

☞ *If an M-IN/OUT Expander is configured as an Expander with 4 Zones + Expander with 2 Outputs, only the Outputs corresponding to terminals OC1 and OC2 (see column '**Ter**') will be usable; if it is configured as an Expander with 4 Outputs + Expander with 2 Zones, only the Outputs corresponding to terminals OC1, OC2, OC3 and OC4 will be usable.*

No. This field shows the Output ID number, used in some parts of the application, instead of the Output Description (refer to "Description").

Position This field shows the **Description** of the Output[9] placement. This label can be edited on the **Output Expanders** page.

Device This field shows the Address of the Output[9] placement (Control Panel Outputs are indicated by a hyphen).

Ter. This field shows the Output terminal tag:

- **RL1** = +N1, +A1, C1-NC1-NA1
- **RL2** = +N2, +A2, C2-NC2-NA2
- **RL3** = +N3, +A3, C3-NC3-NA3

☞ *The labels OC1, OC2, ..., OC6 on M-IN/OUT Expanders programmed as Output Expanders correspond, respectively to terminals T1, T2, ..., T3.*

Description This editable field (16 characters) is for the Output label (e.g. the detector placement or the name of the Key User). The **Parameters** on the right side of the **Outputs** page can be programmed as follows.

Type The Output can be programmed as either Monostable (**M**) or Bistable (**B**).

Pol. The Output can be programmed as either Normally Closed (**NC**) or Normally Open (**NO**).

■ **Type**

Bistable This type of Output will activate when AT LEAST ONE of its associated Events occurs, and will stop when ALL of its associated Events end.

Monostable This type of Output will activate when AT LEAST ONE of its associated Events occurs, and will stop when the programmed **ON Time** expires (see "ON Time" below).

■ **Polarity**
This programming field will allow you to program the Output standby polarity .

Normally Open The electrical state during standby is: [+N] terminals open; Positive signal (13.8V) on the [+A] terminals; [C] terminals closed to their respective [NO] terminals; [NC] terminals open; terminals [OC] on the

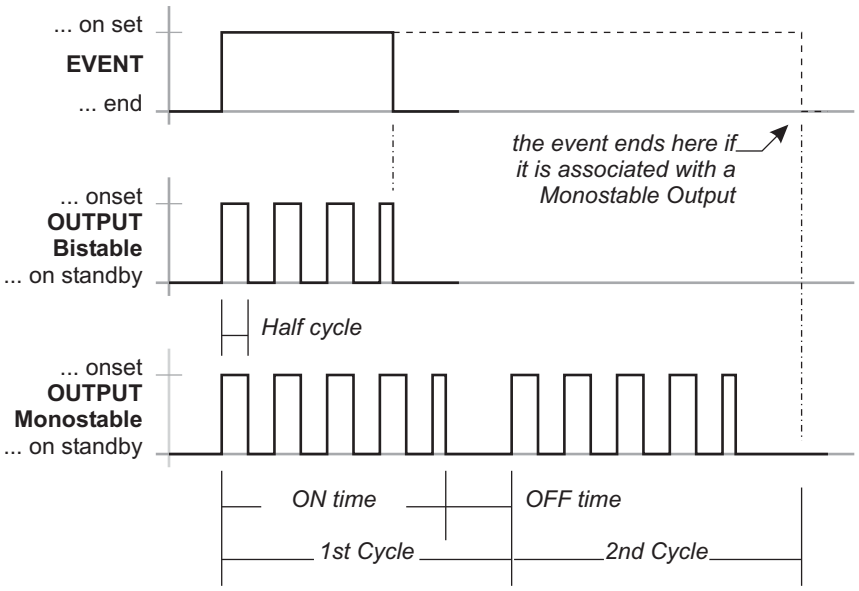


Figure 30 *The Effect of the **Oscillation** and **Cycle** parameters on Bistable and Monostable Outputs*

9 *M-IN/OUT Expander programmed as Output Expander or Input/Output Expander (see "M-IN/OUT Programmable Input/Output Expander" in the "INSTALLATION" chapter).*

Control Panel and terminals [T] on Output Expanders[9] are open.

Normally Closed The electrical state during standby is: Positive signal (13.8V) on the [+N] terminals; [+A] terminals open; [C] terminals closed to their respective terminals [NC]; [NO] terminals open; terminals [OC] on the Control Panel and terminals [T] on Output Expanders[9] are closed to Negative.

■ **Attributes**

Reserved This Attribute will allow the User to activate/stop the Output from the Keypad or via telephone (refer to "Activating Outputs" under "KEYPAD OPERATIONS" in the PROGRAMMING FROM KEYPAD MANUAL, and to the "OPERATIONS VIA TELEPHONE" section in the USER MANUAL).

☞ ***Reserved*** *Outputs CANNOT be associated with the Events on the Events-Actions page.*

☞ *When you exit a programming session via PC, Modem or Keypad, the Reserved Outputs will restore to the status they were in before the programming session started.*

Output followed This field will allow you to associate the selected Output with another Output. The selected Output will track the specified Output (i.e. be activated by the same Events, and perform the same Actions).
If you DO NOT want the selected Output to track another Output, you must select "**None**" in this field. An Output that is programmed to track another Output will:

- activate when the specified Output activates;
- restore to standby when the *"tow"* Output restores to standby.

☞ *If you program an Output to track another Output, you will not be able to associate it with the Events on the* ***Events-Actions*** *page.*

Supervised If the system has been duly set up, this Attribute will allow the system to monitor the Output for short circuits and interrupted connections (refer to **NOTE**).

☞ *This Attribute can be selected for Outputs no. 1, 2 and 3 .*

NOTE: Terminal [+A] must be wired in accordance with the instructions in the "Supervised Outputs" paragraph (refer to the "INSTALLATION" section under "Connecting Signalling Devices"), otherwise, the system will be unable to signal short circuits and interrupted connections on the Supervised Outputs.

■ **Associated Timer**
This section will allow you to associate a Timer with the Output. The Output can be activated ONLY by the selected Timer (refer to "Time Programmer - Timer").

☞ *When the Timer window expires, the Output will restore to standby, even if the conditions that generated the event are still present.*

■ **Times**
This section will allow you to set the **On/Off Times** of the Output.

☞ *The* ***ON Time*** *and* ***OFF Time*** *can be set for Monostable Outputs only.*

ON Time This is the maximum activation time of the Output.
Valid entries:

- 0.2 through 25.4 seconds, in 0.2-second steps (for **sec.** option)
- 1 through 127 minutes, in 1-minute steps (for **Min.** option)

Default setting: 3 minutes

OFF Time This is the minimum OFF Time after restoral of the Output. The Output will be unable to re-activate until the programmed OFF Time expires.
Valid entries: 1 through 255 seconds, in 1-second steps.
Default setting: 3 minutes

■ **Oscillation**
Outputs with this attribute will remain active for the programmed time, return to standby for the same amount of time, and then reactivate. Oscillating Outputs can be used to generate visual and audible signals (cause LEDs to blink or buzzers to sound).
Oscillation parameters

Half Cycle This field will allow you to program the amount of time the Output will be active, and the amount of time it will be in standby status during Oscillation.
Valid entries: 200 msec (milliseconds) through 1400 msec in 200 msec steps; If you set 0, the Output will not oscillate.

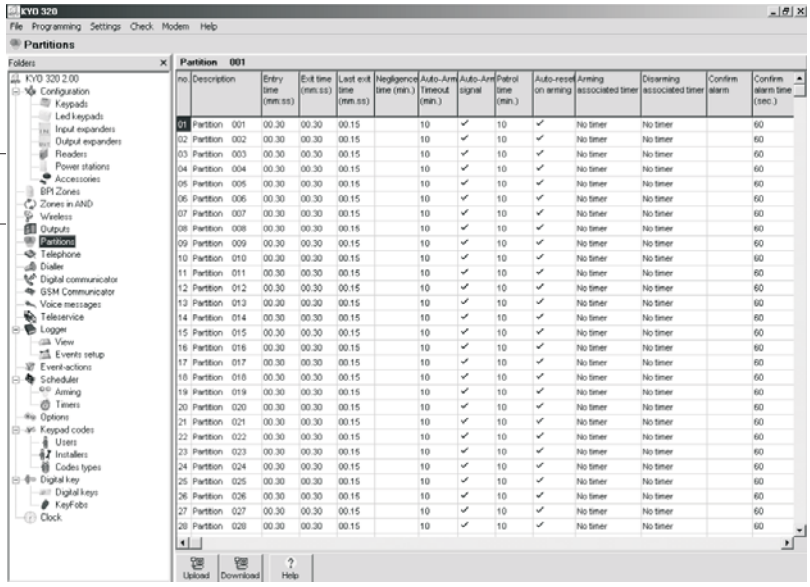


Figure 31 *Partitions page*

■ **Cycles**
Monostable Outputs may continue to run the programmed number of Cycles even after the triggering event has been cleared. During each cycle, the Output will be active for the programmed **ON Time** and will restore to standby for the programmed **OFF Time**. If a **Half Cycle** has been programmed, the Output will oscillate in accordance with the Half Cycle parameters (during the **ON Time**).
This field will allow you to set the number of Output **Cycles**, as follows.

☞ *The parameters in the Cycles section can be set for Monostable Outputs only.*

Cycles This field will allow you to set the number of cycles the Output must run.
Valid entries: 1 to 31 Cycles (1 Cycle is set at default).

Timeless If this option is enabled, the Output will run an unlimited number of cycles. In which case, the Output cycles can be interrupted ONLY by Partition Reset or Control Panel Reset.

⚠ **DO NOT associate Outputs with the Timeless attribute with NON Restorable-NON Spot, Spot and Special events, as these events cannot be stopped.**

■ **Events**
The **Events** button will allow you to view the Events that activate the selected Output.

Partitions

Each Partition consists of a group of zones that the system manages independently (Virtual Control Panel). Each Partition can be programmed with its own Codes, Timers, Actions and Parameters.
This system manages 32 Partitions. You can setup the Partitions in the **BPI Zones** and **Wireless** pages.
The layout of the **Partitions** page is as follows.

No. This field shows the Partition ID number, used in some parts of the application instead of the Description (e.g. for Telephone Access).

Description This field is for the Partition Label (16 characters). The **Description** will identify the Partition in all the operations it is involved in.

Entry Time This field will allow you to set the Partition **Entry Time**. Violation of an Armed **Entry Delay** Zone will trigger the programmed **Entry Time**.
The Partition **Entry Time** will be signalled by:
- the **Entry time on partition** event for the Partition;
- an audible signal from the Partition Keypads.

An Alarm will not be generated if the violated Partition is Disarmed before the **Entry time** expires.

Exit Time This field will allow you to set the Partition **Exit Time**. Violation of an Armed **Exit Delay** Zone will trigger the programmed **Exit Time**.
If violation ends before the **Exit time** expires, the Zone will not generate an Alarm.
The Partition **Exit Time** will be signalled by:
- the **Exit time on partition** event for the respective Partition;
- an audible signal on the Partition Keypads.

Last Exit Time This field will allow you to set the **Last Exit Time**. Violation of an Armed **Last Exit** Zone will trigger the programmed **Last Exit Time** of its Partition. This feature will allow the system to Arm as soon as the programmed **Last Exit Time** expires. Valid entries for **Entry**, **Exit** and **Last Exit Times**:
0 minutes and 0 seconds through 59 minutes and 55 seconds, in 5-second steps. If you enter a higher value, it will be converted automatically to the maximum admissible value. If you enter a value that is not a multiple of 5 seconds, it will be rounded off to the nearest 5-second step. Default setting: 1 minute.

Partition Code This field is for the Partition User Code. When a Partition-related event occurs, the Digital Communicator will send the respective Partition Code to the telephone numbers with the **Send Always** option Disabled (refer to “Digital Communicator”).
The **Partition Code** is useful in shared Security system applications (for example, in an apartment building or Shopping Mall, etc.) where it is necessary to identify the Partition in Alarm status rather than the system (the **Partition Code** will identify the Partition whereas the **Customer Code** will identify the system).

☞ *If the reporting format supports 4 digits, only the first four digits will be sent.*
If the protocol does not support hexadecimal digits (A, B, C, D and F), they will be converted to 0.

☞ *When operating with SIA or SIA on B-NET reporting formats, the Digital Communicator will send the respective Customer Code (refer to "Digital Communicator").*

Negligence Time Under normal circumstances, Users Arm their systems with a certain regularity, if this does not occur, it may be due to Negligence on the User’s behalf or may mean that the User is in difficulty (due to serious illness, accident or delinquency), in which case, this feature will prompt the Central station operator to take the necessary action.
This programming field will allow you to set the **Negligence Time**. If the system is not Armed within the programmed time, the Control panel will generate the **Negligence on Partition** event.
Valid entries: 1 through 60000 minutes (41 days and 16 hours) in 1-minute steps.
Invalid entries (over 60000 minutes) will generate an error message.
If this option is left at default (0), Negligence will not be signalled.

Negligence will be signalled by:
- the **Event negligence on partition** event — relevant to the Partitions the Zone is assigned to.

Auto-Arm Timeout This field will allow you to program the Automatic Arm pre-alert period.
For example, if the Timer is set to Arm Partition no. 1 at 17:45 p.m. with a 15-minute **Auto-Arm Timeout**, the system will generate the **Autoarming warning partition no. 1** event at 17.30, and will signal the start of the pre-alert period. The pre-alert signal will warn anyone on the premises that the system is about to Arm. During the pre-alert phase the system will accept Overtime Requests. If no valid Code is entered during this period, the system will Arm as programmed.
The event will end when the programmed Auto-Arm Timeout expires or when the Partition Arms after an Overtime request.
Valid entries: 0 through 240 minutes, in 1-minute steps.
If you set 0, there will be no warning.
If you enter a higher value than the maximum, it will be converted automatically to 240 minutes.

Auto-Arm Signal If this option is enabled (✓) for the Partition (Enabled at Default), the Partition Keypads will emit an audible signal (beep) during the entire pre-alert period.

Patrol Time This programming field will allow you to set the **Patrol Time**. If the system is disarmed by a User Code with the Patrol attribute (refer to "Patrol Code" under "Keypad Codes — User"), it will rearm automatically when the programmed **Patrol Time** expires.
Valid entries: 0 through 254 minutes in 1-minute steps.
Default setting: 10 minutes.

Autoreset on Arming If this option is enabled (at default), the system will **Reset Partition Alarms** each time it is Armed (refer to "Reset Partition Alarms" under "Keypad Codes — Code Types").

Timer Associated Arming This option provides the system with an **Arm command filter**. If a Timer window is associated with a Partition, the system will carry out commands to Arm the Partition concerned ONLY when the respective Timer window is running (refer to "Scheduler - Timers").

Timer Associated Disarming This option provides the system with a **Disarm command filter**. If a Timer window is associated with a Partition, the system will carry out commands to Disarm the Partition concerned ONLY when the respective Timer window is running (refer to "Scheduler - Timers"). However, if the **Disarm with Alarm in memory** option is enabled, it will be possible Disarm the Partition in the event of violation (Alarm or Tamper) during the Timer window.

Confirm alarm If this option is enabled and a zone triggers Alarm status, the system will start the respective **Confirm alarm timer** window but will not generate a **Partition burglar alarm**. If another zone alarm occurs (triggered by a different zone) while the Timer window is running, the system will generate a **Partition alarm**.

Confirm alarm timer This field will allow you to program the **Confirm alarm timer** window (necessary when the Confirm alarm option is enabled) which determines the Partition alarm delay. This feature will allow the system to trigger a Partition alarm only when two or more zone alarms (triggered by different zones) occur during the running window.

Disarm with Alarm in memory If this option is enabled, it will be possible to override the Partition Timer and Disarm the Partition in the event of violation (Alarm or Tamper in memory), even when the Timer window is running (refer to **Timer associated Disarming**). This feature will allow users to disarm Timer controlled Partitions which under normal circumstances (unviolated) cannot be disarmed. The permitted values range from a minimum of 30 to a maximum of 60 minutes.

Partition Armed Voice Message This option will allow you to select the voice message which will answer status enquiries over-the-phone (DTMF) when the Partition concerned is armed.

Partition Disarmed Voice Message This option will allow you to select the voice message which will answer status enquiries over-the-phone (DTMF) when the Partition concerned is disarmed.

☞ *The "Partition Armed" voice message will apply to all arming types: Stay; Away, Stay 0 Delay.*

Telephone

The **Telephone** page will allow you to program:
- the Telephone numbers for the Digital Communicator, Dialler, Auxiliary Communicator and Teleservice facilities;
- Telephone line parameters;
- the Answering Machine parameters.

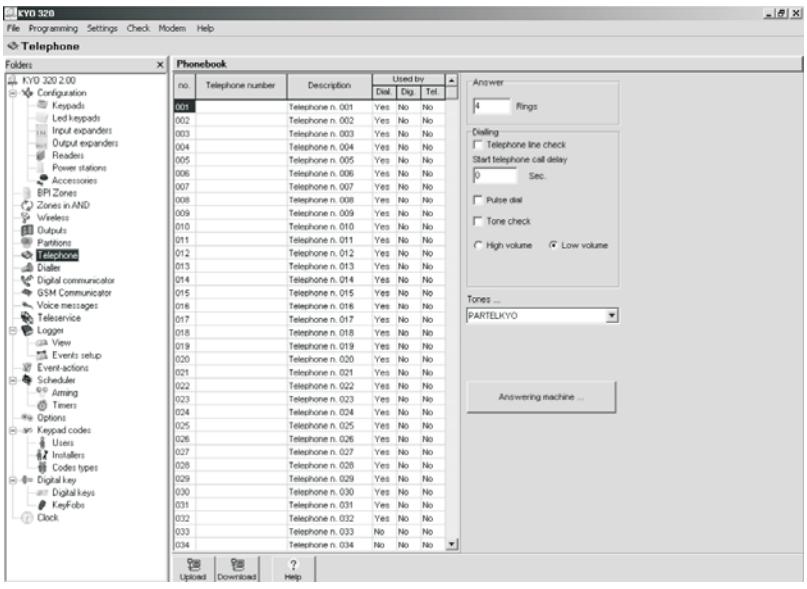


Figure 32 *Telephone page*

The layout of the **Telephone** page is as follows.

No. This field shows the Telephone ID number. This number will be used instead of the Description (User label) in some parts of the application.

Telephone Number This editable field (maximum 20 digits) is for the Telephone number the system will call. Valid entries: digits from 0 to 9, pound (#), star (*) and comma (,). The comma can be used to insert pauses, for example, between a switchboard number and a telephone number.

Description This editable field (maximum 16 characters) is for the Telephone Number label (e.g. User Name). The **Description** at default is [Tel. Number *nnn*] — (*nnn* represents the ID number of the Telephone Number).

Used by This programming section will allow you to assign the Telephone facilities:
- Dial. = Dialler
- Dig. = Digital Communicator
- Tel. = Teleservice

■ Answer

The **Answer** section will allow you to program the Control Panel answer mode.

☞ *The Control Panel cannot answer incoming calls when the Answering Machine or Teleservice function is Disabled (refer to "Enable/Disable Teleservice" and "Enable/Disable Answering Machine" in the USER'S MANUAL).*

Rings This field will allow you to program the number of rings the Control panel must allow before answering an incoming call.

☞ *If the **Double call** option is enabled, the number of **Rings** will be ignored (refer to "Double call" under "Teleservice").*

■ Dialling

The Dialling section will allow you to program the Control Panel Dialling mode.

Line Check If this option is Enabled, the system will supervise the telephone line.

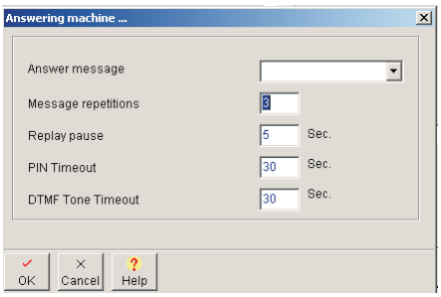


Figure 33 *Answering Machine window*

The system will signal "Line down" (i.e. voltage on the [L.E.] terminals less than 3V for over 45 seconds) by:
- turning ON the ⚠[10] LED;
- generating the Line Trouble signal — an X (blinking) above the icon;
- generating the **Telephone line trouble** event.

The system will signal "Line restoral" (voltage on the [L.E.] terminals more than 3V for 15 seconds) by:
- turning OFF the ⚠ LED (i.e. unless there are other faults);
- clearing the Trouble signal;
- terminating the **Telephone line trouble** event.

This option must be **Disabled** when the Control Panel is not connected to a telephone line, otherwise, the **Telephone line trouble** event will be signalled persistently.

Start Telephone Call Delay This field will allow you to program a delay between the start of the Alarm and the first outgoing Alarm call. This delay will give the User time to verify the Alarm and stop outgoing calls in the event of false Alarm.

☞ *The **Start Telephone Call Delay** will be applied to the first Telephone number in the Call Queue.*

Valid entries: 0 through 1200 seconds (20 minutes), in 1-second steps.
Default setting: 0 seconds.

Tone Check If this option is enabled, the Control panel will check for the dialling tone before dialling. If the dialling tone is not detected during the programmed Time-out, the Control panel will hang-up and retry.

High-Low Volume If listen-in and and remote 2way Speaker system (Teleassistance) is enabled it is possible to choose between High or Low Volume.

Pulse Dial This Control Panel has been set up to dial in DTMF (Touch-tone). If this option is enabled, the Control Panel will dial in Pulse.

Tones This option will allow you to select the country. The selected country will allow the Control panel to operate properly on the local terrestrial line.

☞ *If the country is not listed, select EUROPEAN GENERIC.*

☞ *If the Control panel is unable to operate properly using EUROPEAN GENERIC, you must **Disable** the **Tone check**.*

■ Answering Machine

The Answering Machine function will allow you to record a Voice Answer Message. The message will be

10 *The ⚠ LED signals several different types of Trouble events. If the signal is due to telephone line trouble, the Keypad (in View Trouble Mode) will show the **Tel.Lin.Failure** message.*

played each time the Control Panel answers a call after the programmed number of **Rings**.

☞ *The Answering Machine function can be Enabled/Disabled by the User (refer to "Enable/Disable Answering Machine" in the USER'S MANUAL).*

If the Teleservice function is also Enabled, the Control Panel will emit a beep, wait approximately 6 seconds for the Modem to respond (if connected) and, if no response is detected, will play the Message. If the Answering Machine Message has not been recorded the Control panel will emit a beep.
The layout of the **Answering Machine** window is as follows.

Answer Message This field will allow you to select the Answering Machine Voice Message (refer to "Voice Messages").

Message Repetitions This field will allow you to program the number of times the message must be played.
Valid entries: 0 through 255;
Default setting: 3.

Replay Pause This field will allow you to program a pause between Answer Message announcements.
Valid entries: 1 through 254, in 1-second steps;
Default setting: 5 seconds.

PIN Timeout This field will allow you to program the time the User will have to enter the User Code (with remote Telephone Access) on the telephone keypad.
Valid entries: 1 through 254 seconds, in 1-second steps
Default setting: 30 seconds.

☞ *Only Codes no. 132 to 195 can access the Control Panel via telephone (refer to the "Codes" paragraph).*

DTMF Tone Timeout This field will allow you to program the time (in seconds) the User will have to enter the Command after Code acceptance. The User must start entering the command before the Timeout ends, otherwise, the Control Panel will end the call. Valid entries: 1 through 254 seconds, in 1 second steps. Default setting: 30 seconds.

Dialler

The Dialler page will allow you to define up to 50 Actions. Each Action can be associated with one or more Events in the **Events-Actions** page. The Actions will signal via Telephone the start and/or end of their associated Events. Each Dialler Action can send a Voice Message to a maximum of 32 Telephone numbers.

Message Queue The Dialler will not end the call until all the messages destined for the connected telephone number have been sent. This feature reduces call time and costs.

☞ *Events will not be queued when the **Call successful number** option is **Enabled** (refer to "Options" under "Dialler").*

The layout of the **Dialler** page is as follows.

☞ *The Dialler parameters apply to all the numbers in the **Dialler book**.*

■ **Dialler book**
The **Dialler book** will allow you to assign up to 32 Telephone numbers from the **General book** (refer to "Telephone") to the Dialler function.

No. This is the Identifier number (1 through 32) which represents the Telephone number in the **Actions** window. This Identifier number DOES NOT CORRESPOND to the Telephone Number ID number in the General Phonebook.

Telephone Number This field will allow you to select the Telephone Number the Dialler must call.

1. Click on the field you wish to program.

2. Click again on the same field: the program will display the Telephone Numbers in the General Phonebook.

3. Select the required Telephone Number.

☞ *The ID numbers can be entered in any order. However, the sequence defined in the Dialler phonebook will determine the call priority.*

■ **Send Message after ...**
This section will allow you to program when the Voice Message announcement.

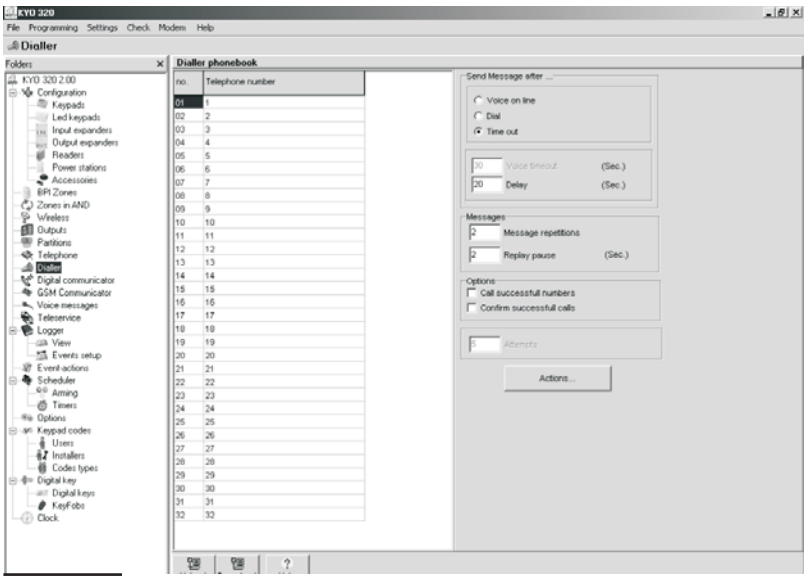


Figure 34 *Dialler page*

Voice on line If this option is enabled, the Voice message will be played after detection of a voice response. If the Control Panel does not detect a voice response before the **Voice timeout** ends, it will hang-up and generate a **Dialler action failed** event.

Dial If this option is enabled, the Voice message will be played after Dialling.

Time out If this option is enabled, the Voice message will be played when the programmed **Delay** after dialling expires.

☞ *All calls that comply with the programmed **Send Message After** conditions will be considered Successful. However, only the **Voice on Line** option ensures a proper response to calls, therefore, if you select **Dial** or **Timeout**, you should also enable **Confirm successful calls** option.*

Voice Timeout This field will allow you to program a pause after dialling. If the Control Panel does not detect a voice answer before the **Voice timeout** ends, it will hang-up and generate a **Dialler action failed** event.

☞ *The **Voice Timeout** applies to the **Voice on Line** option (under **Send Message After ...**).*

Valid entries: 1 through 255 seconds, in 1-second steps
Default setting: 15 seconds

Delay This field will allow you to program a pause between the end of dialling and the Voice Message announcement.

☞ *The **Delay** applies to the **Timeout** option (under **Send Message After ...**).*

Valid entries: 1 through 255 seconds, in 1-second steps
Default settings: 5 seconds

■ **Messages**
The **Messages** section will allow you to program some of the Voice Message parameters.

Message repetitions This field will allow you to program the number of times the Control Panel must repeat the Voice Message.
Valid entries: 1 through 99
Default setting: 3

Replay Pause This field will allow you to program the pause (in seconds) between Voice Message announcements.
Valid entries: 1 through 10 seconds, in 1-second steps
Default setting: 1 second

■ **Options**
The **Options** section will allow you to program some of the Dialler options.

Call successful numbers If this option is enabled, the Telephone numbers of successful calls WILL BE REDIALLED in subsequent call cycles. If this option is disabled (at default), the Telephone numbers of successful calls WILL NOT BE REDIALLED in subsequent call cycles.

☞ *Events WILL NOT be queued when the **Call successful numbers** option is enabled (refer to "Events Queue" under "Digital Communicator").*

Confirm successful calls If this option is enabled, the Control Panel will not consider a call successful until the call receiver presses the star key on the telephone keypad, in order to generate a feedback signal.

☞ *If this option is enabled, you should include a request for the feed back signal (press star) in the message.*

Attempts This field will allow you to program the maximum number of call attempts the Dialler will make before aborting the call.
Valid entries: 1 through 99
Default setting: 5

■ **Actions**
Each Dialler Action will trigger a series of telephone calls (Voice Messages).

The **Actions** button opens the **Actions** window, the layout of which is as follows.

No. This field shows the **Action** identifier number. This number is to be used on the **Events-Actions** page, to associate the Action with the Events.

! If you select this field, the Action will take absolute Priority over all other Actions. Therefore, if one of its associated Events occurs, the Control Panel will suspend any ongoing Dialler calls, and will call the telephone num-

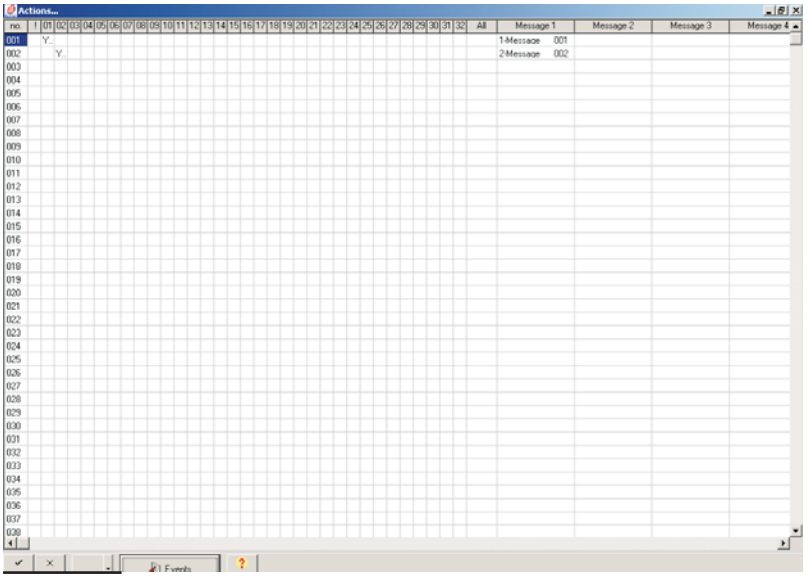


Figure 35 *Dialler settings window*

bers of the Priority Action.
To assign Priority (!): double click on the corresponding cell.

☞ *Only one Dialler Action can take priority.*

1 ... 32 Numbers 1 through 32 represent the Dialler Telephone Numbers (refer to the **No.** column in the **Dialler book** on the **Dialler** page).
To assign an Action to a Dialler Telephone Number, double click on the corresponding cell (**Y** indicates that the Action will generate a call to the corresponding Dialler Telephone Number.

☞ *Each time you click on a Telephone Number cell (1 through 32), the application will display the complete Telephone Number and corresponding Description (User Label).*

All If this option is enabled, the Control Panel will call all the Telephone numbers for the corresponding Action. If this option is disabled (at default). The Dialler will call associated Telephone numbers until one call is successful. To enable (**Y**) this option, press **ENTER** or double click on the respective cell.

Message 1-2-3-4-5 This option will allow you to setup the Voice Messages (refer to "Voice Messages" and "Preset Messages" for further information).

Description This editable field is for the Action label.

Hide This button will allow you to hide the Telephone number columns (1 through 32), and Voice Message columns (Messages 1 through 5).

Events This button will allow you to view all the Events that generate the selected Action.

☞ *The 🔔 on the Keypad WILL NOT signal Dialler or Digital Communicator calls related to **Zones** and codes with **Panic attribute.***

☞ *Events will not be queued for Telephone numbers which are associated with Reporting formats with the Voice feature.*

The layout of the **Digital Communicator** page is as follows.

no. This ID number (1 through 8), corresponds to the Telephone number Identifier in the **Actions** window.
This Identifier number DOES NOT CORRESPOND to the Telephone Identifier number in the General Phonebook.

Telephone Number to call
This field will allow you to select the Telephone Numbers for the Digital Communicator (from the General Phonebook on the Telephone page).

Protocol This field will allow you to select the Reporting format.

This Control Panel supports the Reporting formats shown Table 4. (refer to "Communication Protocols" in the APPENDIX).

The first five protocols are also available with the **Voice** feature.

☞ *Both the Control panel and Central Station must be able to manage voice communications, otherwise, Reporting formats with the **Voice** feature cannot be used.*

Once the digital transmission has been completed, the Control Panel will open the **Voice** channel, and the Central Station operator will be able to open a Talk/listen session.

The system Users will be able to communicate with the Central Station operator via the **VOX-REM** Microphone and Speaker boards (refer to "K3/VOX2 Voice Cards" in the "APPENDIX").

Digital Communicator

The Digital Communicator will allow you to define up to 100 Actions. Each Action can be associated with one or more Events in the **Events-Actions** page, and will signal (via telephone to Central Stations, etc.), the start and/or end of its associated Events.

Each Digital Communicator Action can transmit a distinct groups (8 Telephone numbers per group), (e.g. a Trouble signal to the Installer and Central Station).

Event Queue The Digital Communicator will not end the communication until all the events destined for the connected service have been transmitted. This feature reduces communication time, and call costs.

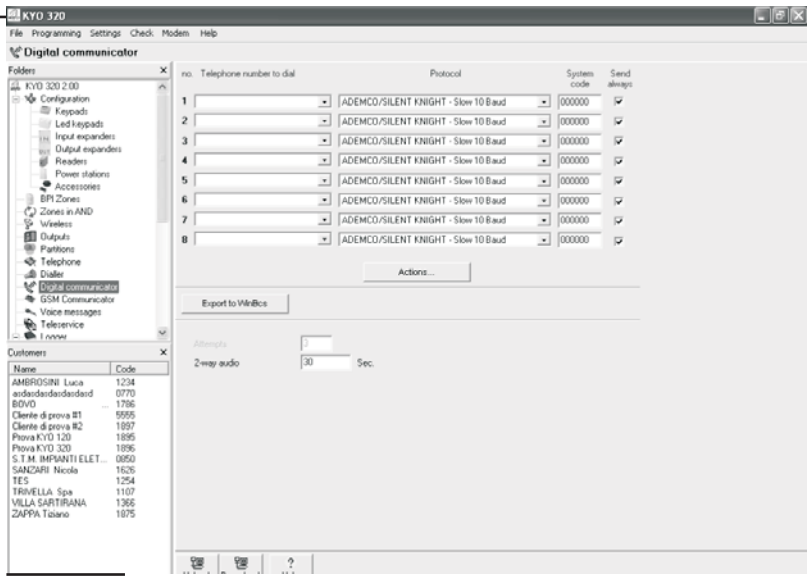


Figure 36 *Digital Communicator page*

REPORTING FORMAT	TYPE	CUSTOMER CODE digits (validity)	EVENT CODE digits (validity)	NOTES
ADEMCO/SILENT KNIGHT - Slow 10 baud	Pulse	3/4 (0 ÷ F)	½ (0 ÷ F)	0 = A
ADEMCO/SILENT KNIGHT - Fast 20 baud	Pulse			
FRANKLIN/SESCOA/DCI/VERTEX - Fast 20 baud	Pulse			
RADIONICS - 40 baud	Pulse			
SCANTRONIC - 10 baud	Pulse			
CONTACT ID	DTMF	4 (0 ÷ F)	See Event-Actions Page	0 = A
TELEMAX	Pulse	3 (0 ÷ 9)	1 (0 ÷ 9)	
TELIM	Pulse	6 (0 ÷ 9)	Pre-set	
CESA	FSK	5 (0 ÷ 9)	2 (0 ÷ 9)	
SIA **SIA over B-NET**	LAN	4 (0 ÷ 9)	See Event-Actions Page	

Table 4 *Digital Communicator Reporting Formats*

The Voice channel will remain open for the programmed time (refer to "**2-way audio**"), or until the Central Station operator ends the session.

☞ *Reporting formats with the **Voice** feature transmit ONLY one event per call.*

Reporting formats with the **Voice** feature should only be used when absolutely necessary. For events that do not require the **Voice** channel feature, use the same Reporting format without the Voice feature, as follows:

1. Select the same Telephone number (Central Station number) in two programming fields on the **Digital Communicator** page.

2. Select the Reporting format "**without Voice**" in one programming field, and the same Reporting format "**with Voice**" in the other.

3. In the Digital Communicator **Actions** window:
   for events that DO NOT REQUIRE a Voice channel
   — select the Central Station that supports the Reporting format "**without Voice"**;
   for events that REQUIRE a Voice channel
   — select the Central Station that supports the Reporting format "**with Voice**".

System Code This field is for the System ID Code (usually assigned by the Central Station). The System Code format (number of digits and valid range) depends on the selected Reporting Format (refer to the **CUSTOMER CODE** column in the Table 4).

Send Always If this option is Disabled, the Digital Communicator will transmit the **Partition Code** when the Action is triggered by a Partition-related event, and will transmit the **System Code** when the Action is triggered by any other type of event. If this option is Enabled, the Digital Communicator will transmit the **System Code** regardless of the type of event.

Attempts This field will allow you to program the maximum number of Call attempts for each Telephone Number.
Valid entries: 1 through 99
Default setting: 3

2-way audio This option will allow you to program the **2-way audio** session time.
Valid entries: 0 through 180 seconds (3 minutes), in 1-second steps.
Default setting: 30 seconds

Actions The **Actions** button opens the **Actions** window.Each Digital Communicator Action comprises two sub-actions, each of which sends a Code Call to a series of telephone numbers.

No. This field shows the Action ID number. This number is to be used on the **Events-Actions** page to associate the Action with the Events.

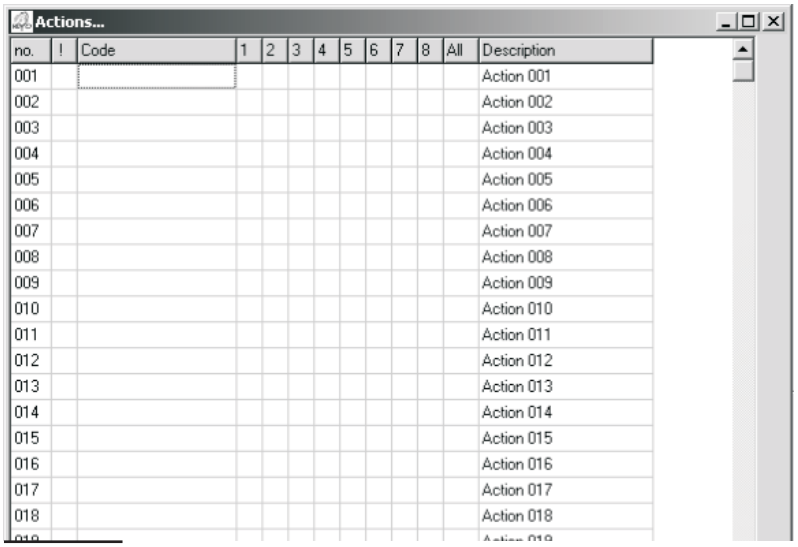


Figure 37 *Digital Communicator Actions window*

! If this option is enabled, the Action will take absolute Priority over all other Actions. Therefore, if one of its associated Events occurs, the Control Panel will suspend any ongoing Digital Communicator calls, and will call the telephone numbers of the Priority Action. To assign Priority (!): double click on the corresponding cell.

☞ *Only one Digital Communicator Action can have priority.*

Code This field is for the Event Code. The Event Code format depends on the selected Reporting Format (refer to the **EVENT CODE** column in the Table 4) (for CESA and Pulse protocol only).

The preset Event Codes of **TELIM** Reporting Format CANNOT be edited (refer to "Reporting Formats" in the "APPENDIX"). Therefore, the Communicator will transmit the preset Event Code.
The preset Event Codes of **CONTACT ID, SIA and SIA over B-NET** can be edited (refer to "Reporting Formats" in the "APPENDIX"). If the cell is left empty, the Communicator will transmit the preset Event Code, otherwise, it will transmit the edited Event Code. **For SIA and SIA over B-NET** Reporting Formats accept 2 uppercase letters only.

1 ... 8 These Numbers represent the Digital Communicator Telephone Numbers that will be called when the Action occurs.
The Digital Communicator Numbers are represented by their ID Number (see **No.** column on the **Digital Communicator** page). To select/deselect a Digital Communicator Number, double click on the respective cell (**YES** indicates that the Digital Communicator Number will be called).

☞ *If you associate an Action with a Digital Communicator Number which transmits in **CONTACT ID**, **TELIM**, **CESA** or **SIA** Reporting Format, any other Digital Communicator Numbers, assigned to the Action concerned, must transmit in the same Reporting Format.*

All If this option is Enabled, the Control Panel will call all the numbers when the corresponding Action occurs. If this option is Disabled (at default), the Control Panel will terminate the call cycle after the first successful call. To enable (**Y**) this option, press **ENTER** or double click on the respective cell.

Description This editable field is for the Action label.

Events This button will allow you to select the Events that will trigger the Action.

CONTACT ID If the selected telephone number is associated with CONTACT ID, it is possible to associate this reporting format automatically to priority events, by selecting and confirming CONTACT ID (see the Figure 38).

DEFAULT SIA If the selected telephone number is associated with SIA, it is possible to associate this reporting format automatically to priority events, by selecting and confirming SIA (see the Figure 38).

Voice Messages

This function is provided by the **K3/VOX2** Voice Board (accessory item). The **K3/VOX2** will allow the Control Panel to manage up to 64 Voice Messages with programmable quality and length. The amount of message time available depends on the sound quality of the messages, and ranges from **3** minutes **48** seconds for high sound quality, to **8** minutes **44** seconds for low sound quality (refer to "K3/VOX2 Voice board" in the "APPENDIX").

☞ ***Message No. 63** can be used for the **Memo** function (refer to "Memo" in the USER'S MANUAL) and **Message No. 64** for the Continuous Recording function (refer to "Enable Continuous Recording" under "Options"). If the Home Memo and/or Continuous Recording facilities are not used, these messages can be used for other purposes.*

The Voice messages can be used for the:
- Zone status control
- Answering Machine message
- Dialler messages
- Memo function
- Continuous Recording function

☞ *Voice Messages can be recorded and played at the Keypad, as described in the KEYPAD PROGRAMMING MANUAL.*

The layout of the **Voice Messages** page is as follows.

No. This is the non-editable Message ID Number. This number substitutes the Message Description in some parts of the application.

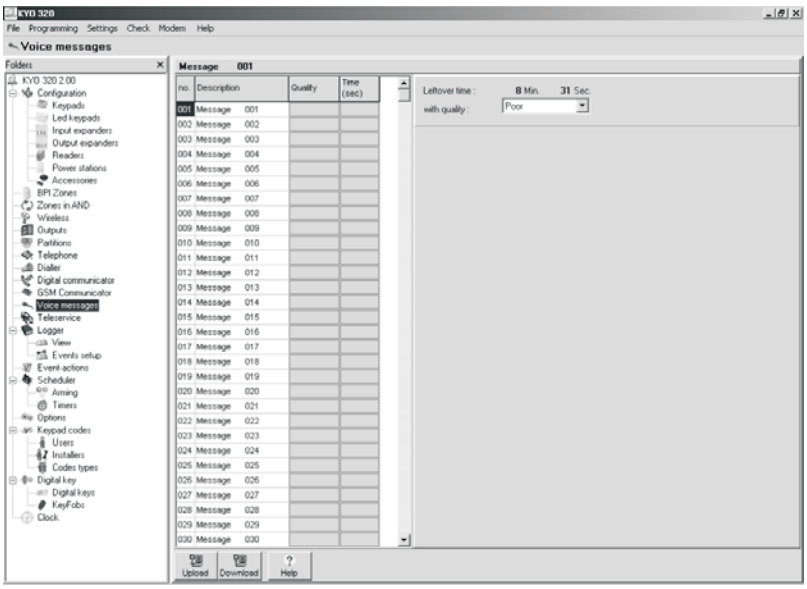


Figure 38 *Voice Messages page*

Description This editable field is for the Message label (maximum 16 characters).

Quality This field will allow you to select the sound quality, as follows: click the required cell; click again to highlight the programming field; click the arrow to open the drop-down menu.
(for 63 and 64 messages only). For all other messages during Recording it is possible to set the **Time** and the **Quality**.

Time Enter the Message length (in seconds) (for 63 and 64 messages only).

With quality Select the Voice Message quality.

Leftover Time This field will show the residual time which can be added to other Voice Messages.
The residual time depends on the selected quality.

■ **Compound Messages**
The Control panel Dialler can manage Compound Messages. This type of Message takes up less time than a regular Message. Therefore, if you must record several messages with parts in common, such as an Address, the Compound Message will allow you to save message time.

For example, instead of recording:
- **Message 1** (regular Message taking 5 seconds) <<Burglar Alarm, Stef's Café, King St., St. Helier>>
- **Message 2** (regular Message taking 5 seconds) <<Fire Alarm, Stef's Café, King St., St. Helier>>
- **Message 3** (regular Message taking 5 seconds) <<Duress Alarm, Stef's Café, King St., St. Helier>>,

you can record:
- Message 1 (1 second) <<Alarm>>
- Message 2 (1 second) <<Burglar>>
- Message 3 (1 second) <<Fire>>
- Message 4 (1 second) <<Duress>>
- Message 5 (4 seconds) <<Stef's Café, King St., St. Helier>>

and combine the messages to obtain the same contents, as follows:
- **Message 1** = Messages 2 + 1 + 5
- **Message 2** = Messages 3 + 1 + 5
- **Message 3** = Messages 4 + 1 + 5

The three regular Messages take 15 seconds while the three Compound Messages take only 8 seconds, thus saving 7 seconds.

Download messages button This can be used to save all the messages already recorded and stored in the voice P.C.B. in a file on the hard disk of your PC (not available with the **B-MOD**).

☞ *This button is only available for updated firmware version 2.10 or later.*

Upload messages button This can be used to select a file containing the messages previously saved to the hard disk and send them to the voice P.C.B.: all existing messages stored on the voice P.C.B. will be overwritten (not available with the **B-MOD**).

☞ *This button is only available for updated firmware version 2.10 or later.*

Teleservice

The B-Mod2 modem and the **KYO320** application from the **Security Suite** will allow you to provide the Teleservice function (access to the system via telephone).
Teleservice calls can be made by the installer (Teleservice calls to the Control panel require User authorization), or by the User (if the Control panel has been setup to perform the automatic **Test** Event).
When the Control Panel generates a Teleservice call (manually, by User request, or automatically via the **Callback** or **Enable Test Call** options (these options must be Enabled), it will dial the programmed numbers (refer to **Enable** and **Telephone number to call**) until a call is successful, or until the programmed call **Attempts** cycle ends.
The layout of **Teleservice** page as follows.

Double call This option will allow the Control Panel to share the telephone line with another answering device (answering machine, fax, etc.). Under normal circumstances, the device which allows the least number of rings will answer any incoming calls. However, if this option is Enabled, the Control panel will override the other answering device when it recognizes the Double Call sequence.
Double Call sequence: the caller must allow no more than 2 rings, then hang up and callback within 60 seconds. The Control panel will answer on the first ring of the second call.

☞ *The other answering device must be programmed to answer after 3 or more rings.*

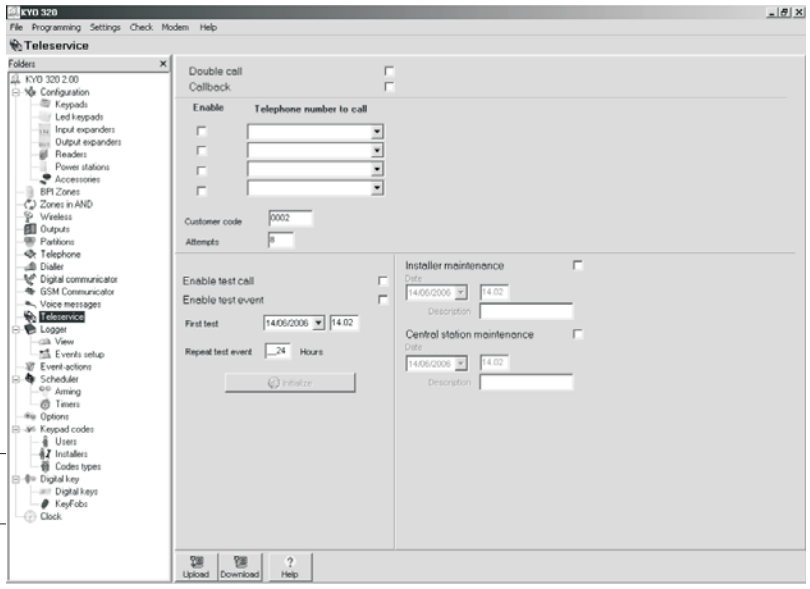


Figure 39 *Teleservice page*

The **B-Mod2** modem manages the **Double call** option automatically.
To access the system over the phone: ring twice and hang up, then call the Control Panel again within 60 seconds.

Callback If this option is Enabled, the Control panel will call the **Enabled** telephone numbers (refer to **Enable** and **Telephone number to call** on the **Teleservice** page). In this way, ONLY authorized persons can access the Teleservice function.

Enable This check box will allow you to Enable the Teleservice number.

☞ *The application will assign the first four Telephone Numbers in the **General book** (**Telephone** page) to the Teleservice function. If you do not wish to use the preset numbers, Disable the corresponding **Enable** option.*

Telephone Number to call Select the Teleservice Telephone Numbers from the **General book** on the **Telephone** page.

☞ *Disabled Telephone Numbers will not be called.*

Customer Code This Code will allow the Central Station to identify the Control Panel.

☞ *Any changes made to the **Customer code** on the **Teleservice** page will affect the **Customer code** in the **Customer Data** window and vice versa.*

Attempts This programming field will allow you to program the maximum number of call attempts.
Valid entries: 1 through 99
At default: 8

■ **Enable Test Event**
If this option is Enabled, the Control panel will make regular Test Calls. The Test call confirms that the Control Panel is operating properly. If the Control panel fails to transmit to the Central station for a long period, it may mean:
— the system is operating properly but no events have occurred or,
— there is a breakdown in transmissions.
If the Central station does not receive the Test Call at the set time, it will be assumed that there is a breakdown in transmissions.
To set up the Test call, use the **Test** event and/or Teleservice, as follows.

Enable Test Call If this option is Enabled, the Control Panel will make the Test call at regular intervals, in accordance with the **First Test** and **Repeat test event** settings.

☞ *If the **Enable Test Event** is Disabled, the Control panel will not send the Test call.*

Enable Test Event If this option is Enabled, the Control panel will generate the **Test event** in accordance with the **First Test** and **Repeat test event** parameters.
If this option is Disabled (at default), the **Test event** will be inhibited.

First Test This programming field is for the date and time of the first Test.

☞ *Subsequent Test calls depend on the **Repeat test event** setting.*

Repeat test event This programming field is for the interval between Test calls.

Initialize If you are downloading a new Test setting to the Control panel, you must select this button, otherwise the new setting will be ignored.

☞ *If the entered date and time are prior to the current date and time on the computer, the **Initialize** button will be inhibited. The Control Panel must be connected to the PC via serial port or telephone.*

■ **Installer Maintenance**
The **Installer Maintenance** section will allow you to program the date and time of *Installer Maintenance Request signal*.

The *Installer Maintenance Request* will be signalled by the:
- **Installer Maintenance** event;
- ON status of the ⚠ indicator on the keypad.

☞ *The Trouble indicator ⚠ signals various Trouble events. The Trouble details can be found on the LCD Keypads (in View Mode). If the trouble is related to an **Installer Maintenance** Request, the respective message will be shown (see the **Description** field in the **Installer Maintenance** section).*

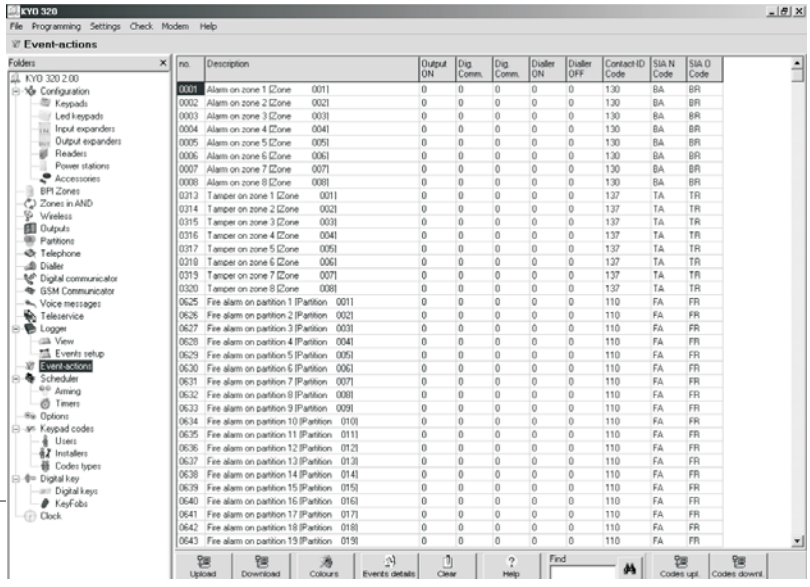


Figure 40 *Event-Actions page*

The Trouble signal generated by the *Installer Maintenance Request* and **Installer Maintenance** will terminate when:
- the **Teleservice** page is downloaded;
- the Date and Time of Installer Maintenance are programmed at the Keypad (refer to “Teleservice” in the KEYPAD PROGRAMMING MANUAL).

To set up the *Installer Maintenance Request* — Enable the **Maintenance Request** option and set the Date and Time, as follows.

Date Enter the date of the *Installer Maintenance Request* signal.

Time Enter the time of *Installer Maintenance Request* signal.

Description Edit the message that will be shown on Keypad (in View Mode) when an *Installer Maintenance Request* is received.

■ **Central Station Maintenance**
The **Central Station Maintenance** section will allow you to program the date and time of the *Monitoring Maintenance Request signal.*

The *Monitoring Maintenance Request* will be signalled by the :
- **Central station maintenance** event;
- ON status of ⚠ indicator on the keypad.

☞ *The Trouble ⚠ indicator signals various Trouble events. The Trouble details can be found on the LCD Keypads (in View Mode). If the trouble is related to a Monitoring Maintenance Request, the respective message will be shown (refer to the Description field in the **Central station maintenance** section).*

The Trouble signal generated by the *Central station maintenance request* and the **Central station maintenance** event will terminate when:
- the **Teleservice** page is downloaded;

the Date and Time of Monitoring Maintenance are programmed at the Keypad (refer to “Teleservice” in the KEYPAD PROGRAMMING MANUAL).

You must Enable the **Central Station Maintenance** option and set the Date and Time, as follows.

Date Enter the Date of the *Central Station Maintenance Request* signal.

Time Enter Time of the *Central Station Maintenance Request* signal.

Description Enter the message that will be shown on the Keypad (in View Mode) when a *Central Station Maintenance Request* is received.

Log – Events setup

The **Events setup** page will allow you to select the Events that will be recorded in the log, and those that will be printed, as follows.

☞ *The Event Printout is an accessory feature, and is provided by the optional K3/PRT2 Printer Interface (refer to “K3/PRT2 Printer Interface” in the APPENDIX).*

No. This is the Event ID Number.

Description This is the Event label.

Enabled Select the Events that will be recorded in the log.

Printer Select the Events that will be printed.

Colour For a best reading of the Logger it is possible to change the colour events.

☞ *In the **Logger** menu there is the **Wiew** window. In this window you find the **"Export"** key. This key allows yow to export the **Logger** as a text file. So you can edit it by software as "Excel" or others. The **Logger** export can be done in several way, using many type of filters.*

Events-Actions

The **Events-Actions** page determines how the system will operate.

The Table in the **Events-Actions** page will allow you to associate the Events (managed by the Control Panel) with the Output, Digital Communicator and Dialler Actions, as follows.

No. This is the Event ID Number.

Description This is the Event label:

- the round brackets show the label of the device (Keypad, Reader, etc.) that is associated with the “Object” (Zone, Code, Key, etc.) that generated the event;

- the square brackets show the Description of the “Object” (Zone, Code, Key, etc.) that generated the event.

☞ *The events shown depend on the selected detail level (see “Events Details”).*

Output The **ON** column is for the ID number of the Output that must activate when the respective Event occurs (refer to **No.** column on the **Outputs** page).
Enter **0** if the event is not to activate any Output.

☞ *You can select the required Output by double clicking the corresponding cell in the **Output** column.*

Dig. Comm. The **ON** column is for the ID Number of the Actions the Digital Communicator must generate when the Event concerned starts (see **No.** column in the **Actions** window on the **Digital Communicator** page) . The **OFF** column is for the ID Numbers of the Actions the Digital Communicator must generate when the Event concerned ends (see **No.** column in the **Actions** window on the **Digital Communicator** page).
Enter **0** in the **ON** or **OFF** column if the Digital Communicator for NO Actions.

☞ *You can associate the Digital Communicator Action with the Event by double clicking the corresponding cell in the **Dig. Comm. ON** or **Dig. Comm. OFF** column.*

Dialler The **ON** column is for the ID Numbers of the Actions the Dialler must generate when the Event concerned starts (see **No.** column in the **Actions** window on the **Dialler** page).

The **OFF** column is for the ID Numbers of the Actions the Dialler must generate when the Event concerned ends (see **No.** column in the **Actions** window on the **Dialler** page).
Enter **0** in the **ON** or **OFF** column if the Dialler is not to generate any Actions.

☞ *You can associate the Dialler Action with the Event by double clicking the corresponding cell in the **Dialler ON** or **Dialler OFF** column.*

Contact ID Code Event Code default value with Contact ID protocol. If teleservice needs this value can be changed.

SIA N Code Event Code default value with SIA protocol (New event). If teleservice needs this value can be changed.

SIA O Code Event Code default value with SIA protocol (Restore). If teleservice needs this value can be changed.

■ **Telephone action priority**
Priority Actions will override all other Actions in the call queue.

The Digital Communicator Action marked with an exclamation mark (refer to “Actions” in the “Digital Communicator” section) has priority over all other Telephone Actions. The Dialler Action marked with an exclamation mark (refer to “Actions” in the “Dialler” section) has priority over all other Telephone Actions except the priority Action set for the Digital Communicator.

☞ *The priority Telephone Actions are useful in situations that require quick intervention, such as Medical emergency and Duress.*

■ **Colours**
The **Colours** button will allow you to assign a colour to each group of events.

■ **Events Details**
The **Events Details** button will allow you to filter the events that will be shown, as follows.

Highlight programmed events If you Enable this option, Events with AT LEAST ONE associated Action (on an Output, Digital Communicator or Dialler) will be displayed in bold face.

Show only programmed events If you Enable this option, only the Events with AT LEAST ONE associated Action (on an Output, Digital Communicator or Dialler) will be shown.

None If you Enable this option, **All** Events will be displayed.

Zone If you Enable this option, all the Zone events will be shown. If this option is Disabled, the Zone events will be grouped into the following *Global* Events:

- **Alarm on zone *Global***
- **Alarm on zone Wireless *Global***
- **Tamper on zone *Global***
- **Tamper on zone Wireless *Global***
- **Bypass zone *Global***
- **Bypass zone Wireless *Global***
- **Real time of zone *Global***
- **Real time of zone Wireless *Global***

Partition If you Enable this option, all the Partition events will be shown. If this option is Disabled, the Partition events will be grouped in the following *Global* Events:

- **Fire alarm on partition *Global***
- **24h alarm on partition *Global***
- **Burglar alarm on partition *Global***
- **Generic alarm on partition *Global***
- **Tamper alarm on partition *Global***
- **Generic+Tamper alarm on partition *Global***
- **Away alarm on partition *Global***
- **Stay alarm on partition *Global***
- **Not Ready-to-arm partition *Global***
- **Extended not Ready-to-arm partition *Global***
- **Partial arming partition *Global***
- **Global arming partition *Global***
- **Disarming partition *Global***
- **Exit time on partition *Global***
- **Entry time on partition *Global***
- **Autoarming warning partition *Global***
- **Memory alarm on partition *Global***
- **Memory tamper on partition *Global***
- **Alarm stop on partition *Global***
- **Reset on partition *Global***
- **Chime on partition *Global***
- **Event negligence on partition *Global***
- **Event delinquency on partition *Global***

Digital Key If you Enable this option, all the Key events will be shown. If this option is Disabled, the Key events will be grouped in the following *Global* Event:

- **Valid Key *Global***

Output If you Enable this option, the Supervised Output events will be shown. If this option is Disabled, the Supervised Output events will be grouped in the following *Global* Event:

- **Tamper on supervised output *Global***

Keypad If you Enable this option, the Keypad events will be shown. If this option is Disabled, the Partition events will be grouped in the following *Global* Event:

- **Block keypad *Global***
- **Recognized user code on Keypad *Global***

FAP Key If you Enable this option, the Super Key events will be shown. If this option is Disabled, the Super Key events will be grouped in the following *Global* Event:

- **Super key *Global***

Keypad Codes If you Enable this option, all the Code events will be shown. If this option is Disabled, the Code events will be grouped in the following *Global* Event:

- **Recognized user code *Global***

User Events If you Enable this option, all the Customized Events will be shown. If this option is Disabled, the Customized Events will be grouped in the following *Global* Event:

- **User event *Global***

Timer If you Enable this option, all the Timer events will be shown. If this option is Disabled, the Timer Events will be grouped in the following *Global* Event:

- **Timer *Global***

Reader If you Enable this option, all the Reader events will be shown. If this option is Disabled, the Reader Events will be grouped in the following *Global* Event:

- **Key present on reader *Global***

☞ *You CANNOT associate Actions with **Global Events** as they re not single events but represent groups of Events that would not otherwise be shown.*

Show events concerning The drop-down menu in this section (opened by clicking the arrow) will allow you to filter the details of the Events (Enabled in the **Show Details** section) that will be viewable, as follows.

- **All:** ALL the events concerning the Enabled Event Types will be viewable.
- **Zone:** ONLY the events concerning the specified Zone will be viewable (the Zone ID Number must be entered in the small box).
- **Partition:** ONLY the events concerning the specified Partition will be viewable (the Partition ID Number must be entered in the small box).
- **System:** ONLY the System events will be viewable.
- **Digital Key:** ONLY the events concerning the specified Key will be viewable (the Key ID Number must be entered in the small box).
- **Output:** ONLY the events concerning the specified Supervised Output will be viewable (the Output ID Number must be entered in the small box).
- **Keypad:** ONLY the events concerning the specified Keypad will be viewable (the Keypad ID Number must be entered in the small box).
- **FAP Key:** ONLY the events concerning the specified SuperKey will be viewable (the SuperKey Number must be entered in the small box).
- **Keypad Codes:** ONLY the events concerning the specified Keypad Code will be viewable (the Keypad Code ID Number must be entered in the small box).
- **User events:** ONLY the events concerning the specified Customized Event will be viewable (the Customized Event ID Number must be entered in the small box).
- **Timer:** ONLY the events concerning the specified Timer will be viewable (the Timer ID Number must be entered in the small box).
- **Reader:** ONLY the events concerning the specified Reader will be viewable (the Reader ID Number must be entered in the small box).

■ **Clear**

The **Clear** button will allow you to delete the Output, Digital Communicator and Dialler Actions.
Select the Type of Action to be deleted (Output, Digital Communicator or Dialler), then click OK to confirm the operation.

■ **Find**

This tool will allow you to find Events quickly. You must enter part, or the entire Event label (Description), then click the  button. The application will go to the first Event which contains the entered word or combination of words. Click the  button again to continue.

■ **Event Description**

This section describes the conditions that generate, and terminate each event.

Zone Events Table 5 shows Zone events associated with Zone alarm and Zone Tamper events.

☞ *The conditions which terminate Zone events (**ENDS WHEN ...** column) are valid ONLY when the Zone Event is NOT associated with a Monostable Output.*

If the Zone event is associated with a Monostable Output, the event will end when the **Output OFF** Timeout expires, even if the conditions that triggered the event are still present. In all other cases, the event will end when the conditions clear (see Figure 41).

A Zone event can be restored to standby by:
- changing the status (Armed/Disarmed) of a Partition the Zone is associated with;
- running Alarm Reset from a Keypad (the entered User Code and Keypad must be jointly enabled on a Partition the Zone is associated with);
- running Alarm Stop from the Keypad (the entered User Code and Keypad must be jointly enabled on a Partition the Zone is associated with);
- Using a valid Digital Key/Card at a Reader (both Digital Key and Reader must be jointly Enabled on a Partition the Zone is associated with).

Partition Events Table 6 shows the Partition Events. The Partition Events encase the Zone Events (Fire, 24h, Burglar, etc.). Each Zone event will in turn generate a Partition event (on the Partition the Zone is associated with). The Partition event will not terminate until all the Zone events end, as follows:

☞ *The conditions which terminate Partition Events (**ENDS WHEN ...** column) are valid ONLY when the Partition Event is NOT associated with a Monostable Output.*

Zone Events which are associated with a Monostable Output will not terminate until the Output OFF Timeout has expired (see Figure 41).
Partition Events can be restored to standby by:
- changing the Partition status (Armed/Disarmed);
- running Alarm Reset from a Keypad (the entered User Code and Keypad must be jointly enabled on the Partition concerned);
- running Alarm Stop from the Keypad (the entered User Code and Keypad must be jointly enabled on the Partition concerned)
- Using a valid Digital Key/Card at a Reader (both Digital Key and Reader must be jointly enabled on the Partition concerned).

Control Panel Events Table 7 shows the Control panel Events. The Control panel events comprise all the Zone Events (Fire, 24h, Burglar, etc.) but are totally independent of the Partitions. Control panel events will be generated when the events they comprise occur, and will not terminate until all the events they comprise have ended.

☞ *The conditions which terminate the Control Panel Events (**ENDS WHEN ...** column) are valid ONLY when the Control Panel Event is NOT associated with a Monostable Output.*

Control Panel Events associated with Monostable Outputs will not terminate until the Output OFF Timeout has expired (see Figure 41).

Control Panel Events can be restored to standby by:
- running **Alarm Reset** from a Keypad (the entered User Code must be enabled for Control **Panel Reset** — refer to "Keypad codes - Codes types");
- running **Alarm Stop** from a Keypad (the entered User Code must be enabled for **Stop alarms** — refer to "Digital keys");
- using a Digital Key/Card at a Reader (the Digital Key/Card must be enabled for **Stop alarms**, refer to "Digital keys").Generic Events

These are Control Panel-generated warnings (e.g. Power Failure).

☞ *The conditions which end a Generic Event (**ENDS WHEN ...** column) are only valid when the Generic Event is NOT associated with a Monostable Output.*

EVENT		OCCURS WHEN...	ENDS WHEN...
0001 **0280**	**Alarm on zone no.**[11]	*... the zone detects Alarm conditions*[12]	*... the zone restores to standby status*
0281 **0344**	**Alarm on zone no. – Wireless**	*... the Wireless zone detects Alarm*[13] *conditions*	*... the Wireless zone restores to standby*
0345 **0624**	**Tamper on zone no.**[11]	*... the zone detects Tamper conditions*	*... Tamper conditions are no longer present on the zone*
0625 **0688**	**Tamper on Zone no. – Wireless**	*… the Wireless Zone detects Tamper conditions*	*... Tamper conditions are no longer present on the Wireless zone*

Table 5 *Zone Events*

11 *Zone Events relating to terminals T1 and T2 of M-IN/OUT Expanders programmed as Expanders with 4 Zones + 2 Outputs, and Zone Events relating to terminals T1, T2, T3 and T4 of M-IN/OUT Expanders programmed as Expanders with 4 Outputs + 2 Zones, are NOT usable.*

12 *The conditions that trigger Alarm and Tamper status on Hardwired Zones depend on the settings programmed on the **BPI Zones** page.*

13 *The conditions that trigger Alarm and Tamper status on Wireless Zones depend on the settings programmed on the Wireless page.*

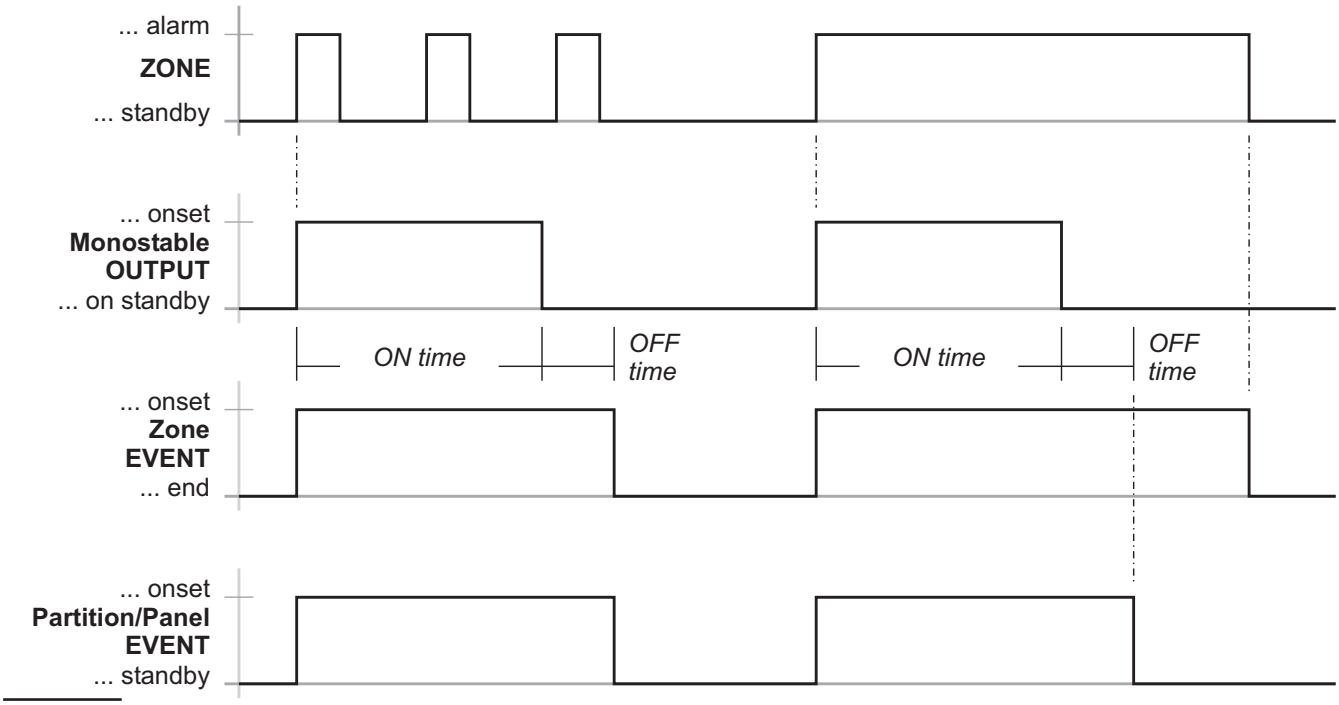


Figure 41 *Zone, Partition and Control Panel event operation — when associated with Monostable Outputs*

If a Generic Event is associated with a Monostable Output, it will not terminate until the Output-OFF Timeout has expired (even if the trouble clears before); in all other cases it will terminate when the trouble has been cleared (see Figure 42).

Generic Events can be restored to standby by:

- running **Alarm Reset** from a Keypad (the entered User Code must be enabled for Control **Panel Reset** — refer to "Keypad codes - Codes types");
- running **Alarm Stop** from a Keypad (the entered User Code must be enabled for **Stop alarms** — refer to "Digital keys");
- using a Digital Key/Card at a Reader (the Digital Key/Card must be enabled for **Stop alarms** — refer to "Digital keys").

EVENT	STARTS WHEN...	ENDS WHEN...
0689 Fire alarm on partition no. 0720	*...a **Fire** Zone — associated with the Partition detects Fire Alarm conditions*	*…**all** events generated by **Fire** Zones — associated with the Partition restore to standby*
0721 24h alarm on partition no. 0752	*...a **24h** Zone — associated with the Partition detects Alarm conditions*	*...**all** events generated by **24h** Zones — associated with the Partition restore to standby*
0753 Burglar alarm on partition no. 0784	*...a Burglar Zone (**Instant**, **Entry delay**, **Entry path**, **Exit delay**, **Last exit**) — associated with the Partition detects Alarm conditions*	*...**all** events generated by **Burglar** Zones — associated with the Partition restore to standby*
0785 Generic alarm on partition no. 0816	*...a Zone (any type) — associated with the Partition detects Alarm conditions*	*... **all Alarm** events generated by Zones — associated with the Partition restore to standby*
0817 Tamper alarm on partition no. 0848	*...a Zone — associated with the Partition detects Tamper conditions*	*...**all Tamper** events generated by Zones — associated with the Partition restore to standby*
0849 Generic+ Tamper alarm on partition no. 0880	*...a Zone— associated with the Partition detects Alarm or Tamper conditions*	*...**all Alarm** and **Tamper** events generated by Zones — associated with the Partition restore to standby*
0881 Away alarm on partition no. 0912	*...the **Generic+Tamper alarm on partition** event is triggered during Away mode*	*...the **Generic+Tamper alarm on partition** event ends*
0913 Stay alarm on partition no. 0944	*...the **Generic+Tamper alarm on partition no.** event is triggered during Stay mode*	*...the **Generic+Tamper alarm on partition no.** event ends*

Table 6 *Partition Events*

EVENT		STARTS WHEN...	ENDS WHEN...
0945	**Fire alarm on panel**	*...a **Fire** zone — regardless of its Partition detects Fire Alarm conditions*	*...**All** events generated by the **Fire** zones of all Partitions restore to standby*
0946	**24h alarm on panel**	*...a **24h** zone — regardless of its Partition detects Alarm conditions*	*…all events generated by the **24h** zones of all Partitions restore to standby*
0947	**Burglar alarm on panel**	*...a Burglar zone — regardless of its Partition detects Alarm conditions (**Instant**, **Entry delay**, **Entry path**, **Exit delay**, **Last exit**)*	*...**All** events generated by the Burglar zones of all Partitions restore to standby*
0948	**Generic alarm on panel**	*...a Zone — regardless of its Type and Partition detects Alarm conditions*	*…**All** events generated by the zones of all Partitions restore to standby*
0949	**Tamper alarm on panel**	*...a Zone — regardless of its Partition detects Tamper conditions*	*...**All** Tamper events generated by the zones of all Partitions restore to standby*
0950	**Generic+ Tamper alarm on panel**	*...a Zone — regardless of its Partition detects Alarm or Tamper conditions*	*…**All** **Alarm** and **Tamper** events generated by the zones of all Partitions restore to standby*
0951	**Tamper on Main unit**	*...the Control Panel Tamper microswitch **3** or Seize microswitch **12** trip*	*...the Tamper and Seize microswitches restore*
0952	**Stop-alarms jumper**	*... the STOP ALARMS jumper **50** is inserted*	*...the STOP ALARMS **50** is removed*
0953	**Balanced tamper**	*...the [ASB] terminal is unbalanced*	*… the [ASB] terminal is balanced (grounded with a 10000 ohm resistor)*
0954 : 0956	**Tamper on supervised output no.**	*...a Supervised Output is tampered[14]*	*...the Output tamper event ends*
0957	**Tamper BPI readers**	*...the Proximity reader Tamper microswitch **95** or Seize microswitch **87** trips*	*...the Proximity reader Tamper and Sieze microswitches restore*
0958	**Tamper BPI input expanders**	*...the Tamper microswitch **98** or Seize microswitch **96** of an Input Expander[15] with the same BPI bus Address trips*	*...the Tamper and Seize microswitches of all Input Expanders[15] restore, and NO two Expanders have the same BPI bus address[16]*
0959	**Tamper keypads**	*...the Keypad Tamper microswitch **75** or Seize microswitch **79** trips, or there are at least two Keypads with the same BPI bus Address*	*...the Tamper and Seize microswitches of all Keypads restore, and NO two Keypads have the same BPI bus Address[16]*
0960	**keypadTamper LED**	*...the Keypad Tamper microswitch **75** or Seize microswitch **79** trips, or there are at least two Keypads with the same BPI bus Address*	*...the Tamper and Seize microswitches of all Keypads restore, and NO two Keypads have the same BPI bus Address[16]*
0961	**Tamper output expanders**	*...the Output Expander Tamper microswitch **101** or Seize microswitch **96** trips, or there are at least two Output Expanders[17] with the same BPI bus Address*	*...the Tamper and Seize microswitches of all Output Expanders restore, and NO two Output Expanders[17] have the same BPI bus Address[16]*
0962	**Tamper power stations**	*...the Tamper microswitch or Sieze Tamper Microswitch switch of a Power Supply Station is tripped*	*...the Tamper and Snatch switches of all Power Supply Stations are closed*
0963	**Tamper wireless device**	*...the Tamper switch or Snatch switch of a VectorRX Receiver is tripped*	*...the Tamper and Snatch switches of all VectorRX Receivers are closed*
...	**...**	*...*	*...*

Table 7 *Control panel events (continued on next page)*

14 *The conditions that will trigger Tamper on Supervised Outputs are described in the "Outputs" paragraph.*
15 *M-IN/OUT Expander programmed as Input Expander or Input/Output Expander*
16 *The event can terminate with a maximum delay of 5 minutes after the moment that there are no more duplicated devices on the BPI bus.*
17 *M-IN/OUT Expander programmed as Output Expander or Input/Output Expander.*

EVENT	STARTS WHEN...	ENDS WHEN...
3415 Memo present	*… a message is recorded on the Answerphone*	*.....the message is played*
3416 B-NET Module Missing	*… the Control panel cannot communicate with the B-NET Module*	*... communication with the B-NET Module restores*
3417 LAN Link Missing	*… the Control panel cannot communicate with the LAN*	*... communication with the LAN restores*
3418 IP Receiver Missing	*… the Control panel cannot communicate with the IP Receiver*	*...communication with the IP Receiver restores*

Table 7 *Control panel events*

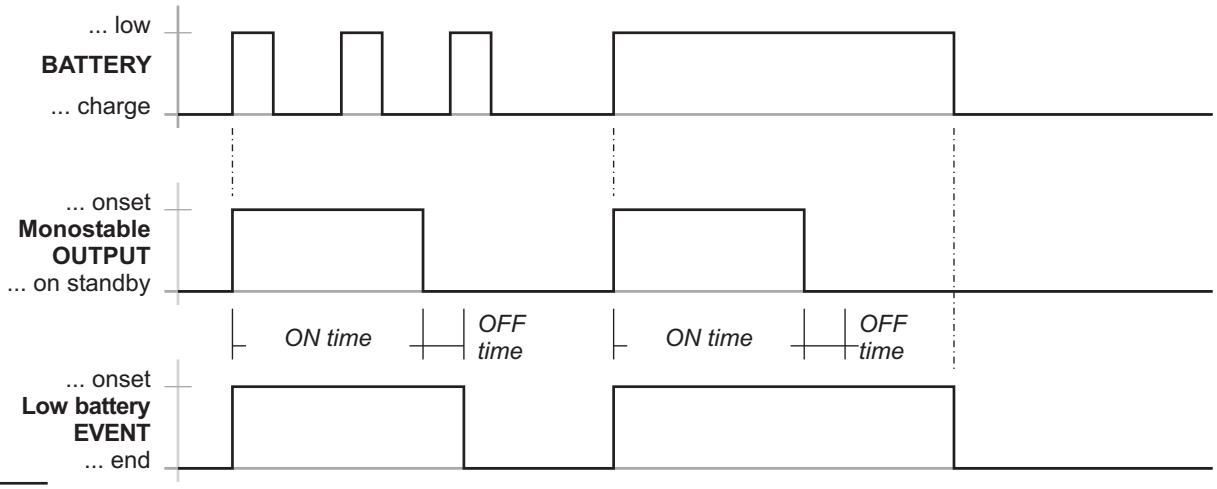


Figure 42 *Operations of Generic Events associated with Monostable Outputs*

EVENT	STARTS WHEN...	ENDS WHEN...
0964 Warning readers	*...an enrolled Reader does not respond to the Control Panel*	*...ALL Readers respond to the Control Panel*
0965 Warning BPI input expander	*...an enrolled Input Expander[15] does not respond to the Control Panel*	*...ALL Input Expanders[15] respond to the Control Panel*
0966 Warning keypads	*...an enrolled Keypad does not respond to the Control Panel*	*...ALL Keypads respond to the Control Panel*
0967 Missing LED Keypad	*.an enrolled LED Keypad does not respond to the Control Panel*	*ALL LED Keypads respond to the Control Panel*
0968 Warning output expanders	*...an enrolled Output Expander[17] does not respond to the Control Panel*	*...ALL Output Expanders[17] respond to the Control Panel*
0969 Warning power stations	*...an enrolled Power Supply Station does not respond to the Control Panel*	*....ALL Power Supply Stations respond to the Control Panel*
0970 Warning wireless devices	*...the VectorRX Receiver does not respond to the Control Panel*	*...The VectorRX Receiver responds to the Control Panel*
0971 False key	*...a false Key/Card is used at a Reader*	*...ALL false Keys/Cards have been withdrawn from the Readers*
0972 Warning fuse +F	*...fuse blows*	*...fuse is replaced*
0973 Warning fuse +B1	*...fuse blows*	*...fuse is replaced*

Table 8 *Generic Events (continued on next page)*

15 *M-IN/OUT Expander programmed as Input Expander or Input/Output Expander*
17 *M-IN/OUT Expander programmed as Output Expander or Input/Output Expander.*

EVENT	STARTS WHEN...	ENDS WHEN...
0974 Warning fuse +B2	*...fuse blows*	*...fuse is replaced*
0975 Warning fuse +B3	*...fuse blows*	*...fuse is replaced*
0976 Warning fuse +B4	*...fuse blows*	*...fuse is replaced*
0977 Warning fuse +B5	*...fuse blows*	*...fuse is replaced*
0978 Warning fuse BPI1	*...fuse blows*	*...fuse is replaced*
0979 Warning fuse BPI2	*...fuse blows*	*...fuse is replaced*
0980 Warning fuse KEYBUS	*...fuse blows*	*...fuse is replaced*
0981 Warning mains failure	*...Mains power has been off for the programmed Timeout (refer to "Options")*	*...Mains power is restored*
0982 Warning low battery	*...Battery voltage drops below 11.4V*	*...Battery voltage is restored to 12.3V*
0983 Warning power trouble	*...a Battery fails the Dynamic Test (refer to "Connecting the Power supply" under "INSTALLING THE KYO320"), or fuse **60** blows*	*...Battery meets the Dynamic Test requirements, or fuse **60** is replaced*
0984 Warning mains failure on Power station	*...the programmed Timeout expires (refer to "Power stations" under "Configuration"). The Timeout will start when the Control panel detects failure of the Mains supply — to one of the BPI Bus Power Supply Stations.*	*...Mains power is restored to ALL the BPI Bus Power Supply Stations*
0985 Warning low battery on Power station	*...the Battery Voltage of a BPI Power Supply Station drops below 11.4V*	*...the Battery voltage of ALL BPI Power Supply Stations restores to 12.3V*
0986 Warning power trouble on Power station	*...the Battery of a BPI Bus Power Supply Station fails the Dynamic test, and therefore, is unable to feed and ensure proper functioning of the peripherals; or the Power Supply Station polarity inversion fuse blows*	*...the Batteries of ALL the BPI Bus Power Supply Stations pass the Dynamic test, or ALL the Power Supply Station polarity inversion fuses are replaced*
0987 Battery not connected on Power station	*...the voltage of a Power station battery drops below 10.2 V*	*the voltage of ALL the Power station batteries rises above 10.2V*
0988 Battery charger trouble on Power station	*...the output voltage of a Power station power supply module is 0.5 V above or below the preset value*[18]	*...the output voltage of ALL the Power station power supply modules is 0.5 V above or below the preset value*
0989 Switching not connected on Power station	*...the output voltage of a Power station power supply module is 0.5 V above the preset value*	*...the output voltage of ALL the Power station power supply modules is 0.5 V below or equal to the preset value*
0990 Short circuit output 1/2/3 on Power station	*...the current draw of a Power station output is over 1.8 A*	*...the current draw of ALL the Power station outputs is over 1.8 A*
0991 Battery low memory	*…2 years have passed since the last **Reset Battery Memory expired** operation*	*...the **Reset Battery Memory** operation is done (refer to "Reset Warning Lithium" under "KEYPAD OPERATIONS" in the PROGRAMMING FROM KEYPAD MANUAL)*

Table 8 *Generic Events (continued on next page)*

18 *The value previewed for the power supply output voltage is 13.8V without Thermal Probe. With the Thermal Probe the output voltage varied in function of the temperature of the same Probe.*

EVENT	STARTS WHEN...	ENDS WHEN...
0992 Warning low battery on wireless device	*...the battery of at least one Wireless Sensor is low*	*...the last Wireless sensor has closed and ALL Wireless Sensor batteries are charged*
0993 Memory tamper BPI device	*...the Control panel detects one of the following Events:* ***Tamper BPI readers***, ***Tamper BPI input expanders***, ***Tamper keypads***, ***Tamper output expanders***, ***Tamper power station***	*...the Control Panel Resets*
0994 Memory balanced tamper	*...**Balanced tamper** event is detected*	*...the Control Panel Resets*
0995 Memory tamper on main unit	*...**Tamper on Main unit** event is detected*	*...the Control Panel Resets*
0996 Memory false key	*... **False key** event is detected*	*...the Control Panel Resets*
0997 Memory tamper supervised output	*...at least one **Tamper on supervised output** event is detected*	*...the Control Panel Resets*
0998 Lost wireless zone	*...at least one of the Wireless Sensors of a Supervised Wireless zone fails to send a valid signal during the Supervision Time*	*...ALL Wireless Sensors send valid signals during the Supervision Time*
0999 Warning generic	*...at least one of the following events occurs:* ***Stop-alarms jumper***, ***Warning fuse +F***, ***Warning fuse +F1***, ***Warning fuse +B1***, ***Warning fuse +B2***, ***Warning fuse +B3***, ***Warning fuse +B4***, ***Warning fuse +B5***, ***Warning fuse +BPI1***, ***Warning fuse +BPI2***, ***Warning fuse KEYBUS***, ***Warning mains failure, Warning low battery, Warning mains failure on Power station, Warning low battery on Power station, Warning power trouble on Power station, Battery not connected on Power station, Battery charger trouble on Power station, Switching not connected on Power station, Short circuit output ½/3 on Power station, Warning power trouble, Battery Low Memory***, ***Warning low battery on wireless device, Installer maintenance, Central Station maintenance***, ***Telephone line trouble****; or the Control panel cannot find the Voice board, the Control Panel clock is wrong (because the microprocessor has been reset), the Control Panel has been programmed from the PC*	*...ALL the listed events clear or, the Control panel finds the Voice board; the Control Panel clock is set properly; the **Reset Programming from PC** operation is done; the **Reset lith. batt.** operation is done*
1000 Installer maintenance	*…the Control panel clock reaches the Time and Date programmed in the **Installer maintenance** section on the **Teleservice page***	*...the **Teleservice** page is downloaded or the **Date and Time** for Installer Maintenance are programmed from a Keypad*
1001 Central station maintenance	*...the Control panel clock reaches the Time and Date programmed in the **Central station Maintenance** section on the **Teleservice page***	*...the **Teleservice** page is downloaded or the **Date and Time** for Central station maintenance are programmed from a Keypad*
1002 Standard time/Summer time changed	*...the **Enable automatic update standard time/summer time** option is enabled and: the Control panel clock reaches 02.00 hours on the last Sunday in March (switch to daylight saving time) or, at 03.00 hours on the last Sunday in October (switch back to standard time)*	*...the [Upd.leg.sum.time] message is shown on a keypad display in View Trouble mode*

Table 8 *Generic Events (continued on next page)*

EVENT	STARTS WHEN...	ENDS WHEN...
1003 1034 Not Ready-to-arm partition no.	*...the Partition Disarms AND: at least one of the **Extended not Ready-to-Arm** Command Zones associated with the Partition detects Alarm conditions OR, at least one of the Zones of the Partition detects Alarm conditions and the Zone IS NOT: — Bypassed or being Tested — an **Exit delay** or **Last exit zone** — **Autobypassable** or **Autobypass with reset unbypass** or **Delayed and estimated on ready to arm** (the event may be triggered with a delay of up to 2 seconds)*	*...ALL the Zones listed in the "STARTS WHEN" field restore to standby (the event may take up to 2 seconds to end)*
1035 1066 Partial arming partition no.	*...the Partition Arms in Stay Mode with Zero Delay*	*...the Partition Arms in Away Mode or Disarms*
1067 1098 Global arming partition no.	*…the Partition Arms in Away Mode*	*...the Partition Arms in Stay Mode or Stay Mode with Zero Delay*
1099 1130 Disarming partition no.	*...the Partition Disarms*	*...the Partition Arms in Away Mode or Stay Mode or Stay with Zero Delay Mode*
1131 1162 Exit time on partition no.	*...the Partition Arms in Stay or Away Mode*	*...the Partition Output Time expires*
1163 1194 Entry time on partition no.	*...one of the **Entry delay** Zones belonging to the Partition detects Alarm conditions and the Partition is Armed in Stay or Away Mode*	*...the Partition Input Time expires or the Partition Disarms*
1195 1226 Autoarming warning partition no.	*…the Control panel signals the start of the programmed Auto-Arm Timeout prior to Automatic Arming of the Partition*	*...the Partition Arms or an Overtime Request is made for the Partition*
1227 1258 Memory alarm on partition no.	*...the **Generic alarm on partition no.** Event occurs*	*...the Partition Resets*
1259 1290 Memory tamper on partition no.	*...the **Tamper alarm on partition no.** Event occurs*	*...the Partition Resets*
1291 1790 Valid key no.	*...a Key/Card is used at a Reader*	*...the Key/Card is removed from the Reader*
1791 1822 Key present on reader no.	*...a valid Key/Card is used at the Reader*	*...the Key/Card is removed from the Reader*
1823 1854 Valid Key on Partition no.	*... a valid Key/Card is inserted/held near a Keypad*	*...the Key/Card is removed from the Reader*
1855 1886 Alarm stop on partition no.	*...a **Stop Alarms** request is made using a User Code enabled for the Partition*	*...the Control panel exits the **Stop Alarms phase***
1887 Alarm stop on panel	*…a **Panel Alarm Stop** request is made*	*...the Control panel exits the **Panel Alarm Stop** phase*
1888 2167 Bypass zone no.	*...the Zone is bypassed*	*...Zone no. is restored*
2168 2231 Bypass zone no. – Wireless	*...the Wireless Zone is bypassed*	*...the Wireless Zone is restored*
2232 Telephone line trouble	*...the Telephone Line voltage is less than 3V for 45 seconds. If the **Telephone line check** is disabled (refer to "Telephone"), the event cannot be generated*	*...the Telephone Line voltage is higher than 3V for 45 seconds*

Table 8 *Generic Events (continued on next page)*

EVENT	STARTS WHEN...	ENDS WHEN...
2233 Error printer	*…the Printer is either Disconnected; Improperly connected to the Printer interface; OFF or Not in line (no paper, no ink/toner, blocked, etc.)*	*…the trouble clears*
2234 Call queue full	*...the 254th Telephone Action is queued*	*...there are no Telephone Actions in the Call Queue*
2235 Timer no. 2298	*...Timer no. switches ON (see **Timer** page)*	*... Timer no. switches OFF*
2299 Real time of zone no. 2578	*...the voltage (resistance) on Zone no. enters the Alarm Range*	*...voltage (resistance) on Zone no. restores to Standby Range*
2579 Real time of zone no. – 2642 Wireless	*...Wireless Zone no. is violated*	*...Wireless Zone no. returns to standby*

Table 8 *Generic Events*

Spot Events Spot events (see Table 9), such as **Recognized User Code**, are instant. Therefore, any action undertaken on termination would serve no purpose. Therefore:

- Bistable Outputs CANNOT be associated with Spot Events;
- Dialler and Digital Communicator Actions CANNOT be associated with restoral of Spot Events.

Customized Events These events (refer to Table 10) can be set up to suit particular system requirements. Each Customized Event is generated by the combined effect of two other events (to be programmed in the **Customized event settings section). This feature is useful in commercial buildings where, for security reasons for example, two Codes must be entered during a 2 minute window to open a protected door.**

To set up a Customized Event — select the required event, right click on the mouse, then click **Define.**
Refer to "Customized event settings" for the programming instructions.

Setup the **Customized Event**, as follows.

Event 1 Enter the ID Number of the first event (associated with the Customized event), or double click the **Event 1** field and select the event from the Table.

Event 2 Enter the ID Number of the second event (associated with the Customized event), or double click the **Event 2** field and select the event from the Table.

☞ *Enter **0** in the **Event 1** and **Event 2** fields, if the Customized event is not required.*

NOT If this option is enabled, the Event logic will CHANGEOVER.

For example, if the **NOT** option is enabled for an **Alarm on zone event**, the event will **START** when the zone RESTORES TO STANDBY, and **END** when the zone SIGNALS ALARM STATUS, instead of vice versa.

☞ *The **NOT** option cannot be enabled for Spot Events, and for NON-Spot events with the **AND** Operator.*

Window This parameter determines the period within which the associated events (Events 1 and 2) must occur. If these events do not occur **during** the programmed **Window**, the system will not generate the Customized event.
Disable the NONE option then enter the required value.
Valid entries: 1 through 13106 seconds (3 hours, 38 minutes and 26 seconds) in 1 second steps.

EVENT	STARTS WHEN...	ENDS WHEN...
2643 Test	*..the Control panel clock signals the Time programmed on the **Teleservice** page*	*NOT ALLOWED!*
2644 Reset on partition no. 2675	*...**Alarms Reset** is requested using a User Code and Keypad jointly enabled for the Partition*	*NOT ALLOWED!*
2676 Reset on panel	*... **Panel Reset** is requested*	*NOT ALLOWED!*

Table 9 *Spot Events (continued on next page)*

EVENT		STARTS WHEN...	ENDS WHEN...
	Super key [Fire] [Keypad nnn]	*…buttons and on the Keypad are pressed simultaneously (Mia-D keypad ONLY)*	*NOT ALLOWED!*
	Super key [Assistance] [Keypad nnn]	*...buttons and on the Keypad are pressed simultaneously (Mia-D keypad ONLY)*	*NOT ALLOWED!*
	Super key [Police] [Keypad nnn]	*...buttons and on the Keypad are pressed simultaneously (Mia-D keypad ONLY)*	*NOT ALLOWED!*
	Super key [Key 1] [Keypad nnn]	*...button* **1** *on the Keypad is pressed and held down for 3 seconds*	*NOT ALLOWED!*
	Super key [Key 2] [Keypad nnn]	*...button* **2** *on the Keypad is pressed and held down for 3 seconds*	*NOT ALLOWED!*
	Super key [Key 3] [Keypad nnn]	*...button* **3** *on the Keypad is pressed and held down for 3 seconds*	*NOT ALLOWED!*
2917 2948	**SuperKey on KeyFob**	*…the button of a Wireless key is pressed and held down for 2 seconds*	*NOT ALLOWED!*
2949 2980	**Chime on partition no.**	*...a Zone with the* ***Chime*** *Attribute belonging to the Partition detects Alarm conditions when the Partition is Disarmed*	*NOT ALLOWED!*
2981 3012	**Event negligence on partition n.**	*… the* ***Negligence Time*** *expires*	*NOT ALLOWED!*
3013 3044	**Event delinquency on partition no.**	*...the* ***Inactivity Time*** *expires*	*NOT ALLOWED!*
3045 3092	**Block Keypad no.**	*...the Keypad locks*	*NOT ALLOWED!*
3093 3287	**Recognized user code no.**	*....ON, OFF, ENTER, A, B, C or D is pressed after entry of a valid User Code PIN*	*NOT ALLOWED!*
3288 3335	**Recognized user code on Keypad no.**	*...a Valid User Code PIN is entered at the Keypad*	*NOT ALLOWED!*
3336 3367	**Recognized user code on Partition no.**	*...a Valid User Code PIN is entered for the partition*	*NOT ALLOWED*
3368	**Invalid code**	*....ON, OFF, ENTER, A, B, C or D is pressed after entry of an Invalid User Code PIN*	*NOT ALLOWED!*
3369	**Recognized installer code**	*…the Installer Menu is quitted*	*NOT ALLOWED!*
3370	**Kissoff recognized**	*...the Control panel detects the Kissoff tone*[19]	*NOT ALLOWED!*
3371	**Start telephone call**	*...the Control Panel engages the telephone line*	*NOT ALLOWED!*
3372	**Teleservice requested**	*...the Control Panel answers a Teleservice call*	*NOT ALLOWED!*
3373	**Start Teleservice**	*...the Teleservice connection is generated after recognition of the Installer PIN*	*NOT ALLOWED!*
3374	**Dialler action OK**	*...a Dialler call is successful*	*NOT ALLOWED!*

Table 9 *Spot Events (continued on next page)*

19 *The Kissoff tone is signal used them from the receiver in order to communicate that it has received a block correctly data.*

EVENT	STARTS WHEN...	ENDS WHEN...
3375 **Action on digital communicator OK**	*...a Digital Communicator call — using a protocol other than Contact ID — is successful*	*NOT ALLOWED!*
3376 **Digital communicator OK**	*...a Digital Communicator call — using a protocol other than Contact ID — is successful*	*NOT ALLOWED!*
3377 **Teleservice action OK**	*...a Teleservice call is successful*	*NOT ALLOWED!*
3378 **Dialler action failed**	*...a Dialler call fails*	*NOT ALLOWED!*
3379 **Action on digital communicator failed**	*...a Digital Communicator call — using a protocol other than Contact ID fails*	*NOT ALLOWED!*
3380 **Digital communicator action failed**	*...a Digital Communicator call — using Contact ID protocol fails*	*NOT ALLOWED!*
3381 **B-NET communication Failed**	*... a Digital Communicator call — using SIA over B-NET via the B-NET Module*	*NOT ALLOWED!*
3382 **Teleservice action failed**	*...a Test call or other user-requested a teleservice call fails*	*NOT ALLOWED!*

Table 9 *Spot Events —*

☞ *The Customized Event can be associated with **Spot** events (which end almost instantly), and **NON-Spot** events (which have a duration).*
*If you associate **two Spot** events with the Customized Event, you MUST program the Window in order to provide the Spot events with a "virtual" end. The "virtual" end of Spot events will occur when the Window expires.*

The Window will start when either Event 1 or Event 2 occurs.

☞ *The Window cannot restart until both events end (see Fig. 43: b3).*

Operator Select the Operator (**AND**, **OR** or **XOR**) for Events 1 and Event 2. The selected **Operator** determines the operating mode of the Customized Event, as follows.

❒ **AND**
The **AND** Operator will signal when BOTH the associated events start. The **AND** Operator depends on the event types (NON-Spot and/or Spot), and on whether or not the Window has been programmed, as follows.

➢ **Event 1 and Event 2 NON-Spot, NO Window**
The system will generate the Customized Event, when Event 1 **AND** Event 2 start (see Fig. 43: a1 and a3).
The system will end the Customized Event when either Event 1 **OR** Event 2 ends (see Fig. 43: a2 and a4).

➢ **Event 1 and Event 2 NON-Spot, WITH Window**
The system will generate the Customized Event when Event 1 **AND** Event 2 BOTH start during the programmed Window (see Fig. 43: b1 and b4).
The system will end the Customized Event when the programmed Window expires (see Fig. 43: b2 and b5).

➢ **One Spot Event and one NON-Spot Event, NO Window**
The system will generate the Customized Event when the NON-Spot Event starts after the Spot Event (see Fig. 43: c1) or, when the Spot Event starts after the NON-Spot Event (see Fig. 43: c3).
The system will end the Customized Event when the NON-Spot Event ends (see Fig. 43: c2 and c4).

➢ **One Spot Event and one NON-Spot Event, WITH Window**
The system will generate the Customized Event when the NON-Spot Event starts after the Spot Event during the **Window** (see Fig. 43: d1) or, when the Spot Event starts after the NON-Spot event during the Window (see Fig. 43: d3).
The system will end the Customized Event when the NON-Spot Event ends (see Fig. 43: d2 and d4).

EVENT	STARTS WHEN...	ENDS WHEN...
3383 **Customized event no.** 3414	*...the logic expression defined for the Customized Event is true*	*...the logic expression defined for the Customized Event is false*

Table 10 *Customized Events*

➢ **Event 1 and Event 2 Spot, NO Window**

☞ *If you apply the **AND** Operator to two Spot Events, you MUST program the Window.*

➢ **Event 1 and Event 2 Spot, WITH Window**

The system will generate the Customized Event when either one of its associated Events starts after the other during the **Window (see Fig. 43: e1).**

The system will end the Customized Event when the Window expires (see Fig. 43: e2).

❒ **OR**

The **OR** Operator will signal when ONE of the associated events starts. The **OR** Operator depends on the Event types (NON-Spot and/or Spot), and on whether or not the Window has been programmed, as follows.

➢ **Event 1 and Event 2 NON-Spot, NO Window**

The system will generate the Customized Event when either Event 1 **OR** Event 2 starts (see Fig. 44: a1 and a3).

The system will end the Customized Event when Event 1 **AND** Event 2 end (see Fig. 44: a2 and a4).

➢ **Event 1 and Event 2 NON-Spot, WITH Window**

☞ *If you apply the **OR** Operator to two NON-Spot Events, the Window will be uninfluential.*

➢ **One Spot Event and one NON-Spot Event, NO Window**

The system will generate the Customized Event when either Event 1 **OR** Event 2 starts (see Fig. 44: b1, b2, b4, b6 and b8).

The system will end the Customized Event when Event 1 **AND** Event 2 end (see Fig. 44: b1, b3, b5, b7 and b8).

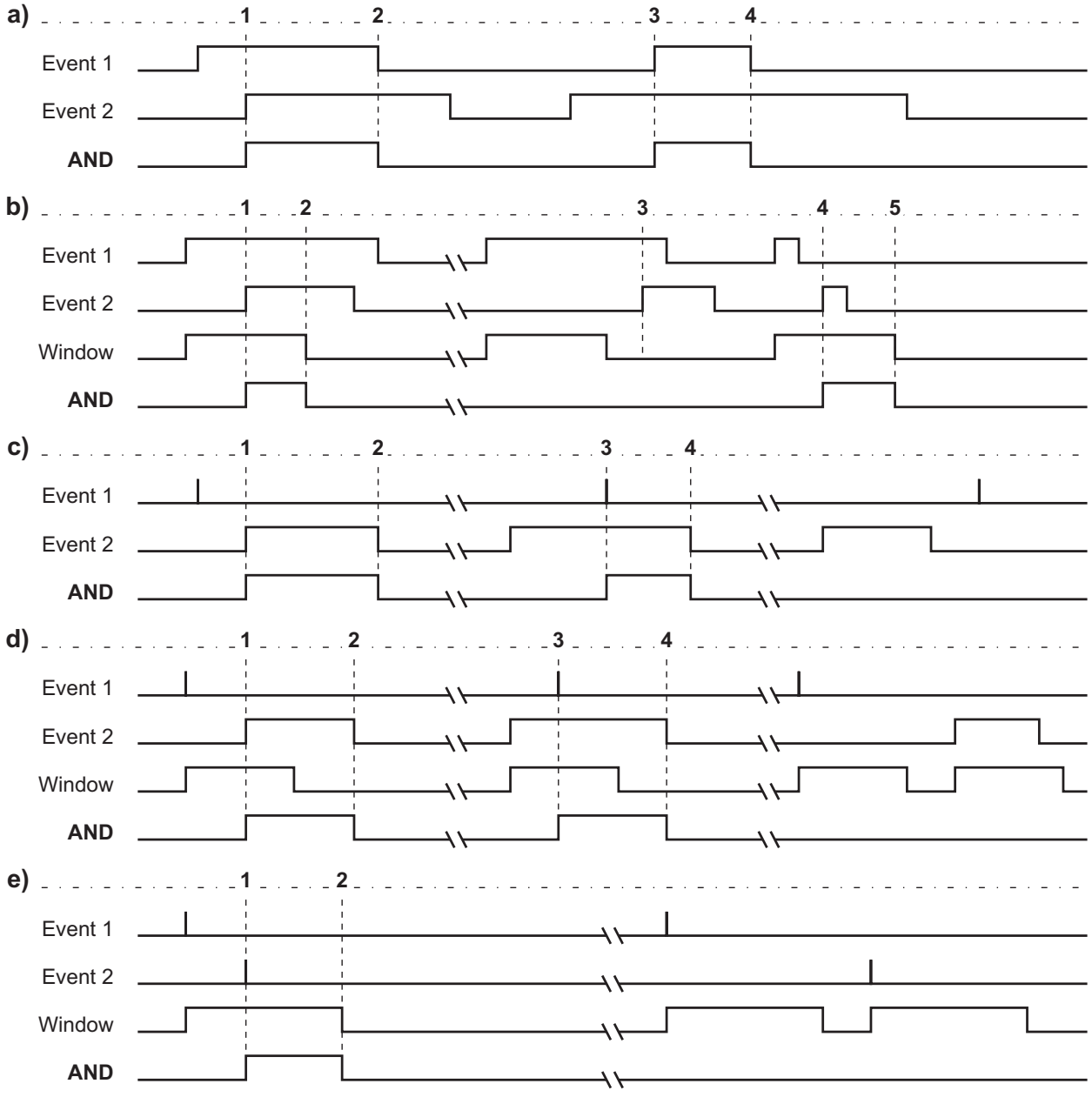


Figure 43 *The **AND** Operator mode*

☞ *If you apply the **OR** operator to a Spot Event and a NON-Spot event, the Customized Event may in some cases operate as a Spot Event (i.e. end almost instantly). Therefore, if you assign a Telephone Action to the start and end of the Customized Event, the respective telephone calls will be placed in the Call queue almost instantly. If you assign a Bistable Output to the Customized Event, the Output may activate for approximately 1 second.*

➢ **One Spot Event and one NON-Spot Event, WITH Window**

The system will generate the Customized Event when Event 1 **OR** Event 2 starts (see Fig. 44: c1, c3, c5 and c7).
The system will end the Customized Event when the NON-Spot Event ends (Fig. 42: c2, c4 and c8) or, when the Spot Event ends, and no other NON-Spot Events have occurred in the meantime (Fig. 42: c6).

➢ **Event 1 and Event 2 Spot, NO Window (NOT ALLOWED**)

☞ *If you apply the **OR** Operator to two Spot Events, you MUST program the Window.*

➢ **Event 1 and Event 2 Spot, WITH Window**

The system will generate the Customized Event when Event 1 **OR** Event 2 starts (see Fig. 44: d1, d3 and d5).
The system will end the Customized Event when the Window expires (see Fig. 44: d2, c4 and d6).

❒ **XOR**

The **XOR** Operator will signal when the status of Event 1 **is different from** that of Event 2. The **XOR** Operator depends on the event types (NON-Spot and/or Spot), and on whether or not the Window has been programmed, as follows.

➢ **Event 1 and Event 2 NON-Spot, NO Window**

The system will generate the Customized Event when the status of Event 1 **is different from** that of Event 2 (see Fig. 45: a1, a3, a5 and a7).
The system will end the Customized Event when the status of Event 1 **is the same as** that of Event 2 (see Fig. 45: a2, a4, a6 and a8).

➢ **Event 1 and Event 2 NON-Spot, WITH Window**

The system will generate the Customized Event when the status of Event 1 **is different from** that of Event 2 during the Window (see Fig. 45: b1, b4 and b7).
The system will end the Customized Event when the status of Event 1 **is the same as** that of Event 2 (see Fig. 45: b2, b5 and b9).

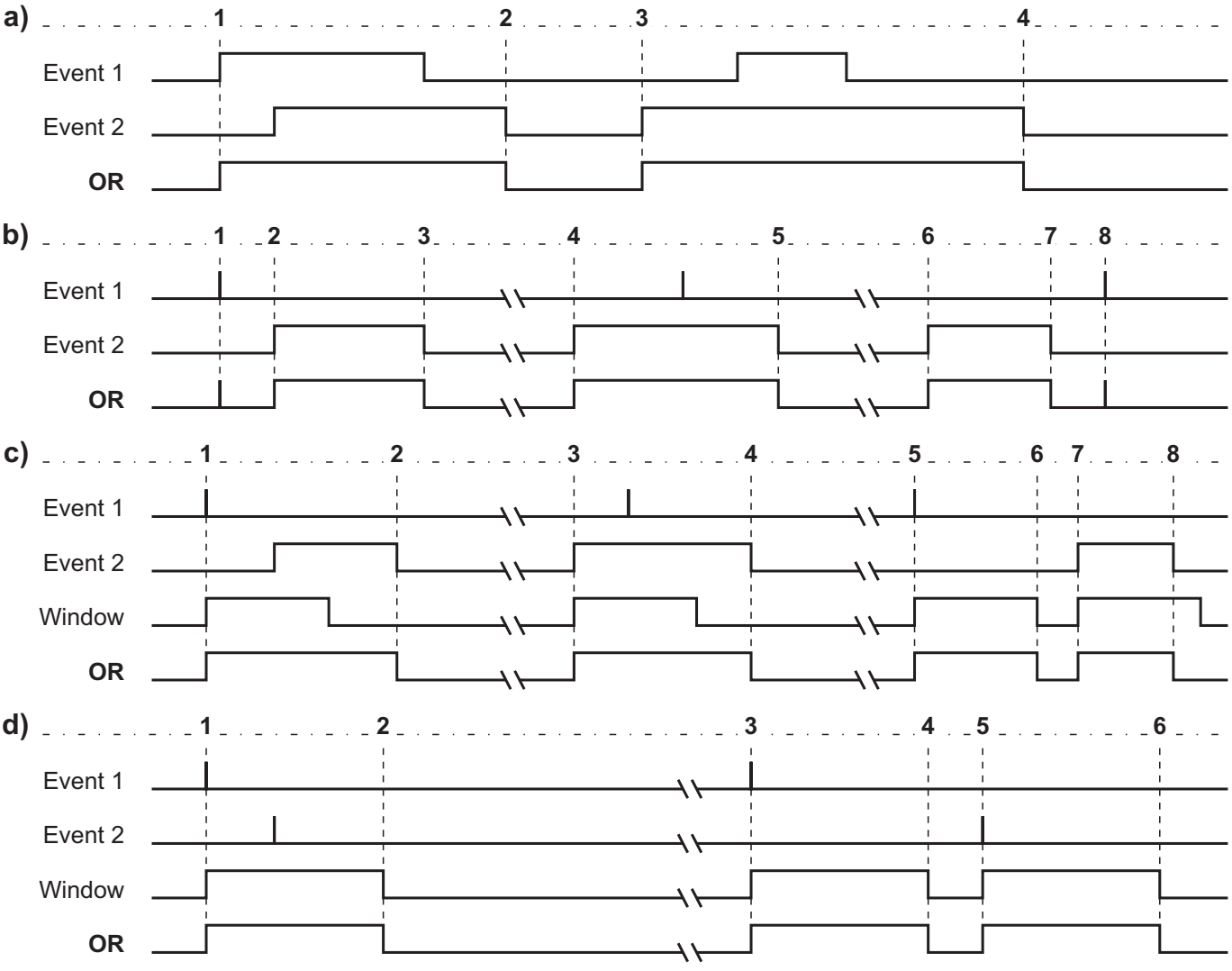


Figure 44 *The **OR** Operator mode*

☞ *The system **WILL NOT** generate the Customized Event if the status of Event 1 **is different from** that of Event 2 when the Window is not running (see Fig. 45: b3, b6 and b9).*

➢ **One Spot Event and one NON-Spot Event, NO Window**

The system will generate the Customized Event when the status of Event 1 i**s different from** that of Event 2 (see Fig. 45: c1, c2, c4, c7 and c9).
The system will end the Customized Event when the status of Event 1 **is the same as** that of Event 2 (see Fig. 45: c1, c3, c6 and c8), that is, unless the Spot Event starts after the NON Spot event (see Fig. 45: c5).

☞ *If you apply the **XOR** operator to a NON-Spot event and a Spot Event, the Customized event may, in some cases, operate as a Spot Event (i.e. end almost instantly). Therefore, if you assign a Telephone Action to the start and end of the Customized Event, the respective telephone calls will be placed in the Call queue almost instantly. If you assign a Bistable Output to the Customized Event, the Output may activate for approximately 1 second.*

➢ **One Spot Event and one NON-Spot Event, WITH Window**

When calculating the **XOR** result of a Spot Event and a NON-Spot Event, you must consider the Spot Event as ending when the Window expires. Thus the Customized Event will start when the status of Event 1 **is diferent from** that of Event 2 during the Window (see Fig. 45: d1, d4, d7 and d9).
The Customized Event will end when the status of the Event 1 **is the same as** that of Event 2 (see Fig. 45: d2, d5, d8 and d10).

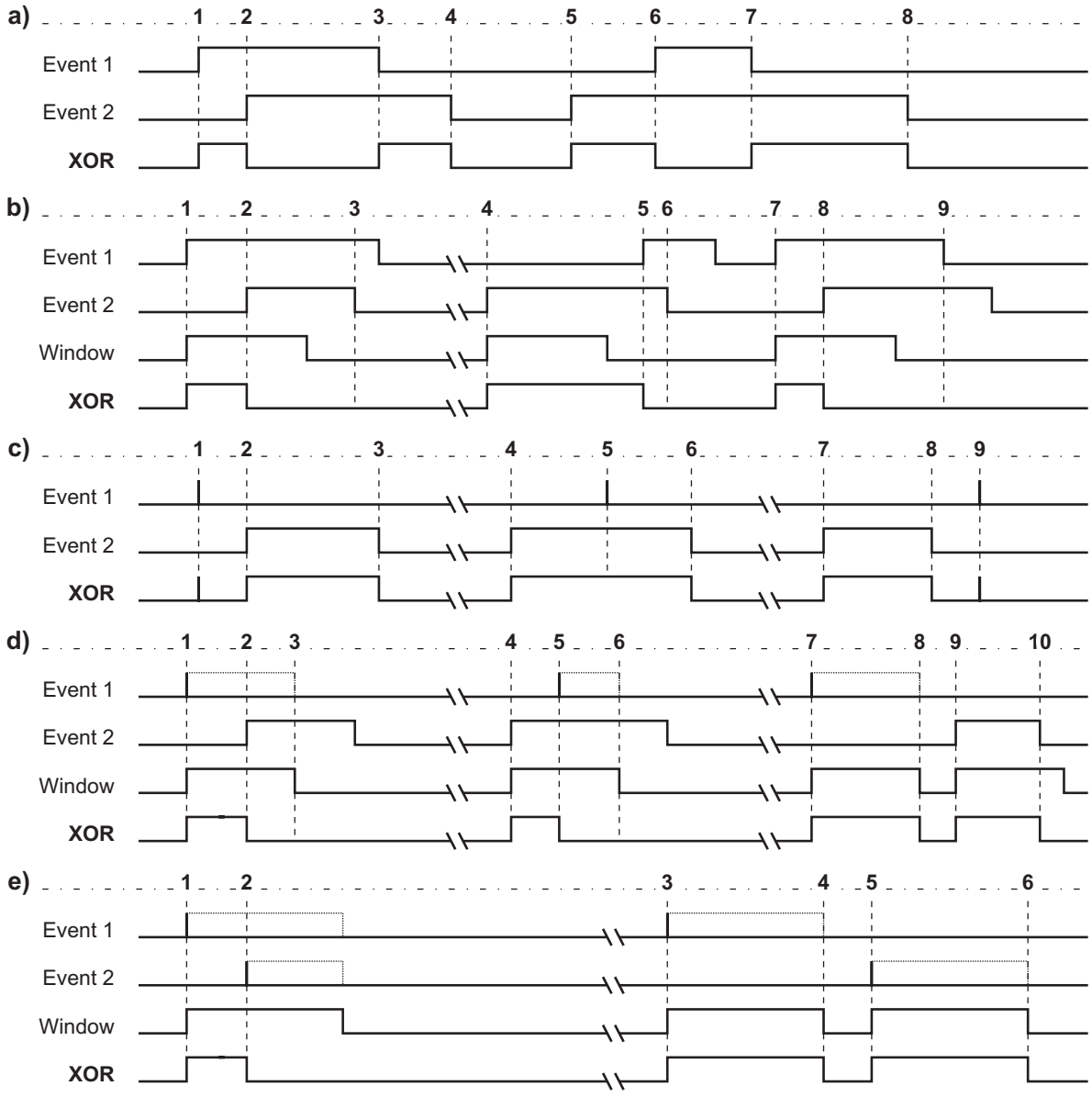


Figure 45 *The XOR Operator mode*

☞ *The system will not generate the Customized event, if the status of Event 1* ***is different from*** *that of Event 2, when the Window is not running (see Fig. 45: b3, b6 and b9).*

➢ **Event 1 and Event 2 Spot, NO Window (NOT ALLOWED)**

☞ *If you apply the* ***XOR*** *Operator to two Spot Events, you MUST program the Window.*

➢ **Event 1 and Event 2 Spot, WITH Window**

When calculating the **XOR** result of two Spot Events, you must consider them as both ending when the Window expires. In this way, the Customized Event will start when the status of Event 1 **is different from** that of Event 2 (see Fig. 45: e1, e3 and e5).
The Customized Event will end when the status of Event 1 **is the same as** that of Event 2 (see Fig. 45: e2, e4, and e6).

Scheduler - Arming

You can program the Scheduler to manage up to 16 Day Models (e.g. Weekday, Holidays, etc.), each with up to 4 Arm and 4 Disarm operations per Partition.

⚠ **The Scheduler Actions will be ignored during the programming session.**

You can program the automatic Arm/Disarm parameters in the **Arming** page.
To create the Day Models — click the **Models** tab.

Partitions This field shows the Partition Descriptions (to be programmed in the Partitions page).

1st Dis. / 2nd Dis. / 3rd Dis. / 4th Dis. These fields will allow you to set up to 4 Disarm times for the corresponding Partition.

Valid format: *hh.mm* — where *hh* represents the hour (00 to 23) and *mm* represents the minutes (00 to 59).
For example, to set 7:45 a.m. — enter 07.45.
to set 5:45 p.m. enter 17.45.
If you enter an invalid value, the application will display an error message.

1st Arm. / 2nd Arm. / 3rd Arm. / 4th Arm.
These fields will allow you to set up the automatic arming times for the corresponding Partition.

1st Type / 2nd Type / 3rd Type / 4th Type
These fields will allow you to select the Arming Mode (Type) for that Partition:

- **A** = Away
- **S** = Stay
- **I** = Stay with 0 Delay (Instant)

■ **Type Description**
The **Type Descr.** button opens a window for the Model labels (Weekday, Half-day, Holiday, Christmas holiday, Summer Holiday, etc.).

No. This non-editable field shows the Model ID Number.

Description This field will allow you to edit the Model label (maximum 16 characters).

■ **Models**
The **Models** button will open the programming window of the parameters described in this section.

Day This field will allow you to select the Day number.
Valid entries: 1 through 31 or Asterisk *.

- If you select an asterisk (*), the Day number (1 through 31) will be irrelevant for the Model.
- If you select a Day number, you will not be able to select a Weekday.
- If you select an invalid number, the application will automatically rectify it to last day of the month concerned, when you click **Download**.

Month This field will allow you to select the Month.

- If you select an asterisk (*) the Month will be uninfluential.

Year This field will allow you to select the Year.
Valid entries: 2005 through 2019:

- If you select an asterisk (*) the Year will be uninfluential.

Interval You must select this field, if the corresponding line indicates the Start of an Interval such as: Summer holidays, Bank holiday week-end, Christmas, etc.
To program an Interval: select the start of the Interval on one line and the end of the Interval on the following line, then click the **Start** field. If the entry is valid the words **Start** and **Stop** will be shown.

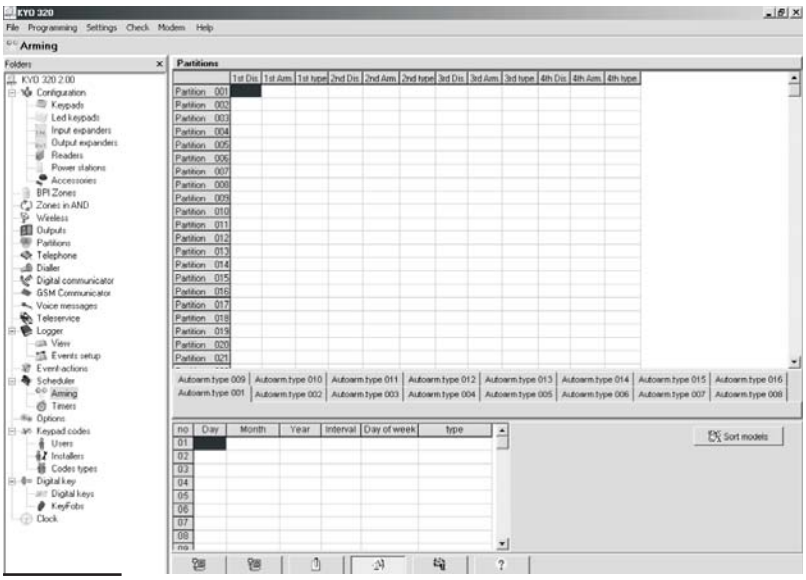


Figure 46 *Scheduler - Arming Page*

Valid entries: 1 through 31 (Day Number) or Monday, Tuesday, etc. (Weekday).

☞ *The Interval **MUST Start** and **Stop** within the same month.*

Day of Week This field will allow you to select the Day.

- If you select an asterisk (*), the Day of the week will be uninfluential.
- If you select a Weekday, you will not be able to specify the Day Number (1 through 31).

Type This field will allow you to select the Description (label) of the Model.

- If you do not select a Description, the corresponding Model will not be saved.
- You must select the Description of the Model on the **Start** line of the interval. You cannot select the Description on the **Stop** line as this field is automatic (*).

Sort Models This button will allow you to prioritize the Models.
NOTE: Some days may belong to several Models. If this occurs, the Scheduler will apply the Times of the least frequent Model.
For example, the **Christmas Holiday** Model is applied once a year, therefore, it will take priority over the Weekday Model that is applied 5 days per week.

■ **Options**
The **Options** button will open the programming window of the parameters described in this section.

Max. Overtime Requests This option will allow you to set the maximum number of Overtime Requests.

EXAMPLE: If a Timer controlled Partition is scheduled to Arm at 17:45 — and the Overtime request period is set at 60 minutes, and the Max. No. of Overtime requests is set at 2 — Arming can be postponed until 19:45 by two Overtime requests (17:45 + 2 x 60 minutes), after which, Overtime requests will be ignored.

The maximum Overtime request is 180 minutes.
- If you select an invalid value, the application will rectify it to the highest accepted value.
- If you select 0, the program will rectify it to 1.

☞ *Overtime Requests will affect the imminent Arming event ONLY.*

Example: If the 1st Arm event of a Partition is scheduled for 12:45 and the 2nd Arm event is scheduled for 15:30, and the User makes four 1-hour Overtime Requests at 12.30 — with the intention of overlapping the 2nd Arm event (12:45 + 4 h = 16.45), the system will ignore the overlap and will Arm the Partition at 15.30 as scheduled.

Overtime request This is the delay before a scheduled Arming Time.

Example: If a Partition is scheduled to Arm at 17:45 and the Overtime Request is set at 60 minutes, and the User makes an Overtime Request at 17.30, the Partition will Arm at 18:45 (17:45 + 1 h) unless the User makes further Overtime Requests in the meantime.

Valid entries: 0 through 60 minutes, in 1-minute steps.
- If you enter a value of over 60 minutes, it will be rectified automatically to 60 minutes.
- If you enter 0 minutes, Overtime Requests will be ignored.

■ **Examples**
The following Models show: Weekday, Half-day, Bank holiday, Summer holiday and Christmas holiday.

Weekdays This Model includes weekdays, regardless of the Day number, Month and Year.

The **Weekdays** Model is an **Interval** and must be setup on two lines.
On the upper line, select an asterisk (*) in the **Day**, **Month** and **Year** fields, and Monday in the **Day of Week** field.
On the lower line, select an asterisk (*) in the **Day**, **Month** and **Year** fields, and Friday in the **Day of Week** field.
Click the Interval field of the upper line: the words **Start** and **Stop** will be shown.
Select Weekdays in the **Type** field.

Day	Month	Year	Interval	Day of week	Type
*	*	*	Start	Monday	Weekdays
*	*	*	Stop	Friday	*

Half-day This Model is for Half-day Closing.
Select an asterisk (*) in the **Day**, **Month** and **Year** fields, and Saturday in the **Day of Week** field.
Select Half-day in the **Type** field.

Day	Month	Year	Interval	Day of week	Type
*	*	*	*	Saturday	Half-day

Summer Holiday This Model is an **Interval** and must be setup on two lines.
On the upper line, select the number of the first day of the holiday period (e.g. 8) in the **Day** field, and the respective Month in the **Month** field (e.g. August).
Select an asterisk (*) in the **Year** and **Day of Week** fields.
On the lower line, select the number of the last day of the holiday period (e.g. 23) in the **Day** field, and the respective Month in the **Month** field (e.g. August).
Select an asterisk (*) in the **Year** and **Day of Week** fields.
Click the Interval field of the upper line: the words **Start** and **Stop** will be shown.
Select Summer holidays in the **Type** field.

Day	Month	Year	Interval	Day of week	Type
8	August	*	Start	*	Summer Holiday
23	August	*	Stop	*	*

Christmas Holidays This Model can be setup in the same way as the Summer Holiday period. However, if the Christmas holiday period continues into the New year (e.g. 24th December to 3rd January), it must be setup on two blocks of 2 lines, as follows.
Days from the 24th to the 31st of December in the first block

- Days from the 1st to the 2nd of January in the second block.

Day	Month	Year	Interval	Day of week	Type
24	Dec.	*	Start	*	Christmas Holidays
31	Dec.	*	Stop	*	*
1	January	*	Start	*	Christmas Holidays
2	January	*	Stop	*	*

Bank Holiday This Model is for Bank Holidays.
Select the **Day** number (e.g 20) and **Month** (e.g. April) in the respective fields.
Select Bank holiday in the Type field.

Day	Month	Year	Interval	Day of week	Type
20	April	*	*	*	Bank holiday

Model Priority Some days may belong to more than one Model, therefore, the Scheduler will apply the Times of the least frequent Model.
For example, **Christmas Holiday** Model — is applied once a year, therefore, will take priority over the Weekday Model that is applied 5 days per week.

Scheduler - Timers

You can define up to 16 Models, each with a maximum of 4 different **ON** and 4 different **OFF** Times for each of the 64 Control panel Timers.

Each Timer is associated with a Timer Event on the Events-Actions page.
When the Timer triggers the ON signal, the corresponding Event will occur (e.g. the Garden Sprinkler will turn ON).
When the Timer triggers the OFF signal, the corresponding Event will be terminated (e.g. the Garden Sprinkler will turn OFF).

The ON/OFF operations of each Timer will be recorded in the log, as follows:
- Type: Timer ON or Timer OFF
- IDENT.: Timer Description
- TIME: Time and Date of the ON and OFF operations

The Timers can be programmed with the ON/OFF Times of domestic appliances such as Garden Sprinklers, Courtesy lights, Heating systems, etc., or with the ACTIVE/INACTIVE Times of the system Outputs, Codes and Keys.

☞ *The user can enable/disable the Timers (refer to "En./Dis. Timers" in the USER MANUAL).*

If a User disables a Timer during its programmed **ON** Time, the corresponding Timer event will end.

If a User enables a Timer during its programmed **ON** Time, the corresponding Timer event will start within the minute.

Example: If a Timer — with a programmed **ON** Time of 21.00 to 24.00 — is enabled at 22:02:01 the corresponding Timer event will be triggered at 22:03:00

The ENABLE/DISABLE operations of each Timer will be recorded in the log, as follows:
- Type: Timer Enabled or Timer Disabled
- IDENT.: Timer Description
- USER: Keypad Description
- USER ID.: Code Description
- TIME: Time and Date of the ON and OFF operations

The **Timers** page will allow you to program the Timer parameters, as follows.

Select the required Day Model, then select the tag of the Day model timer you wish to set up, in the lower part of the table.

No. This non-editable field shows the Timer ID Number.

Description Enter the respective Timer label (e.g. Heater, Sprinkler, etc.). This label will be used to identify the Timer in all the operations it is involved in.

1st ON / 2nd ON / 3rd ON / 4th ON This field will allow you to set the **ON** Time (refer to 1st Dis. / 2nd Dis. / 3rd Dis. / 4th Dis. for the Time format).

1st OFF / 2nd OFF / 3rd OFF / 4th OFF This field will allow you to set the **OFF** Time (refer to 1st Dis. / 2nd Dis. / 3rd Dis. / 4th Dis. for the Time format).

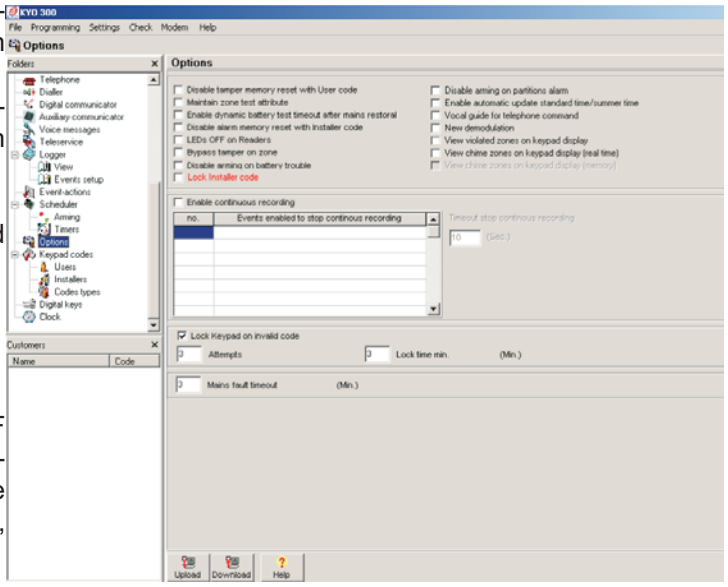


Figure 47 *Options page*

■ **Type Description**
Refer to “Types Description” under “Scheduler - Timers”.

■ **Models**
Refer to “Models” and “Events” under “Scheduler - Timers”.

Options

This page will allow you to setup the options that determine the operating mode of the system.

Disable Tamper Memory Reset with User code If this option is enabled, only the Installer Codes will be able to delete the Zone, Partition and Control Panel Tamper memories. This option is selected by default.

Maintain Zone Test Attribute If this option is enabled, any Alarms generated by Zones in Test status will be recorded in the Events log, also when the Partition is Disarmed.

Enable dynamic battery test timeout after mains restoral
After providing power during a Mains blackout, the battery will be quite low, and therefore, unable to meet the Dynamic Battery Test requirements (refer to “Power supply connection” under “Installation”). If this option is enabled, the Dynamic Battery Test will restart 5 hours after Mains restoral (instead of immediately) thus allowing the battery to recharge.

Disable Alarm Memory Reset With Installer Code
If this option is enabled, only enabled User Codes will be able to delete Alarm memories.

LEDs OFF on Readers If this option is enabled, the Reader LEDs will not signal the system status (all LEDs OFF) until a valid Key/Card is used at the Reader.

☞ *This option is not available for control units with updated firmware version 2.10 or later.*

☞ *The LEDs of Readers which have the **M** option Enabled (refer to “Readers” under “Enrolling”), will always show the status of their associated events, regardless of the status of the **LEDs OFF on Readers** option.*

Bypass Tamper on Zone If this option is enabled, bypassed Zones will not generate Tamper Alarms.

Disable Arming on Battery Trouble If this option is enabled, Arming requests will be denied when any of the following events is in progress:

- Warning low battery
- Warning power trouble
- Warning low battery on Power station
- Warning power trouble on Power station

This option is selected by default.

Lock Installer Code If this option is enabled, restoral of the default settings WILL NOT default the PIN of Code no. 200 (MASTER Installer Code).

Disable Arming with Partition Alarm If this option is enabled, Arm commands from Keypads or Readers will not be carried out if the system detects Partitions in alarm status.

☞ *This option does not apply to Arming operations done via a Command zone, Timer, remote Telephone or computer.*

Enable Automatic Update of

Standard Time/Summer Time If this option is enabled, the Control Panel will manage the Daylight Saving Time changeover automatically, as follows:

- the Clock will be put forward 1 hour at 2 am on the last Sunday in March;
- the Clock will be put back 1 hour at 3:00 am on the last Sunday in October.

The system will signal Automatic Changeover by:

- generating the **Standard time/Summer time changed** event;
- switching ON the ⚠ LED.

☞ *The ⚠ LED signals several different types of Trouble events. If signalling is due to the Standard time/Summer time changeover, the Keypad (in View Trouble Mode) will show the [daylighttimeUpdt] message.*

Voice guide for commands via telephone If this option is enabled, the User will be able to access the voice guided menu and operate the system from a remote phone. Access to this function requires entry of a valid Telephone Access Code. Once the communication has been established, the Control panel will play message **56** which will explain the functions associated with keys 1, 2, 3, 4, 5, 6, 7, 8, 9, # and *.

- If key **1** is pressed, the Control panel will play message **57** which contains the instructions for the DTMF menu **Listen-in** options, that is, the functions of keys 1, 2 and #.

- If key **2** is pressed, the Control panel will play message **58** which contains the instructions for the DTMF menu **Zone and Partition status enquiry** options, that is, the functions of keys 1+nnn, and 2+nnn.

- If Key **3** is pressed, the Control panel will play message **59** which contains the instructions for the DTMF menu **Activate/Deactivate Reserved Outputs** options, that is, the functions of keys 0+nnn, and 1+nnn.

- If key **4** is pressed, the Control panel will play message **60** which contains the instructions for the DTMF menu options, that is, the functions of keys 1, 2, 3, 4, 5 and 6.

➢ If key **5** is pressed, the Control panel will play message **61** which contains the instructions for the DTMF menu Arm/Disarm single Partitions options, that is, the functions of keys 0+nn and 1+nn.

Messages 55, 56, 57, 58, 59 and 60 of the Voice Guide must be recorded by the Installer. The Voice Message recording instructions, and some examples of typical messages can be found in the "Voice Message" section. For example, message 55: "Press 1 to activate Remote Listen-In, press 2 to activate the 2-way Audio channel, press # to go back to the Main menu".

➢ If key **7** is pressed, the Control panel will play message **62** which contains the instructions for the DTMF menu Record/Play Memos option, that is, key 1 (Record memo) and Key 0 (Play memo).

Display Zones in Alarm on Keypad If this option is enabled, the LCD Keypad will provide real-time information — during Disarmed status — regarding Alarm conditions on Zones associated with any of its Partitions.

Display Chime Zone on Keypad(realtime) If this option is enabled, the LCD Keypad will provide real-time information — during Disarmed status — regarding Alarm conditions on **Chime** Zones associated with any of its Partitions. *Signalling will stop when the Zones concerned* ***restore automatically*** *to standby status.*

Display Chime Zone on Keypad (memory) This option is uninfluential if the "Display Chime on Keypad (real-time)" option is disabled.
If this option is enabled, the LCD Keypad will provide real-time information — during Disarmed status — regarding Alarm conditions on **Chime** Zones associated with any of its Partitions. *Signalling will continue until the Partition concerned is* ***reset manually****.*

☞ *The above-mentioned "Display … on Keypad" options will soon be available for programming via Keypad.*

Disable False Key warning If this option is enabled, the Control Panel will store False Key events in the Event log but WILL NOT provide False Key warnings on the system Keypads and Readers.

Disable arming on wireless receiver lost If this option is enable Arm command will not be carried out on Partitions that have wireless zones, if the receiver is lost. This option is selected by default.

Disable arming on wireless zones fault If this option is enable, Arm command will not be carried out if a wireless zone has not transmitted to the receiver in the 15 last minutes (Zone Control time).

Enable Continuous Recording If this option is enabled, the Control Panel will use **Message No. 64** to continuously record any sounds picked up by the microphones of the Voice board and connected Microphone-Speaker boards.

If any of the Events listed in the **Events enabled to stop continuous recording** Table occurs, the Control Panel will stop recording after the programmed **Time-out stop continuous recording**. In this way, **Message No. 64** will record ambient sounds picked up before and after the programmed events (refer to "Continuous Recording" in the USER MANUAL).

Events Enabled to Stop Continuous Recording If this option is enabled, you will be able to select the Events that will stop the Continuous Recording function.
At default, only **Generic+Tamper alarm on partition** will stop the Continuous Recording function.

To change an Event:

1. Double click on the **No.** field, or on the field of the **Events enabled to stop continuous recording**.
2. Select the required Event from the list.
3. Click **OK**.

To delete an Event:

4. Select the **No.** field of the Event;
5. Press **Canc** button on the computer keypad.

Timeout Stop Continuous Recording This field will allow you to program the interval (in seconds) between the start of an Event — selected on the **Events enabled to stop continuous recording** list — and termination of recording.
Valid entries: 0 seconds to 75% of the programmed length of Message No. 64
Default: 10 seconds

Lock Keypad on Invalid Code If this option is enabled, the Keypad will lock for the programmed time (refer to "Lock time in min.") when an Invalid PIN is entered for the programmed number of times (refer "Max. Number of Attempts").

Attempts This field will allow you to program the number of wrong PIN entries allowed before keypad lock out.
The wrong PIN counter will reset when the valid PIN is entered or when the **Lock Time min.** expires.
Valid entries:1 through 10.
Default: 3

Lock Time min. This field will allow you to set the Keypad Lock time (in minutes).
Valid entries: 1 through 20 minutes, in 1-minute steps
Default: 3 minutes

Mains Fault Timeout This field will allow you to set the amount of time that must expire before the **Warning mains failure** event occurs.
Valid entries: 0 through 5400 minutes, in 1-minute steps
Default: 3 minutes.

Code hierarchy If this option is enabled, the user should enable the Maintenance mode, so the installer can work on the system (see "Enable/Disable maintenance" in the User Manual. If this option is not enabled, the user will not need to enable Maintenance mode before the installer begins work on the system. This option is selected by default.

Generate tampering if keypad disappears If this option is enabled, the control unit generates a tampering event when it does not detect one of the keypads.

Generate tampering if Expander-IN disappears If this option is enabled, the control unit generates a tampering event when it does not detect one of the input expanders.

Keypad Codes - User

The Keypad Codes and Digital Keys/Cards allow the Users and Installer to access the system.

200 Codes Available for KYO320 KYO320 manages a total of 200 Codes — 195 User Codes (1 through 195), 4 Installer Codes (196 through 199) and a Master Installer Code (200).
Each User Code can be programmed to control specific functions and Partitions. Each Code must be assigned at least 1 **Father** code (up to 3 different **Father** codes can be assigned). A Code can be assigned to itself, thus becoming its own **Father** code.
Only the **Father** code can change the **PIN**, **Available** and **Active** status of its assigned Codes.

PIN The PIN is the combination of digits that allows access to Code functions. The PIN can be a 4, 5 or 6 digit number.

☞ *You can Arm/Disarm and Bypass Partitions using 6-digit User PIN as follows: type in a valid 6-digit User PIN followed by the 2-digit ID number of the Partition concerned, then press ON, OFF, A, B, C or D, as required. The Partition will Arm/Disarm in accordance with programming.*

Keypads and User Codes Each Keypad and User code can be programmed to control specific Partitions. Therefore, the outcome of a command entered at a Keypad depends on the User code and Keypad in use (commands will affect ONLY the Partitions common to both the User Code and Keypad). This dual level of control greatly increases application flexibility, for example, a Code can be programmed to control a certain group of Partitions when entered at one Keypad, and a different group when entered at another. This feature simplifies User control, as the same operation will have a different outcome on different Keypads.

User Code Recognition Event Each time a Control panel recognizes a Valid Code, it will generate the **Recognized user code** Event. Like all other Control Panel Events, this Event can be assigned to an Output or Telephone Action — regardless of whether or not the Code is enabled to request Control Panel actions. Therefore, an opportune combination of Events and Outputs will eliminate some of the hitches linked with access control and/or limitations.

The **Users** page will allow you to program the Code attributes, as follows (the Installer Codes can be programmed on the **Installers** page).

The Code list (195 Codes for KYO320), on the left side of the **Users** page, shows the following information for each Code.

No. This non-editable field shows the Code ID Number.

Description This editable field (maximum 26 characters) is for the Code label (e.g. User's Name). The label will identify the User Code in all the operations it is involved in.
The parameters of the Codes selected on the left side of the **Users** page can be programmed on right, as follows.

☞ *You cannot change the attributes of a Code without first entering its **Father** code PIN.*

Available If this option is enabled, the corresponding Code can be programmed and used for system access.
Many applications require fewer Codes. This option will allow you to enable only the required number of Codes, thus simplifying the programming process while increasing the security level.
Codes which have not been made **Available** can be considered inexistent.

☞ *NON-Available Codes will be assigned their default PINs.*

☞ *You cannot toggle the **Available** status of a Code, without first entering its **Father** code **PIN**.*
*You cannot toggle the **Available** status of a Code when the **Active** option is Enabled.*

Active An **Active** Code can access and control the system in accordance with its access level.
A Non-Active Code cannot access the system, however, it can still be programmed using its **Father** Code.
Father Codes can toggle the **Active** status of their assigned Codes (also via the User Menu).

☞ *You cannot toggle the **Active** status of a Code that is the sole **Father** of another Code.*

AT Default: **ONLY** Code No. **001** is **Active**.

Duress Code If this option is enabled, any Telephone actions (calls or reports) associated with the **Recognized user code** event (generated by the Code concerned) will not be signalled on the keypad (i.e. <0255> will not appear over the icon).

Patrol Code If this option is enabled, the Code will be able to perform Disarm and Arm operations ONLY, regardless of its assigned **Code Type**. Furthermore, if a Partition is Disarmed by a Code with the **Patrol attribute, it will remain Disarmed for the programmed Patrol Time ONLY, after which, it will Rearm automatically (refer to "Patrol Time" under "Partitions").**

Father Code 1 - 2 - 3 This drop-down list will allow you to select the **Father** codes.

- Each Code can have up to 3 Father codes;
- a Code can be programmed as its own Father.

A **Father** Code can:
- Change the **PIN** of its assigned Codes (**Sons**);
- Enable/Disable the **Active** status of its assigned Codes, that is, if they are not **Fathers** of other Codes;
- Enable/Disable the **Available** status of its assigned Codes.

☞ *YOU CANNOT assign a new **Father** code to a code without first entering the PIN of one of its current **Father** codes.*
*For KYO320 — Codes no. 132 to 195 (the 64 Telephone Access Codes) CANNOT be **Father** codes. **Father** codes can be changed by the User.*

At default:
- Code no. 001 is its own **Father** code;
- Codes no. 002 to 131 have two **Father** codes: themselves and Code no. 001;
- Codes no. 132 to 195 have one **Father** code: Code no. 001.

Linked event codes Connected with Code Types (if Duress Code or not), in Contact ID and SIA protocol case, the linked code changes. In this way, for example, a code only will be automatically linked to a Duress code.

■ **Enable on Partitions**
The **Enable on Partitions** Table will allow you to select the Partitions the Code will be able to control and set the A, B, C and D Arming modes, as follows.

Partitions The **Partitions** line (first line) shows the Control Panel Partition ID Numbers.

☞ *If you click the **Description** button (at the bottom of the page), the application will show the Partition Description.*

The check boxes on the second line will allow you to select the Code Partitions.
- Box ticked: the Code CAN operate on the corresponding Partition.
- Box empty: the Code CANNOT operate on the corresponding Partition.

To DISABLE the Code on all the Partitions: click the **Partitions** button (bottom of page) then select **None**.
To ENABLE the Code on all the Partitions: click the **Partitions** button (bottom of page) then select **All**.
To toggle the current Enabled/Disabled status of the Code: click **Partitions** button (bottom of page) then select **Invert selection**.

☞ *Code commands will affect ONLY the Partitions (and subsequently the Zones) common to both the Code and Keypad in use.*

A This line will allow you to select the **A** Mode Arming configuration of the Partitions.
Double click on the Partition field until the required mode is shown (**D**, **N**, **A**, **S** or **I**), or right click the Partition field then select the required mode from the drop-down list.

Arming Modes
- **D** = Partition will Disarm
- **N** = no operation
- **A** = Partition will Arm in Away mode
- **S** = Partition will Arm in Stay mode
- **I** = Partition will Arm in Stay mode with zero delay (Instant)

B As for **A** but for **B** Mode Arm commands at a Keypad.

C As for **A** but for **C** Mode Arm commands at a Keypad.

D As for **A** but for **D** Mode Arm commands at a Keypad.

■ **Associated Timer**
If a Code is associated with a Timer, it will function only during the programmed Timer slots (refer to "Scheduler - Timers").

■ **User menu access**
This section of the **User** page will allow you to limit the number of operations a code can perform (Arm, Arm Type A, B, c or D, Disarm and Access User Menu).

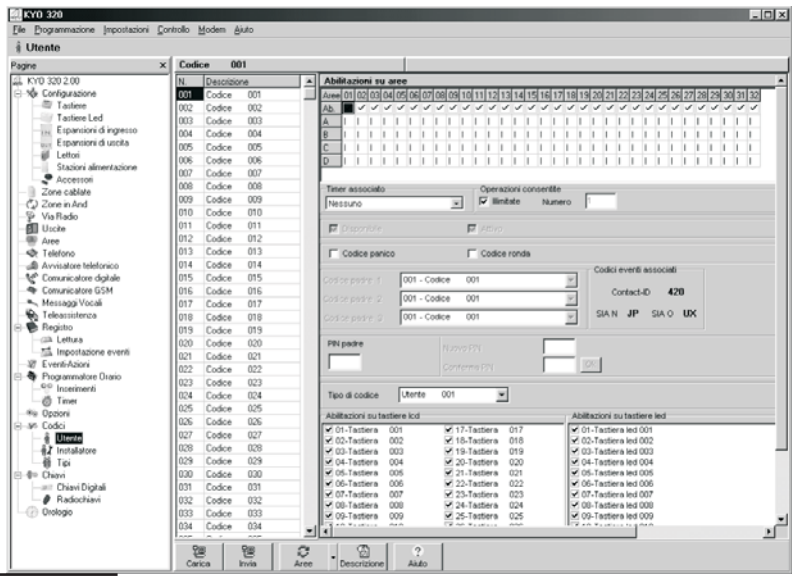


Figure 48 *Users — Code access page*

Always If this option is enabled, the Code will be able to perform an UNLIMITED number of operations.
If this option is disabled, you will be able to LIMIT the number of operations the Code will be able to perform via the **Max.** option.

☞ *ONLY Codes with **Always** status can be Father codes.*
*You CANNOT disable the **Always status of Father codes.***
***A Code that DOES NOT HAVE Always** status (**Always** option disabled) can be its own Father code, in which case, the **Always** attribute will be enabled automatically.*

Max. This field will allow you to program the number operations the Code will be allowed to perform.
Valid entries: 1 through 254

The *Code operation counter* will count all the Arm, Arm Type A, B, c or D, Disarm and Access User Menu operations.
Once the Code reaches the **Max.** number of operations allowed, it will be automatically disabled. If an attempt is made to use a Code that has reached the **Max.** number of operations (therefore disabled), the display will show the [code not active] message.

You must change the Code PIN, if you wish to refresh the *Code operation counter*.

☞ *ALL the Code operation counters will be refreshed automatically each time the User page is downloaded.*

■ **Father PIN**
A Code's **Available** status, **Active** status, **Father** codes and **PIN** cannot be changed without entering one of its programmed Father codes.

☞ *The Code PIN at default is **0** followed by the Code ID Number. Example: PIN of Code No. 001 is **0**001.*

■ **New PIN**
This programming field will allow you to change the default PIN, as follows:
- enter the Code's **Father** Code (to activate the New PIN programming field);
- enter the New digits in the **New PIN** and **Redigit New PIN** fields, then click **OK**.
  The digits will be masked by asterisks (*****). A PIN can have 4, 5 or 6 digits.

WARNING: The default PINs of all **Available** Codes must be changed for security reasons.

☞ *You cannot change a Code's **Father** code/s without first entering the PIN of one of its Father codes.*

Redigit New PIN Enter the digits of the **New PIN** in this field.
If the entry is correct (both fields match), the PIN fields will clear when you click **OK**, and the New PIN will become Valid.
In the event of mismatch, the PIN fields will not clear, and it will be necessary to repeat the procedure.

■ **Code Type**
This parameter determines the Code functions — programmed in the Code Types page (refer to "Keypad codes - Codes types").

■ **Enable on LCD Keypad**
The "Enable LCD keypad" table will allow you enable the code concerned on the LCD Keypads (32 keypads for KYO320).

■ **Enable on LED Keypad**
The "Enable LED keypad" table will allow you enable the code concerned on the LED Keypads (16 keypads max).

■ **Programming**
Due to the extreme importance of Code functions (system access and security), the programming procedure is different from that normally used.

Full downloading of all the parameters on the **User** page depends on whether or not the Code PIN entries (entered at Computer) match the Control panel PINs (programmed at the system Keypad). In the event of mismatch, a dialogue box will inform you of the incongruity:

<<WARNING: PINs in Control Panel not congruent. Only data for Partition enabling, associated Timers and Code Types will be sent>>.

If you select **OK** you will be able to program the **Description**, **Enabled Partitions**, **Associated Timers**, **User menu access** and **Code Type** ONLY.

If you wish to program the Code parameters (**Available** status, **Active** status, **Panic** attribute, **Patrol** attribute **Father Codes** and **PIN**), you must first upload the **Users** page from the Control panel.

Matching Code entries All the programmed Code data will be downloaded, including any user modified parameters.

Mismatching Code entries Only the following parameters will be sent:
- Description
- Enabled Partitions Functions
- Associated Timer
- Code Type

Codes - Installers

The Installer Codes can access the system for programming and maintenance purposes.

The MASTER Installer code is always **Active** and can perform a limited number of programming and maintenance operations.

The four Installer Codes can be made Activated as required, and programmed to perform a limited number of programming and maintenance operations.

☞ *The Installer Code can program and change all parameters via computer.*

The **Installers** page will allow you to program Installer code attributes, as follows.

☞ *You cannot program an Installer Code without first entering its **Father Installer** Code PIN.*

The **Installer Code hierarchy is set at factory and CANNOT be changed:**

- Installer codes no. 196, 197, 198 and 199 have two **Father** codes which cannot be changed: themselves and Code no. 200;
- Code no. 200 is its own **Father** code and cannot be changed.

The Table on the left side of the **Installers** page shows the 5 Installer Codes . The page layout is as follows:

No. Refer to "**No.**" in the "Keypad codes - Users" section.

Description Refer to "**Description**" in the "Keypad codes - Users" section.
On the right side of the **Installers** page you can set the parameters for the Codes selected on the left side of the page, as described below.

Active Refer to "**Active**" in the "Keypad codes - Users" section.

☞ *The **Active** status of Installer Code no. 200 is irreversible.*

Father PIN Refer to "Father PIN" in the "Keypad codes - Users" section.

☞ *At default the Installer Code PIN is **0** followed by the Code ID Number. For KYO320 for example, the PIN of Code no. 200 is **0200**;*

New PIN Refer to "New PIN" in the "Keypad codes - Users" section.

Redigit New PIN Refer to "Redigit New PIN" in the "Keypad codes - Users" section.

Code Type Refer to "Code Type" in the "Keypad codes - Users" section.

☞ *The Installer Code type CANNOT be changed.*

The **Code Type** for Installer Codes no. 196 and 197 is Install. Type 1 and CANNOT be changed.
The **Code Type** for Installer Codes no. 198 and 199 is Install. Type 2 and CANNOT be changed.
The **Code Type** for Installer Codes no. 200 is a MASTER and CANNOT be changed.

■ **Lost Installer Codes**
For the instructions on how to restore the default PIN **0200** for KYO320, refer to the "Restore Default Settings" paragraph.

⚠ **If the Installer Codes Lock option is enabled (refer to "Options"), restoral of the default settings WILL NOT restore the Installer Code PIN.**

NOTE: If this occurs, contact your Service dealler.

Codes - Code Types

When programming the Codes, you must also select which functions are to be enabled.

The system manages 19 Code Types:

- 16 User Codes
- 2 Installer Codes

☞ *Code Type 19 is reserved for Installer Code No. 200 , and CANNOT be programmed.*

The **Code Types** page will allow you to select the User Code and Installer Code functions, as follows.

On the left side of the **Code Types** page is a Table with a list of the 19 Code types.

No. This is the Code Type ID Number:

- Code Types no. 01 to 16 are reserved for User Codes;
- Code Types no. 17 and 18 are reserved for Installer Codes;
- Code Type no. 19 is reserved for Installer Code No. 200 and CANNOT be programmed.

Description This editable field (16 characters) is for the label that will identify the Code Type. The label will be used in the Code Type on the **Users** and **Installers** pages.

The functions of the Code Type (selected from the **Code Type** list) can be programmed on the right side of the page.
The User Code functions are described in the following paragraph.
The Installer Code functions are described in the "Installer Codes" paragraph.

■ **User Codes**
This paragraph provides a general description of the User Code functions — refer to the USER'S MANUAL for further information.

☞ *The Partition related functions will affect ONLY those Partitions common to both the Code and Keypad in use.*

Panel Reset This operation will:

- terminate all the Control Panel Events (refer to Table 7 on page 61) and Generic Events (see Table 8 on page 62);
- restore to standby any Outputs associated with the terminated events (refer to the previous points);
- delete memory of BPI Device Tamper, Tamper Line Alarm, Control Panel Tamper, False Key and Supervised Output Tamper events.

☞ *If the Alarm conditions are still present after Reset (approx. 2 seconds), the Control panel will trigger the relative Alarm Events again.*

Stop Alarms As per **Panel Reset** but for the Stop Alarms option.
NOTE: If the Stop Alarms option is enabled, the events listed in the previous paragraph will be ignored.

Arm/Disarm from User Menu If this option is enabled, the Code will be able to Arm (in Stay/Away mode and Stay 0 Delay mode) and Disarm its Partitions, via the **Arm** option from the USER MENU.

Request Overtime If this option is enabled, the Code will be able to make Overtime Requests for its Partitions.

Request Teleservice If this option is enabled, the Code will be able to Enable/Disable Teleservice.

Enab./Disab. Scheduler If this option is enabled, the Code will be able to Enable/Disable the Scheduler on its Partitions.

Enab./Disab. Teleservice If this option is enabled, the Code will be able to Enable/Disable Teleservice.

Enab./Disab. Answering Machine If this option is enabled, the Code will be able to Enable/Disable Answering function.

Enab./Disab. Keypad Buzzer If this option is enabled, the Code will be able to Enable/Disable the Keypad buzzer.

Phone Number Modify If this option is enabled, the Code will be able to edit the Telephone Numbers in the General Phonebook.

Date/time Modify If this option is enabled, the Code will be able to set the Control Panel date and time.

Reset Warning PC Progr. If this option is enabled, the Code will be able to restore fault signals triggered by computer or Keypad programming.

Keypad Test If this option is enabled, the Code will be able to run the Keypad test.

Squawk If this option is enabled, the Code will be able to run the test on Output no. 1.

Output ON/OFF If this option is enabled, the Code will be able to switch the Reserved Outputs ON and OFF.

Bypass/Unbypass Zones If this option is enabled, the Code will be able to Bypass/Unbypass and view the status of the Zones of its Partitions.

Reset/Play/Restart Continuous Rec. If this option is enabled, the Code will be able to manage the Continuous Recording function.

Play/Rec. Memo If this option is enabled, the Code will be able to listen to and record Voice Memos at the Keypad.

View Log If this option is enabled, the Code will be able to view and print the Events — relative to its Partitions — in the Control panel log.

☞ *This feature is provided by the optional K3/PRT2 Printer Interface (refer to "K3/PRT2 Printer Interface" in the APPENDIX).*
Only Enabled events can be printed (refer to "Log — Event settings").

Clear Call Queue If this option is enabled, the Code will be able to stop outgoing calls.

Enable Timer Control If this option is enabled, the Code will be able to program specific Timers (refer to "Controlled Timers") via the USER MENU. If this option is disabled, the Timers can be selected in the "Controlled Timers" section.

Enable Key Control If this option is enabled, the Code will be able to enable/disable any Keys which operate on the Partitions it is assigned to.
Each Enable/Disable Key operation, complete with the Code and Keypad concerned, will be recorded in the Event log. The **Maximum Operations**' counters of 'limited' Keys (i.e. Keys programmed with a maximum num-

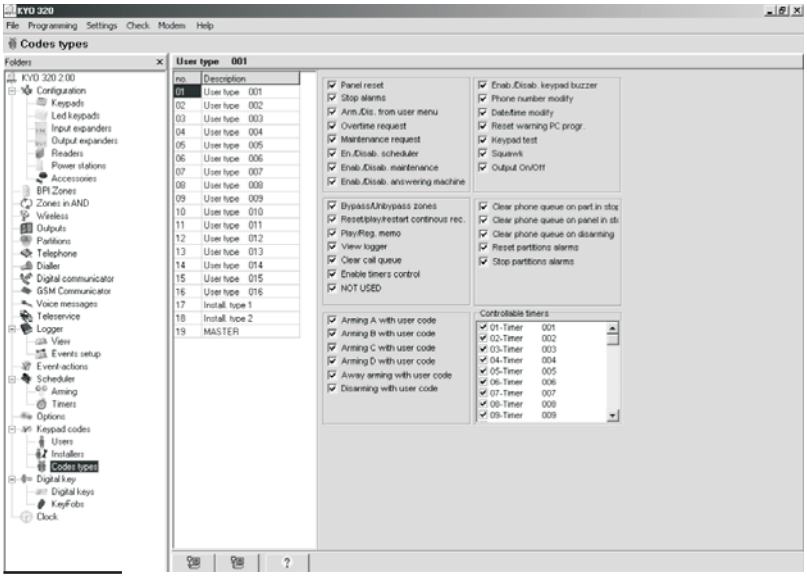


Figure 49 *Codes Type page*

ber of operations) will refresh automatically when the Key is deactivated.

Enable Timers Control If this option is enabled, the Code will be able to Enable/Disable the Timers selected in the 'Controllable Timers' section.

Clear phone queue on Partition in stop/reset If this option is enabled, outgoing calls — triggered by events associated with the Code Partitions — will be aborted when the Code is used to stop/reset Alarms.

Clear phone queue on Panel in stop/reset If this option is enabled, outgoing calls — triggered by events associated with the Control panel — will be aborted when the Code is used to stop/reset Alarms (refer to the Table 7 on page 61).

Clear phone queue on disarming If this option is enabled, outgoing calls — triggered by events associated with the Code Partitions — will be aborted when the Code is used to Disarm the system.

Reset Partition Alarms If this option is enabled, **Resets Partition Alarm** operations requested by the Codes will:

- terminate all Partition Events (refer to Table 6 on page 60) and Zone Events (refer to Table 5 on page 59) associated with the Code Partitions;
- restore to standby the Outputs associated with the terminated events (refer to the previous points);
- delete Generic Partitions and Partitions Tamper Alarms generated by the Code Partitions.

☞ *If the Alarm conditions are still present after Reset (approx. 2 seconds), the Control panel will trigger the respective Alarm Events again.*

Stop Partition Alarms As for **Reset Partition Alarms** but for the Stop Alarms option.
NOTE: If this option is enabled, the events listed in the previous paragraph will be ignored.

Arming A with User Code If this option is enabled, the Code will be able to perform **A Mode** Arming operations.

Arming B with User Code If this option is enabled, the Code will be able to perform **B Mode** Arming operations.

Arming C with User Code If this option is enabled, the Code will be able to perform **C Mode** Arming operations.

Arming D with User Code If this option is enabled, the Code will be able to perform **D Mode** Arming operations.

Away Arming with User Code If this option is enabled, the Code will be able to Arm all the Partitions common to both the Code and Keypad in use in **Away** mode.

Disarming with User Code If this option is enabled, the Code will be able to Disarm all the Partitions common to both the Code and Keypad in use.

■ **Installer Codes**
This paragraph provides a general description of the functions that can be performed by the Installer Codes: refer to the KEYPAD PROGRAMMING MANUAL for details.

View Log If this option is enabled, the Code will be able to view and print the events recorded in the log.

☞ *This feature is provided by the optional K3/PRT2 Printer Interface (refer to "Printer Interface" in the APPENDIX). Only the enabled events will be printed (refer to "Log — Events setup").*

Zone Status If this option is enabled, the Code will be able to view the status (Standby, Alarm, Short, Tamper, Bypass) of all the Control Panel Zones, and the percentage of the Voltage value.

Zone Test If this option is enabled, the Code will be able to Test all the Control Panel Zones.

Output Test If this option is enabled, the Code will be able to Stop all the Control Panel Outputs.

Clear Call Queue If this option is enabled, the Code will be able to clear the Call Queue.

Voice Functions If this option is enabled, the Code will be able to record and listen to Voice Messages.

Change Installer PIN If this option is enabled, the Code will be able to change its own PIN, and the PINs of its assigned codes (sons).

User Codes If this option is enabled, the Code will be able to program the User codes from the Keypad.

Digital Keys If this option is enabled, the Code will be able to the Digital Keys from the Keypad.

Panel Programming If this option is enabled, the Code will be able to program the Control Panel from the Keypad.

Enrol Wireless If this option is enabled, the Code will be able to enrol Wireless Devices from the Keypad.

Keypad Broadcast If this option is enabled, the Code will be able to edit the Keypad strings.

Change date/time If this option is enabled, the Code will be able to change the system Date and Time from the Keypad.

Digital keys

The **Digital Keys** page will allow you to program the parameters of the Digital Keys, as follows.

☞ *Digital Keys can be enrolled at the Keypad (refer to the KEYPAD PROGRAMMING Manual.*

The Table on the left side of the **Digital Keys** page shows the Keys the Control Panel can manage.

✓ Select the required Keys:
Box checked (✓) = Key Enabled
Box empty = Key Disabled
Press the **Select** button at the bottom of the page to Enable/Disable all the Keys.

☞ *The system will consider Disabled Keys as False, even if they have been enrolled.*

No. This is the Key ID Number.

Description This editable field (16 characters) is for the Key label (e.g. User's Name). The label will identify the key in all the operations it is involved in.

The parameters of the key (selected on the left side of the page) can be programmed on the right side of the Keys page, as follows.

Enable on Partitions This line will allow you to assign the Key to the Partitions.
Box checked (✓) = the Key is Enabled on the corresponding Partition
Box empty = the Key is Disabled on the corresponding Partition

To DISABLE the Key on all the Partitions: click the **Partitions** button (bottom of page) then select **None**.
To ENABLE the Key on all the Partitions: click the **Partitions** button (bottom of page) then select **All**.
To toggle the current Enabled/Disabled status of the Key: click **Partitions** button (bottom of page) then select **Invert selection**.

Stop Alarms If this option is enabled, the Key will be able to stop Control panel Alarms (refer to "Stop Alarms" under "Codes - Code types").

Stop Partition Alarms If this option is enabled, the Key will be able to stop Partition Alarms (refer to "Stop Alarms" under "Codes - Code types").

Clear Call Queue on disarming If this option is enabled, the Key will be able to stop outgoing Alarm calls (refer to "Clear Call Queue upon Disarming" under "Codes - Code types").

Associated Timer If this option is enabled, the Key will be able to perform its programmed functions ONLY during its Timer slots (refer to "Scheduler - Timers").

■ **Allowed Operations**
This section of the **Digital Keys** Page will allow you to set up the amount of times a Key can operate the system (i.e. perform Arm/Disarm in **Away**, **A** and **B** Mode operations) before it is locked out automatically.

Unlimited If this option is enabled, the Key will be able to perform an unlimited number of operations. If this option is disabled, the required number of operations can be programmed in the **Operations** field.

Maximum Operations This programming field will allow you to program the amount of times the Key can operate the system (accepted values: 1 to 254).
The system will disable the Key automatically when the '**Maximum Operations**' counter reaches its limit.
The '**Maximum Operations**' counter can be cleared and the Key re-enabled by entering a valid User Code (refer to "Enable Key Control" under "User Code Type").

■ **Attributes**

Patrol If this attribute is enabled, the Key will be able to Disarm and Re-arm the Control panel during the programmed **Patrol** Time. If a Partition is disarmed by a Key with the **Patrol** attribute, the Partition will Re-arm automatically when the programmed **Patrol** time of the Partition concerned expires (refer to "Patrol Time" in the "Partitions" section).

Arm only If this attribute is enabled, the Key will be able to Arm the Control panel ONLY.

Disarm only If this attribute is enabled, the Key will be able to Disarm the Control panel ONLY.

■ **Enable on Key Reader**
The "Enable Key Reader" table will allow you enable the code concerned on the Key Reader (32 Readers for KYO320).

KeyFobs

Systems with **VectorRX-8** or **VRX32 serie** Receivers can manage up to 16 keyFobs (up to 32 with VRX32 series).

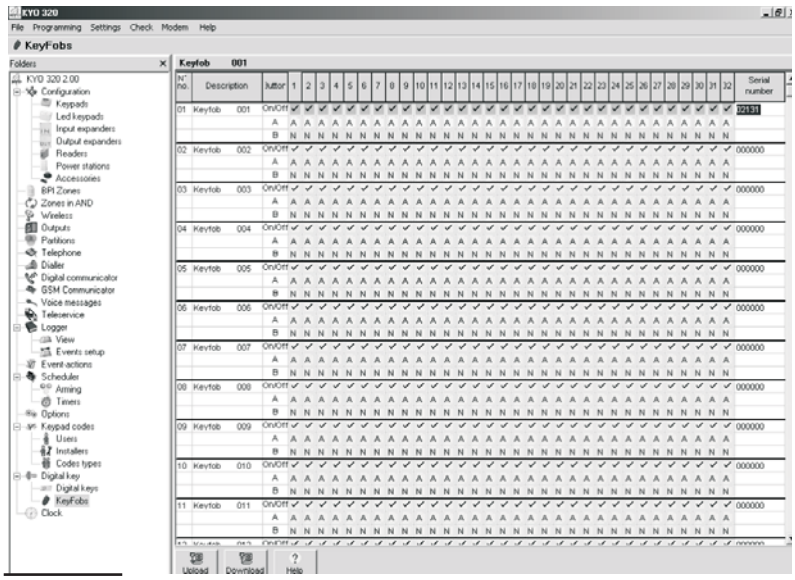


Figure 50 *Wireless key page.*

The parameters description and programming is shown in the following KeyFobs page (Fig.51).

N. This field shows the keyFob identification number which will be used in different parts of the application.

Description This editable field (16 characters) is for the KeyFobs (e.g. the name of the Key User). This **Description** will identify the KeyFob in all the operations it is involved in.

1, 2, 3...32 These numbers correspond to the Partitions. The KeyFob can be programmed to operate in 3 different modes on the system Partitions.

On/Off Button This row will allow you to Enable/Disable the KeyFobs on the Partition (Check= KeyFob enabled on the relative Partition).

A mode (Amber) This row will allow you to enable the status the Partition will assume when the KeyFob makes an **A** Mode Arming request. The box will indicate the selected mode (see the Mode section: A= Away, S= Stay, I= Stay o Delay, D= Disarm, N= No change.

B mode (Green) This row will allow you to enable the status the Partition will assume when the KeyFob makes an **B** Mode Arming request. The box will indicate the selected mode (see the Mode section: A= Away, S= Stay, I= Stay o Delay, D= Disarm, N= No change.

Serial Number This editable field is for the ESN 6-digit (Electronic Serial Number) of the KeyFob (printed on back). The ESN may include hexadecimal digits (A, B, C, D, E and F), in order to lower the risk of duplicate ESNs.

To replace KeyFob: select the required Wireless key, then enter the ESN of the new Wireless Key in the **Serial Number** field.
To enrol a KeyFob: select an empty key placement (ESN = 0) then enter the Wireless Key ESN in the **Serial Number** field.
To unenrol a KeyFob: select the required Wireless Key then enter 000000 in the **Serial Number** field.

☞ *If you press the SHIFT button and click on **A** or **B** Arming type the arming mode will change on all the partitions.*

☞ *If you click on Partition number the arming mode will change on all the KeyFobs.*

Clock

Proper functioning of the Scheduler/Timers depends on the Clock setting (**Clock** page), therefore, the Control panel clock must be set with extreme precision.

Actual Date Set the current date.

Actual Time Set the current time.

Date format Select the Keypad date format:

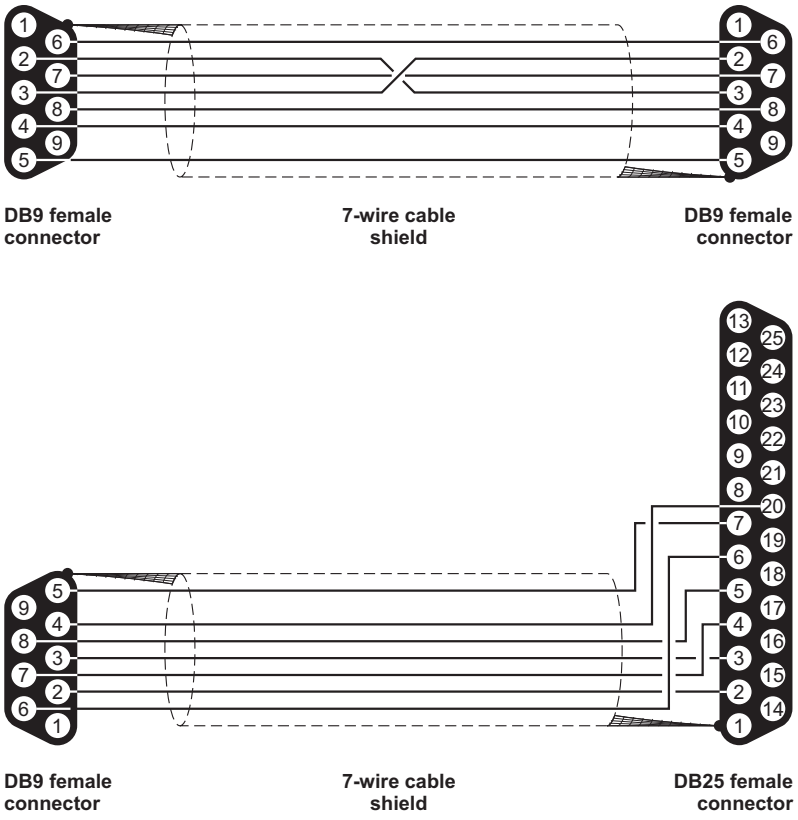


Figure 51 *Wiring diagram for the serial link between the Control panel and PC*

- **dd/mm/yyyy** = day/month/year
- **mm/dd/yyyy** = month/day/year
- **yyyy/mm/dd** = year/ month/day

On-site downloading

Once the operating parameters have been set up, they must be downloaded to the Control Panel concerned, as follows.

☞ *Access to **Programming** requires the Installer Code PIN.*

1. Connect the Control Panel serial port (**24**) to one of the PC serial ports, as follows:
   – using a **CVSER/9F9F** link (accessory item), or a cable similar to the one in Figure 51a, connect the Control Panel to the PC;
   – if the PC serial port has 25 pins, use an **ADSER/9M25F** adapter (accessory item), or a cable similar to the one in Figure 51b.

2. Select the PC serial port used for connection with the Control panel, as follows:
   – select **Serial Ports** from the **Settings** menu;
   – select the serial port (**Control Panel** section);
   – select the number of attempts (**Attempts** box) and **Baud Rate**;
   – click **Download** (**Baud Rate** section) or **OK**.

3. Select the parameters to be downloaded, as follows:
   – select **Parameters** from the **Settings** menu;
   – enter a valid **Installer code** in the **Installer code** field;
   –select the Control panel type from the **Panel type** menu;
   –select the relevant firmware release from the **Firmware Release** menu;
   – click **OK**.

4. **To download a specific page**: click the **Download** button on the page concerned.

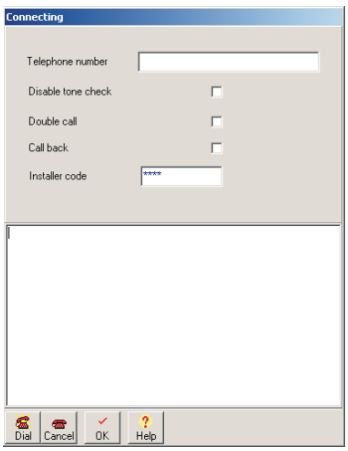


Figure 52 *Connecting Window*

5. **To Download several pages**:
   – select the required page from the **Folders** menu, right click, select **Tag** (a ✓ on the page Icon indicates that it will be downloaded);
   – repeat the procedure for all the required Pages;
   – right click again then select **Download**.

☞ *To download a family of pages, select the root.*

⚠ **If you send the User page with other pages, the Control panel WILL STORE the Description, Enabled Partitions, Associated Timers, User Menu Access and Code type parameters, but WILL NOT STORE the Available status, Active status, Duress Code, Patrol Code and Father Code parameters.**

☞ *If changes to the Descriptions are not shown on the Keypads, use the* Broadcast Kewp.command *from the INSTALLER MENU.*

For example: – to download all the Configuration related pages, select **Configuration** from the **Folders** menu; to download **All** the Pages, select **KYO 320** from the **Folders** menu.

6. To view the parameters of the connected Control Panel, work carefully through point **4.** then select **Upload** instead of **Download**.

Firmware Upgrade

Under "Programming Menu" in addition to Upload and Download item there is Firmware Upgrade.
When a new Firmware is released, a file .hex will be given to the installer. This file will run after selecting the "Start" button (see Figure 53). In this fase if the system goes in black-out or block, it is necessary to check on "Restore Panel" and click on "Start". To restore the system with the default setting call the Service).

Remote Downloading

You can download the programming data via telephone line, using a **B-Mod2** modem, as follows.

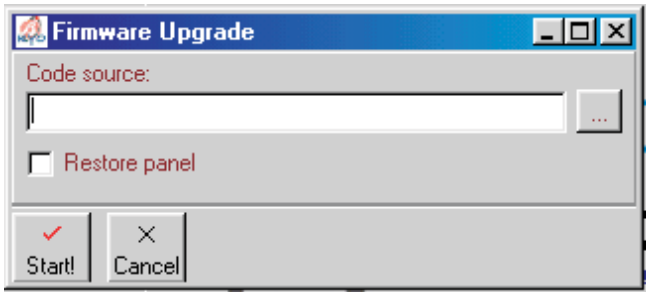


Figure 53 *Upgrade Firmware window*

☞ *Telephone access requires entry of the Installer code PIN, and will ONLY be allowed when the Teleservice option has been Enabled by the User (refer "Enable/Disable Teleservice" in the USER'S MANUAL).*

1. Using the serial cable (the same as used for On-site Downloading), connect the Modem to one of the PC serial ports.

2. Select the PC serial port for connection with the Modem, as follows:
   – select **Serial Ports** from the **Settings** menu;
   – select the serial port (**Modem** section);
   – select **OK**.

3. Select **Connecting** from the **Modem** menu: this command will open the **Connecting** window (Figure 52).

4. Program the following parameters:
   – **Telephone Number** – enter the Control panel telephone number;
   – **Disable Tone Check** – Enable/Disable this option as required.
   If this option is Enabled, the Modem will not check for the dialling tone before dialling;
   – **Double call** – refer to the **Teleservice** page;
   – **Call back** – refer to the **Teleservice** page;
   – **Installer Code** – enter a valid Installer code PIN (enabled for Downloading)

When the **Connecting** window opens, the above parameters (except for **Disable Tone Check**) will have the programmed settings.

☞ *The parameters in the **Connecting** window can be changed temporarily without affecting the programmed parameters of the open Customer.*

5. Press **Dial**: the connection status will be shown in the box at the bottom of the **Connecting** window (refer to "Messages"). If the connection is completed properly, the following message will be shown:
   KYO320 ACK
   02.00
   CONNECTION

6. Select **OK**: the **Connecting** window will close.
   At this point, it will possible to download/upload to/from the connected Control panel.

7. To program and view the parameters of the connected Control panel, work carefully through steps **4.** and **5.** in the "On-site Downloading" section.

8. Select **On-hook** from the **Modem** menu to end the connection.

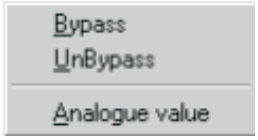
Messages The connection status will be shown in the box at the bottom of the **Connecting** window, as follows.

MODEM v. x.xx	This is the release of the Modem that is connected to the PC serial port
Modem not recognized	The application cannot find the BMod2 on the specified serial port. Check the cable and serial port settings
Receiving...	The Modem/PC system is waiting for an incoming call. This is the status when the Connections window opens
RING	The modem detects rings on the telephone line
BUSY	The dialled number is busy
BACKRING	the dialled number is ringing
KYO320 ACK	A KYO320 Control Panel has been recognized
2.00	This is the Firmware Release of the Control panel
CONNECTION	The Modem and Control Panel are connected
ON HOOK	The Modem has released the line
Installer Code reading error	The Control panel cannot read the PIN — probably due to a poor quality signal on the telephone line
Lost Connection	It is impossible to communicate with the Control Panel — probably due to a poor quality signal on the telephone line

Check Panel

The **Check** option from the menu bar of KYO320 downloading software application provides two sub-options: **Check Panel** and **Check Configuration**.

Check Panel This option will allow you to view the real-time status of the Control panel (see Fig. 55).
Entry of a valid User code PIN will allow you to control the Zones, Outputs and Partitions and view the Timers and Trouble windows.
To operate on a specific Partition: click on the Partition concerned then right-click to open a menu (see Fig. 55) which will allow you to:
D: Disarm; **A**: Arm Away mode; **S**: Arm Stay Mode; **I**: Instant (Arm Stay 0 Delay Mode) or Reset the Partition concerned and Control panel.
To operate on a ALL Partitions: right-click on the Partition section to open a menu which will allow you to:
D: Disarm ALL Partitions; **A**: Arm ALL Partitions in Away mode; **S**: Arm ALL Partitions in Stay mode; **I**: Arm ALL Partitions in Instant mode (Stay 0 Delay) or Reset ALL Partitions and Control panel.
To operate on a specific Zone: right click on the Partition the Zone belongs to, then right-click to open a menu which will allow you to: Bypass; Unbypass or view the real-time analogue value of the Zone. To control an Output: right-click on the Output concerned to open a menu which will allow you to turn the Output ON or OFF.



About the function buttons *(under User PIN field)*.

Clicking on the first button will open a menu which will allow you to disable display of real-time status data (enabled at default) regarding the Zones, Partitions, Trouble, Outputs and Timers.

Clicking on the second button will open a menu with the following options: Show violated zones only; Audible signalling (Beep); Clear manually.

Clicking on the third button will allow you to enable "Test" mode on ALL Zones.

Clicking on the fourth button will allow you to disable "Test" mode on ALL Zones.

Clicking on the fifth button will allow you to Reset "Programming from PC" Trouble.

Clicking on the sixth button will close the window.

Check Configuration This option will allow you to view the status of the Control panel peripherals in either **Test mode** or **Graphic mode** (see Fig.56).
Graphic mode: The real-time status of each peripheral will be indicated by the colour of its icon, as follows:

- ❒ **Green**: the peripheral concerned is in the configuration and operating properly.
- ❒ **Red**: the peripheral concerned is in the configuration but is in Tamper status (e.g. Frontplate open).
- ❒ **Yellow**: the peripheral concerned is in the configuration but is missing.
- ❒ **Orange**: the peripheral concerned is in the configuration but has the same address as another peripheral of the same type (Duplicated peripheral-Possible tamper).
- ❒ **White**: the peripheral concerned is not included in the configuration.

☞ *In **Test mode** the real-time status of each peripherals will be indicated by the colour of the virtual LED located next to it.*

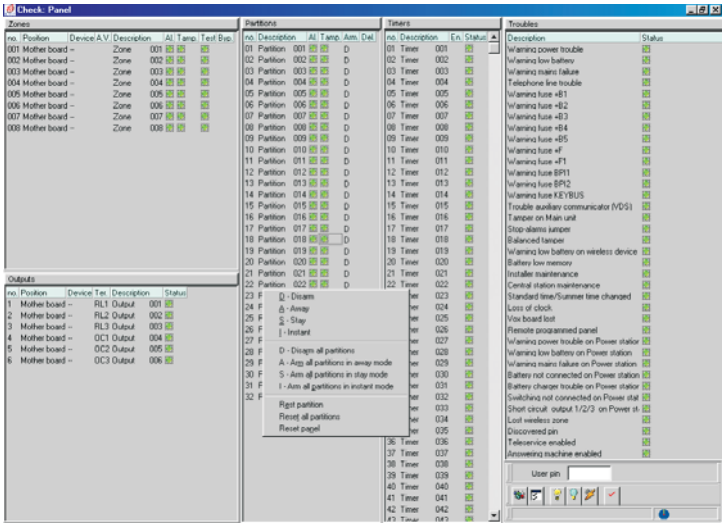


Figure 54 *Check panel Window*

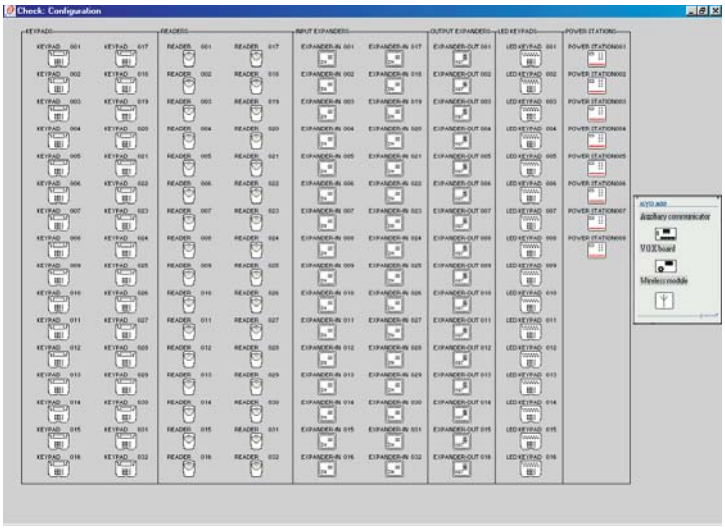


Figure 55 *Check Configuration Window*

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