YOUR SECURITY IS OUR PRIORITY

Contents

GSD i70

Grade 2 Wireless Intruder Alarm System

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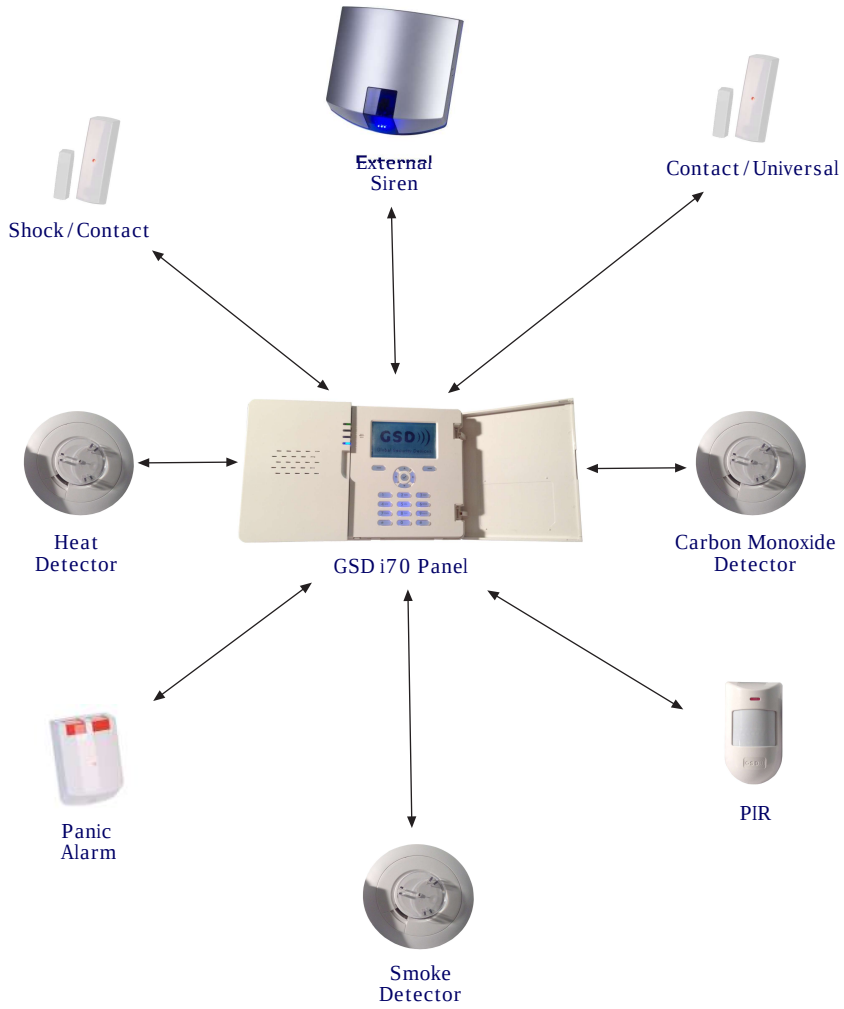
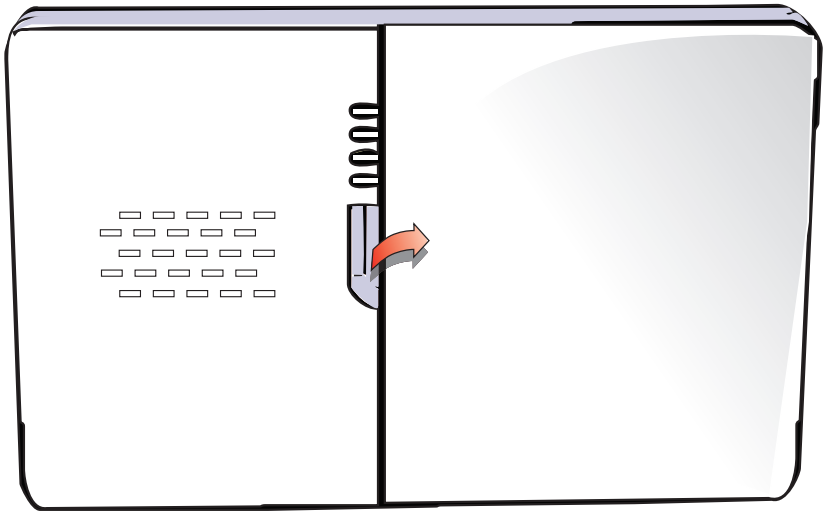
Installation Manual V1.04

Installation steps

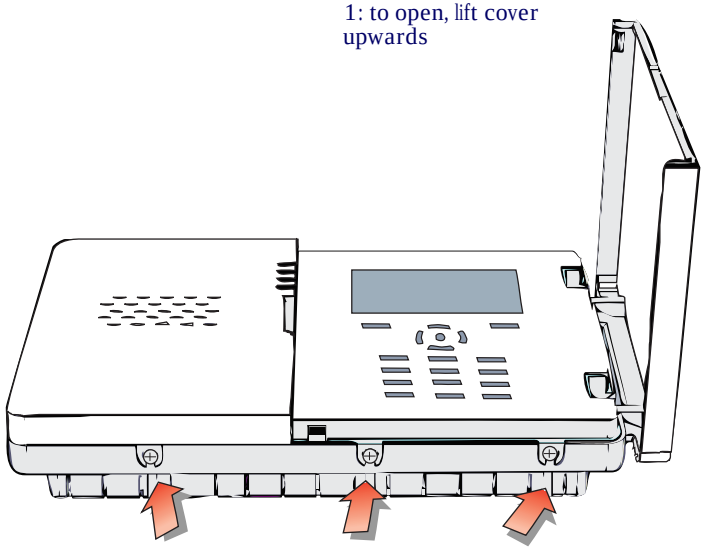
System Overview - Network Plan



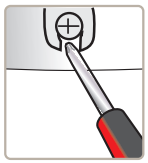
Control Panel Opening



1: to open, lift cover upwards



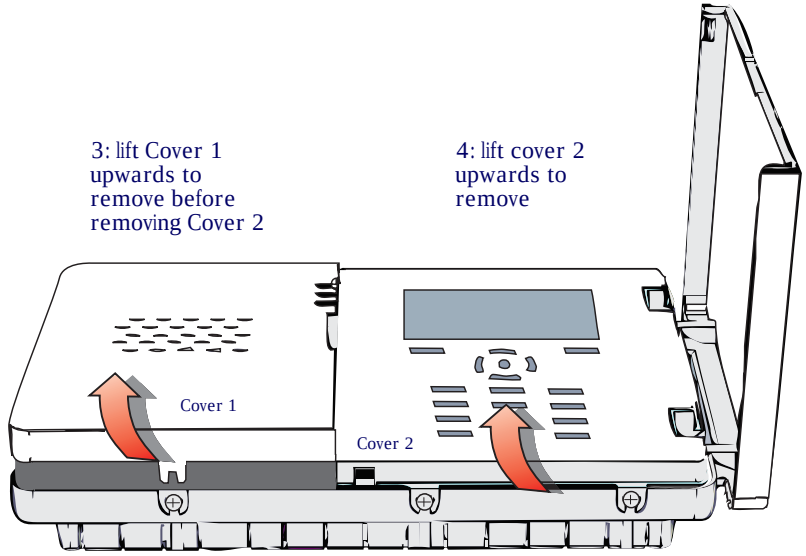
2: loosen retaining screws to release covers



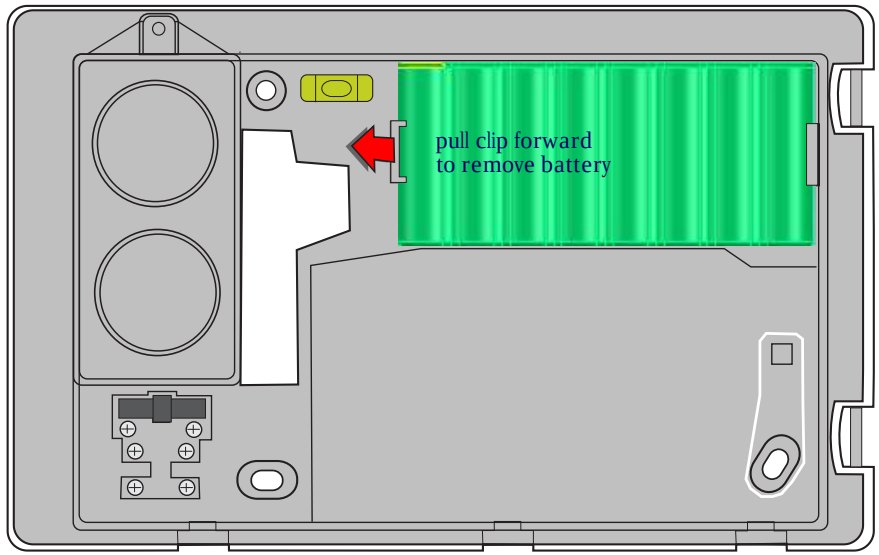
Control Panel opening

3: lift Cover 1 upwards to remove before removing Cover 2

4: lift cover 2 upwards to remove

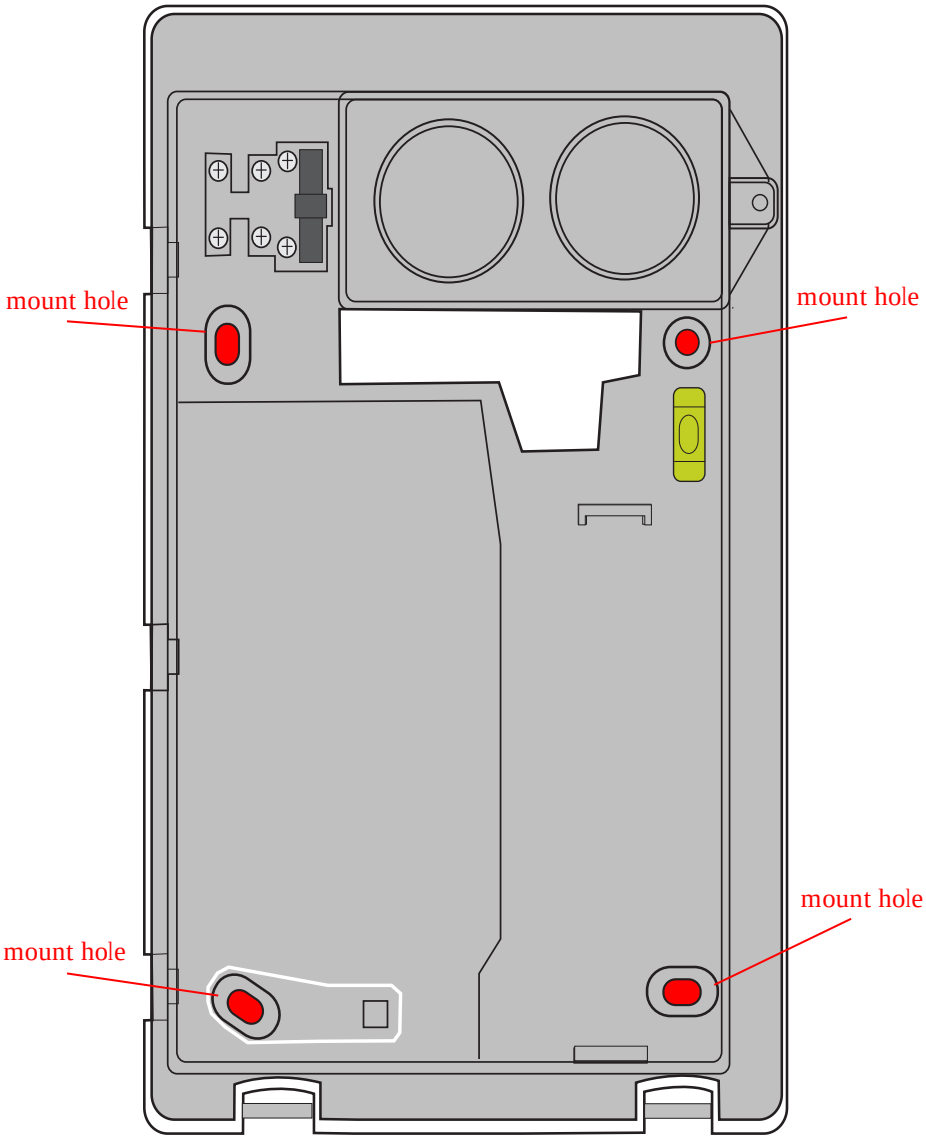


Battery Removal



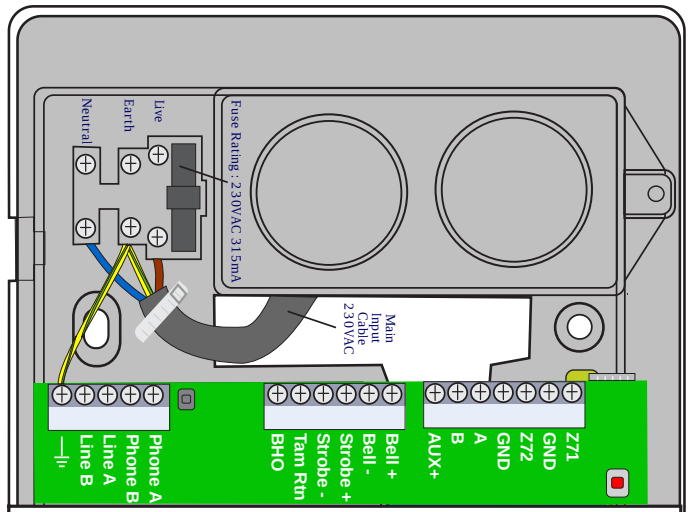
Control Panel Mounting

Remove covers 1 & 2 and battery before mounting
See instructions for Control Panel Opening and
Battery Removal.



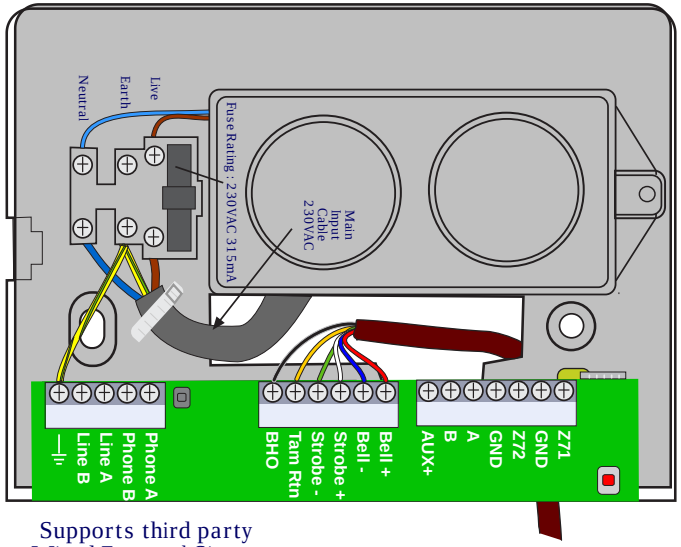
Control Panel Wiring

Remove cover 1 to access the wiring terminals.
See instructions for Control Panel Opening for
instruction to remove cover.



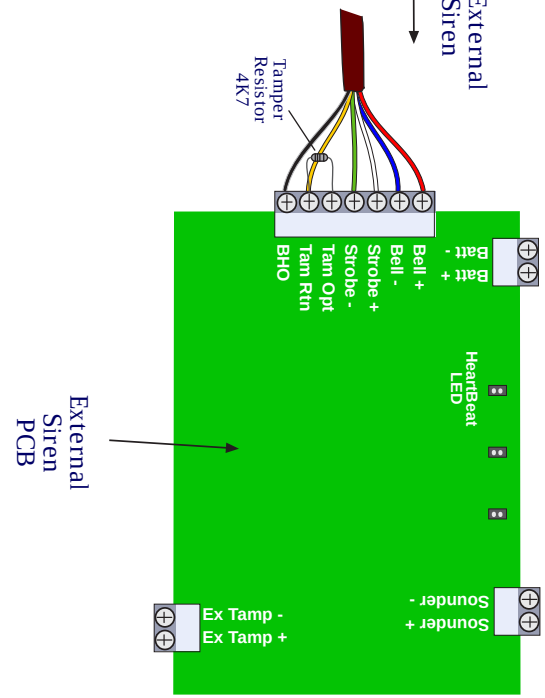
Warning : Installation should only be carried out
by a suitably qualified person.

Wiring External-Siren



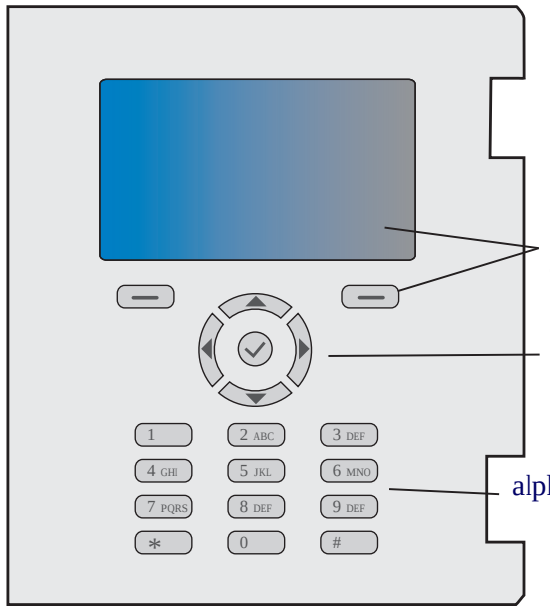
Supports third party
Wired External Sirens

to External Siren



External Siren PCB

keypad features



LED Status:

- Green LED: Solid = Battery fully charged, Flashing = Battery charging
- Amber LED: Fault Indication
- Red LED: Alarm Indication
- Blue LED: Solid = Full Set, Flashing = Part Set or some Areas Set

Restoring All Factory Default Settings

IMPORTANT NOTICE

This should only be carried out when you want to completely default the control panel back to its original default state as ALL programming of the system will be lost!

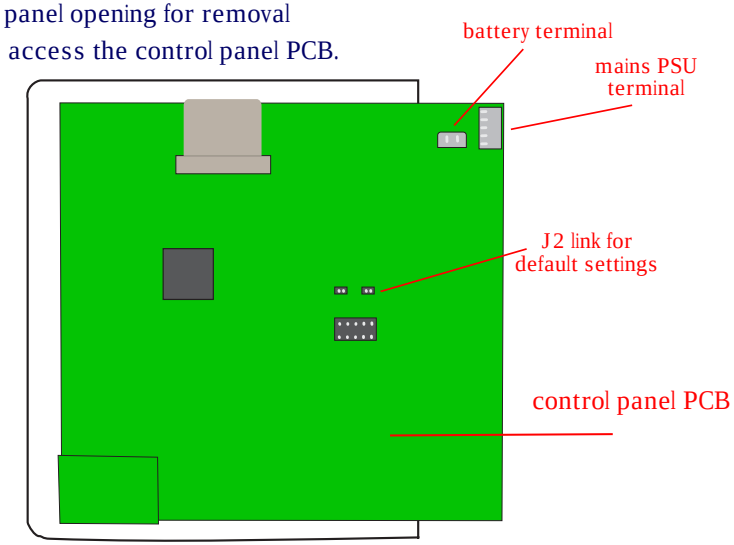
1. Disconnect the mains PSU from the control panel PCB by unplugging the lead that comes from the mains PSU.
2. Disconnect the battery pack from the control panel PCB by unplugging the battery from the battery terminal.
3. Remove the J2 link from the control panel PCB. See control panel opening for removal of covers.
4. Wait 10 s then reconnect the mains PSU and the battery pack.
5. The Control Panel will start up in the installer menu - this indicates the configuration has been defaulted.
6. Replace the J2 link.

* After restoring factory default settings the following default codes exist on the system.

4-digit codes	6666 1111	Default installer code Default user 1 code
5-digit codes	06666 01111	Default installer code Default user 1 code
6-digit codes	006666 001111	Default installer code Default user 1 code

Restoring All Factory Default Settings

See control panel opening for removal of covers to access the control panel PCB.



First power-up settings

The following settings are set after the control panel is restored to factory defaults.

1. Country: Ireland
2. Security Grade: Grade 2
3. Number of PIN digits: 4

Settings the Time and Date:

1. Navigate to System - Time & Date: use up and down to select a field and OK to change it. Enter a value using the number keys and press OK to store the new value.
2. Press the Next soft key to finish.

Start the installer menu

1. Start the installer menu: enter the installer code.
   - The keypad will display any faults that have occurred on the system, including faults that occurred but are not currently present.
   - If no faults have occurred the keypad will immediately start the installer menu.

2. Examine faults: navigate the faults menu (refer to Menu operation) to see the faults indicated.

   Continue to the installer menu: navigate to the top level of the faults menu and press the Continue soft key.
   - When you press the Continue soft key the keypad will reset the fault indications of faults that are no longer present.

3. Operate the installer menu: described in Menu operation.

Menu Operation

Navigation

Up / Down	move in the current menu
OK or Right	activate the current menu item, e.g. enter a sub-menu, change a value
Back or Left	back up one menu level
Info	display help for the current menu item

Changing an On / Off setting

OK	toggle the setting between On and Off

Changing a selection item

On activating the menu item using the OK key the keypad displays an edit window containing a list of items. You can select one item using the following keys.

Up / Down	move in the list to select the item required
Cancel	cancel and revert to the unchanged selection
OK	store the new selection

Changing a numeric setting

On activating the menu item using the OK key the keypad displays an edit window. You can edit the value using the following keys.

Number keys	enter the new value
Right soft key	switch to alternative units for the setting, e.g. switch from seconds to minutes. This is not available for all settings.
Cancel	cancel and revert to the unchanged value
OK	store the new value

Changing a text setting

On activating the menu item using the OK key the keypad displays an edit window. You can edit the value using the following keys.

1	enter punctuation characters using multi-tap text entry or press and hold to enter digit 1
2 - 9	enter characters using multi-tap text entry or press and hold to enter digits 2 - 9
0	enter digit zero
*	cycle character entry between ALL UPPER CASE, First Upper Case and all lower case

#	enter a space
Delete	delete one character to the right of the cursor or press and hold to delete several characters
Left	move the cursor one character left or press and hold to move the cursor several characters
Right	move the cursor one character right or press and hold to move the cursor several characters
Cancel	cancel the change and revert to the unchanged text
OK	store the new text

Changing a phone number

On activating the menu item using the OK key the keypad displays an edit window. You can edit the value using the following keys.

0 - 9	enter a phone digit or press and hold 1 to enter a comma signifying a pause in dialling
*	enter a *
#	enter a #
Delete	delete one character to the right of the cursor or press and hold to delete several characters
Left	move the cursor one character left or press and hold to move the cursor several characters
Right	move the cursor one character right or press and hold to move the cursor several characters
Cancel	cancel the change and revert to the unchanged phone number
OK	store the new phone number

Changing a reporting account code

On activating the menu item using the OK key the keypad displays an edit window. You can edit the value using the following keys.

0 - 9	enter an account digit or press and hold keys 0 - 5 to enter letters A - F
Delete	delete one character to the right of the cursor or press and hold to delete several characters
Left	move the cursor one character left or press and hold to move the cursor several characters

Right	move the cursor one character right or press and hold to move the cursor several characters
Cancel	cancel the change and revert to the unchanged account code
OK	store the new account code

Define Areas (optional)

Areas are regions in the premises that can be set and unset individually. They may be separate buildings or parts of one building. Common areas are regions in the premises that set when all areas associated with the common area become set and unset when any one of the associated areas unsets. For example a building with two apartments and a common entrance may have two areas for the apartments and a common area for the entrance.

1. Start the Define Areas installation wizard: in the installer menu navigate to System - Installation wizards - Define areas and then press OK.

2. Set the number of areas and common areas.

3. Press Next.

4. Set the name of each area and common area.

5. Press Next.
   - If you set zero common areas then the wizard will end at this point.

6. Mark the areas associated with common area 1 using Up, Down and OK.

7. Press Next to move to the next common area. Continue marking associated areas until all the common areas have been defined.

Install Devices

Enrol GSDi sensors onto the system, one per zone. GSD recommends that you enrol each device at the location where it will operate as this facilitates immediate testing of communication and operation. Enrol each device using the following steps.

1. Using the keypad start enrolling on the desired zone: in the installer menu navigate to Device / Zones - <desired zone> - Device - Enrol device and then press OK.*
   - The system will open its network for a device to enrol.

2. Take the device to its operational location together with the instruction manual supplied with the device.

3. Tell the device to enrol: refer to the instruction manual supplied with the device.
   - The device will enrol on the system within about 10 s and the keypad will indicate the type of device that enrolled.
   - Once the device has enrolled, the system will automatically close the network to prevent other devices joining.

4. On the Panel Press Next.
   - The system will exchanges messages with the device and display an indication of signal strength (RSSI) with the device.
   - For robust communication the RSSI must be at least 2 bars.
   - The Reduced Tx soft key attenuates transmission from the device by 6 dB to test the robustness of the connection. Transmission is automatically restored to normal on exiting test mode.

5. Press Next.
   - For motion and shock sensors the system now starts tests specific to the sensor type. For details refer to the instruction manual supplied with the device.
   - All other devices skip this step.

6. Press Next.
   - All devices end with a test showing the zone and tamper state of the device.
   - If the device is a sensor you can test its zone function.
   - You can test the tamper function of all device types.

7. Press Next to end testing.

8. Set other sensor settings if required: in the current Device menu navigate to Device settings.
   - The Device Setting menu gives access to settings according to the type of device enrolled.

* Dual sensors, e.g. GSDi Shock / Contact, GSDi Contact / Universal can be enrolled onto two independent zones if required. Set this option in the installer menu Devices / Zones - Global settings - Enrol on 2 zones before enrolling the devices. If enrolled on two zones then the system allows cross-zone alarm verification between the zones.

Testing Devices

Devices previously enrolled can be tested again using the following procedure.

1. Select the device: in the installer menu navigate to Device / Zones - <desired zone> - Device - Test Device and press OK.

2. Wait up to 30 s, or activate a sensor or tamper on the device
   - The system will start displaying RSSI values.

3. Continue testing as detailed from point 4 - 6 in section Install Devices.

Configure Zones

(See also Menu Operation)
Configure zones with sensors connected so that they function as required.

1. Select the zone menu for the sensor: in the installer menu navigate to Device / Zones - <desired zone> and then press OK.

2. Set the Zone Type, Name, Area and Attributes as required.

Zone Type	Description
Burglary	Causes an intrusion alarm. This zone sets and unsets with its area.
24-hour	Causes an intrusion alarm. This zone is always set.
Access	Same as a burglary zone but it will not cause an alarm during exit and entry.
Exit / entry 1	Same as an access zone but opening it when set starts entry timer 1 for its area.
Exit / entry 2	Same as an access zone but opening it when set starts entry timer 2 for its area.
Emergency exit	Same as a burglary zone but if opened while unset it causes an emergency exit open alarm in its area.
Fire	Causes a fire alarm - this zone is always set.
PA audible	Causes an audible Personal Attack alarm. This zone is always set.
PA audible on LF	Normally causes a silent Personal Attack alarm. However, if there is a communication Line Fault it causes an audible Personal Attack alarm. This zone is always set
PA silent	Causes a silent Personal Attack alarm. This zone is always set.
Medical	Causes a Medical Alert alarm. This zone is always set.
Tamper	Causes a local tamper alarm when its area is unset and a full tamper alarm when its area is set.
Technical	Activates a technical output if one exists in its area.
LF no alarm	Indicates an external dialler Line Fault. Never causes an alarm.
LF set alarm	Indicates an external dialler Line Fault. Causes an alarm only when its area is set.
LF alarm	Indicates an external dialler Line Fault. Always causes an alarm whether its area is set or unset.
FTC	Indicates an external dialler Failure To Communicate.
Exit terminator	If an area has an exit terminator zone then the exit period when setting does not end with an exit timer. Instead it ends when the exit terminator zone it activated.
Off	This zone does nothing.

Configure Wired Zones - Zone 71 & Zone 72

Set global options for Onboard EOL type for wired zones

1. Select an area menu: in the installer menu navigate to Devices / Zones - Global Settings - Onboard EOl types and then press OK.

2. Change the EOL type for all wired zones as required.
   If using single EOl or no EOL, configure zone 71 or zone 72 as Zone Type Tamper.

Configure Keypads (optional)

Set keypad global options that affect all keypads.

1. Select the keypad global settings menu: in the installer menu navigate to Keypads - Global setting and then press OK.

2. Change the Idle display, Code tamper as required.

Change individual keypad options.

1. Select a keypad menu: in the installer menu navigate to Keypads - <desired keypad> and then press OK.

2. Change the Keypad Name, Area, Volume, Sounds and Backlight as required.

Configure Sirens (optional)

Change individual siren options.

1. Select a siren menu: in the installer menu navigate to Sirens - <desired siren> and then press OK.

2. Change the siren's Name, Area, Volume, Sounds and LED Heartbeat as required.

Configure Users

Add a user

1. Select the add users menu: in the installer menu navigate to Users - Add user and then press OK.

2. Select the user number to add and press OK.

3. Enter the new code for the user and press OK.

4. Re-enter the same new code for the user and press OK. Set the other options as prompted.

Delete a user

1. Select the delete users menu: in the installer menu navigate to Users - Delete user and then press OK.

2. Select the user to delete and press OK.

3. Select Yes to confirm and press OK.

Set user codes and operations

1. Select a user menu: in the installer menu navigate to Users - <desired user> and then press OK.

2. Change the user's Name, Code, Accessible Areas and Permissions as required.

Configure Areas

Set the properties of each area. (See also Menu Operation)

1. Select an area menu: in the installer menu navigate to Areas - <desired area> and then press OK.

2. Change the area's Name and Attributes as required.

Configure Common Areas

Set the properties of each common area. (See also Menu Operation)

1. Select an area menu: in the installer menu navigate to Areas - <desired common area> and then press OK.

2. Change the area's Name and Areas included in this common area as required.

Configure Timers

Program the System timers, Output timers and Area timers.

1. Select the system timers menu: in the installer menu navigate to Timers - System and then press OK.
   - These times affect all areas in the system.

2. Change the times as required.

3. Select the output timers menu: in the installer menu navigate to Timers - Output timers and then press OK.
   - These times affect specific output types.

4. Change the times as required.

5. Select an area timers menu: in the installer menu navigate to Timers - <desired area> and then press OK.
   - These times affect only the area selected.

6. Change the times as required.

Walk Testing

Test all the sensors in each area are functioning correctly and communicating alarms to the system.

1. Select the Walktest Outputs: in the installer menu navigate to Devices / Zones - Global Settings and then press OK.

2. Select the outputs on which to indicate zone activation and press Back.
   - By default the keypad being used is selected and will chime each time a zone activates.

3. Select the walk test menu: in the installer menu navigate to System - Tools - Walk test and then press OK.

4. Select the area to test and press Next.

5. Start the walk test: press Next.
   - The area switches to walk test mode.
   - The keypad displays a list of zones still to be tested.

6. Walk test: walk around the system tripping each sensor and checking that it chimes the keypad (or other selected output).
   - As each zone is tripped, the keypad removes it from the list of zones still to be tested.
   - On testing the last zone the keypad beeps and displays a success status.

7. Press Next or Finish to end the walk test.

*For individual zone walk testing see Test Devices on page 17.

Output Testing

Test correct functioning of all keypads, sirens, strobes and other outputs.

1. Select the test outputs menu: in the installer menu navigate to System - Tools - Test outputs and then press OK.
   - The system lists all keypads, sirens, strobes and other outputs.

2. Test an output: select the output to test then press OK.
   - The system switches on the output.
   - Sirens switch on only for a few seconds to avoid unnecessary noise.
   - Outputs on wireless devices can take up to five seconds to switch on. This is normal operation.

3. Press OK again to switch off the output test.

4. Repeat steps 2 to 4 for any other outputs to be tested.

Soak Testing (optional)

It may be advisable to soak test some or all of the zones for several days so that they will not sound sirens or report alarms until they have been proven reliable and the users have learnt how to operate the alarm system.

1. Start the soak test wizard: in the installer menu navigate to System - Installation Wizards - Set up soak test and press OK.

2. Enter the number of days required for the soak test and press Next.
   - After this time the soak test will automatically end and the zones will revert to normal operation.
   - On pressing Next the keypad displays a list of zones showing their soak test attributes.

3. Select the zones to soak test: in the list of zones, navigate to a zone and press OK to switch its soak test attribute on or off.
   - The zones in soak test will still indicate alarms on the keypad and will record soak test alarm and soak test tamper events in the event log.

4. Finish: once all the zone soak test attributes are configured press Finish.

Troubleshooting

Device fails to enrol

- Device is a keypad and it fails to leave its current system: see Device fails to enrol - fails to leave current system.

- Device's LED flashes once or twice then stops: see Device fails to enrol - fails to leave current system.

- Device is a keypad and it cannot find a system to enrol on: see Device fails to enrol - cannot find system to enrol on.

- Device's LED flashes for more than 5 seconds but it doesn't enrol: see Device fails to enrol - cannot find system to enrol on.

Device fails to enrol - fails to leave current system

As a security measure a system will not allow a device to leave unless the system is enrolling or unenrolling. If a device fails to leave its current system then it must still be in range of something on that system. You must either unenrol the device on that system, using Devices / Zones - <device-to-remove> - Device - Unenrol Device, or you must use the steps below to make sure the controller from that system is uncontactable.

1. Make sure that its previous controller
   a) is switched off, or
   b) is out of range, or
   c) has been defaulted

2. Make sure that its previous repeaters
   a) are switched off, or
   b) are out of range, or
   c) have been enrolled on a new network

Device fails to enrol - cannot find system to enrol on

Either the system is not in enrol mode - see Install end devices for instructions - or the device is out-of-range. To bring an out-of-range device into range you may

a) reposition the device, controller or repeaters*

b) add repeaters*

There are faults on the system

When a code is entered the system indicates faults that have occurred. This indication does not imply that the faults are still present. The display of current faults and the event log may be used to assist in fault finding and fixing. Also, pressing the Continue soft key to exit the fault indication removes from the list faults that are no longer present, so that they will not be displayed next time.

1. View faults currently present: in the installer menu view the faults shown in System - Tools - Current Faults.

2. Examine the event log for fault events: the time of occurrence and other details of faults can be found in the event log at System - View Event Log. See also Event Log

Event log

The event log contains a wide variety of events that occur on the system, including alarms, faults and set / unset. Examine the event log at System

- View Event Log.
- Events are listed with the latest at the top.
- Use Up / Down to move through the list.
- Use OK to examine an event in more detail.

Battey Voltages

All battery voltages can be viewed as follows.

View controller battery voltage: in the installer menu navigate to System - Tools - Controller checks.
- The keypad displays the battery voltage of the controller.

View device battery voltages: in the installer menu navigate to System - Tools - Device checks - Battery Voltages.
- The keypad displays a list of device battery voltages.

Device	Battery Type	Nominal	Replace at	Full	Flat
Controller	8 cell rechargeable pack	9.6 V	5 years	11.4 V	8.0 V
External siren					
Sensors	Lithium CR123A primary	3.0 V	2.6 V		

Set up reporting (optional)

Set up Alarm Receiving Centre (ARC) details to report alarms, set / unset and faults as required.

Set up the main ARC

1. Fit GSDi Digital Communicator: if not already fitted mount the communicator in the controller housing, connect it to the controller using the supplied ribbon cable and connect an earth lead to its earth terminal. Note that the earth connection is an essential part of the circuit that protects the communicator if lightening strikes near the phone line.

2. Start the ARC with 2 phone nos. wizard: in the installer menu navigate to System - Installation wizards - Set up dialler - ARC with 2 phone nos. and then press OK.

3. Set the ARC name: you may optionally change the name of the ARC then press OK to continue.

4. Set phone number 1: set the first phone number for the ARC then press OK to continue.

5. Set phone number 2: optionally set the second phone number for the ARC then press OK to continue.
   - This is the backup phone number for the main ARC.
   - Leave this blank to always retry on the first phone number.

6. Set report format: select the reporting format and press OK or Next to continue.

7. Set account code: enter the account code given by the ARC for the premises and the press OK.
   - To enter hex values A - F press and hold keys 0 - 5.

8. Test call phone number 1: navigate to Communications - Alarm Rx Centres - <first ARC> - Connection 1 - Do test call and press OK.
   - The keypad displays call progress. Once Kissoff is indicated the test call has completed successfully.

9. Test call phone number 2: if you set phone number 2 then navigate out of Connection 1 and into Connection 2 - Do test call and press OK.
   - The keypad displays call progress. Once Kissoff is indicated the test call has completed successfully.

Set up a backup ARC (optional)

This sets up the details of a second ARC that will be tried if all attempts to the main ARC fail.

1. Start the Backup with 2 ph. nos. wizard: in the installer menu navigate to System - Installation wizards - Set up dialler - Backup with 2 ph. nos. and then press OK.

2. Set the ARC name: you may optionally change the name of the ARC then press OK to continue.

3. Set phone number 1: set the first phone for the ARC then press OK to continue.

4. Set phone number 2: optionally set the second phone number for the ARC then press OK to continue.
   - This is the backup phone number for the backup ARC.
   - Leave this blank to always retry on the first phone number.

5. Set report format: select the reporting format and press OK or Next to continue.

6. Set account code: enter the account code given by the ARC for the premises and the press OK.

7. Test call phone number 1: navigate to Communications - Alarm Rx Centres - <second ARC> - Connection 1 - Do test call and press OK.

8. Test call phone number 2: if you set phone number 2 then navigate out of Connection 1 and into Connection 2 - Do test call and press OK.

Change events reported*

Change the events reported to a main ARC. Open the ARC settings: in the installer menu navigate to Communications - Alarm Rx Centres - <desired ARC> - Events

1. Change alarms events: navigate into Alarms and then switch event types On or Off as required.

2. Change other events: navigate out of Alarms and into Other events and then switch event types On or Off as required.

* Do not switch on events for a backup ARC as it will automatically report any events that fail to report to the main ARC.

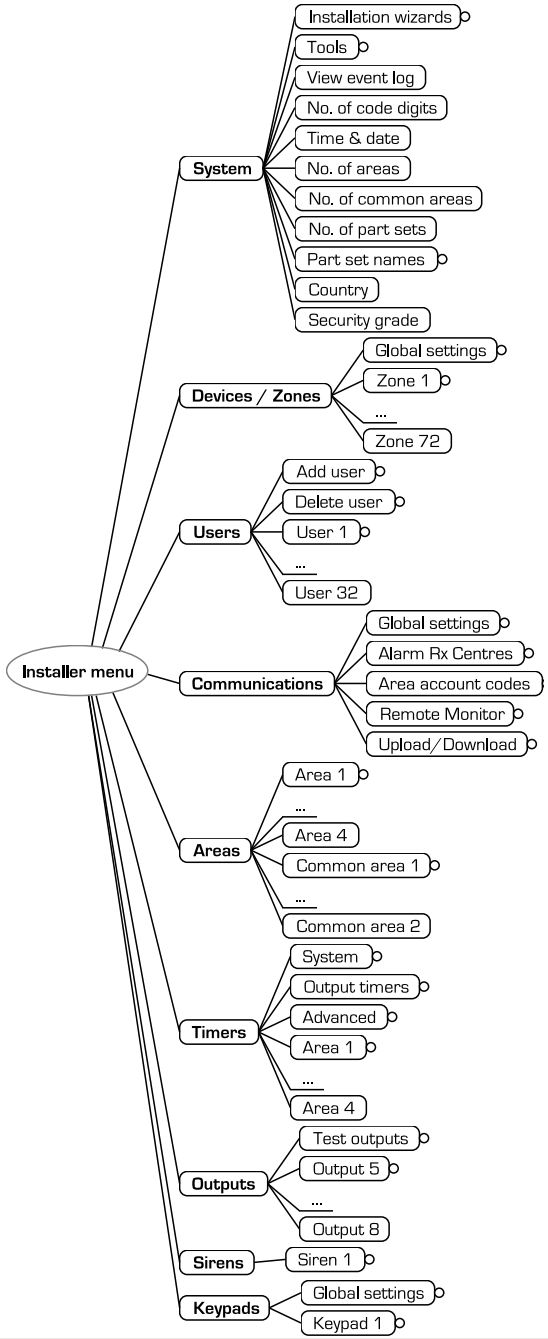
Technical specification

	GSD i70
Name of manufacturer	Global Security Devices Ltd
Description of equipment	Intrusion alarm system
Standards	Controller (CIE) EN50131-1:2006 EN50131-3:2009 EN50131-6:2008 PD6662:2010 EN60950:2006
Security grade	Grade 2
Environmental class	Class II
Operating temperature	-10ºC to 40ºC
Relative humidity	Up to 75% non-condensing
Dimensions (w d h)	240mm 152mm 45mm
Weight (without batteries)	0.5kg
Type of interconnections	Wire-free, specific wired
Methods of setting	Code entered at keypad and / or RFID tag
Methods of unsetting	Code entered at keypad and / or RFID tag
Fuse	230V 315mA T
Power supply description	Type A, with detection of mains failure and monitoring of battery and output voltage.
Power supply input	230 VAC 50 Hz, 50 mA
Internal power requirement	12v 300mA 9.6 100mA
Battery	Backup battery: 8 NiMH cell pack 80% charge 10 h Low indication below 8.0V

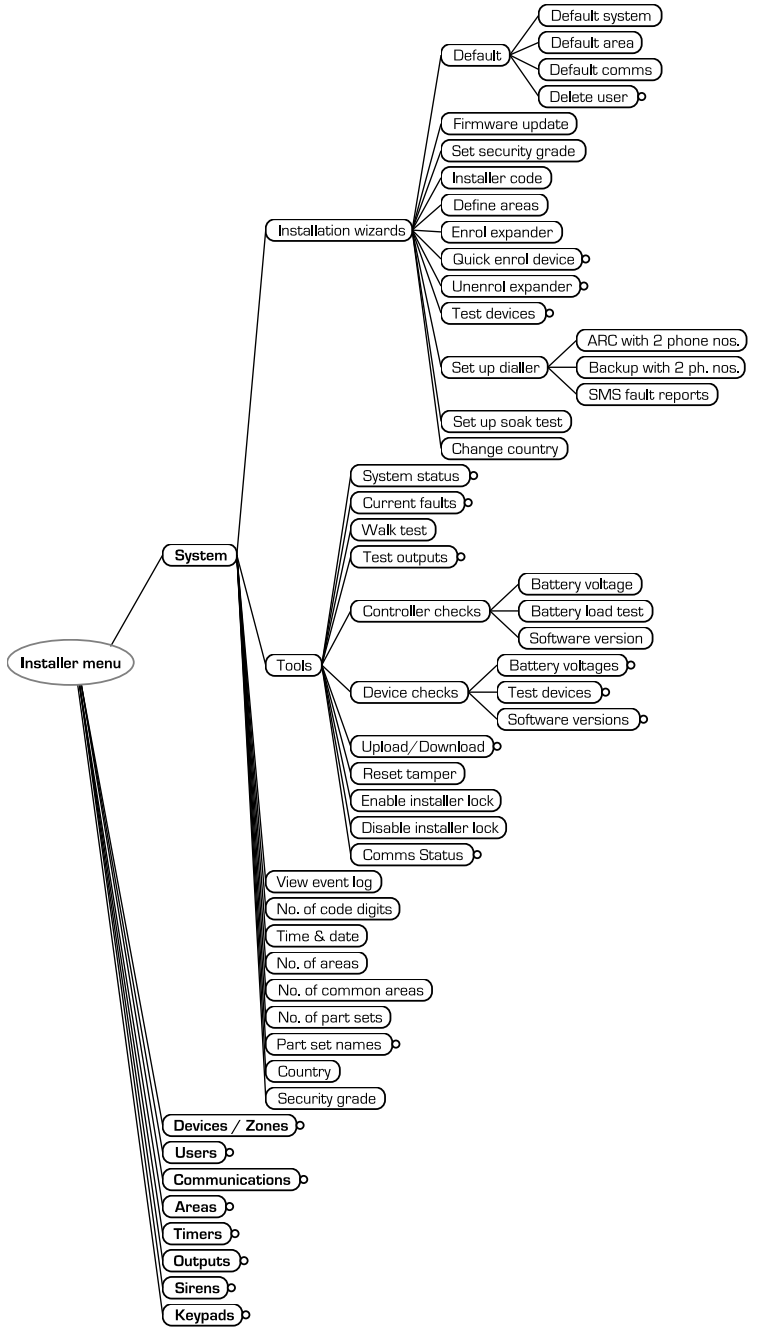
	GSD i70
No. of devices	1 controller / keypad / siren 0 - 4 sirens / external siren 1 - 71 sensors
Indications made inaccessible to level 1	By 30 s timeout
Notification priority	Fire Highest Medical Alert Personal Attack Intrusion Tamper Faults Lowest
Minimum PIN variations	4 digits: 0000 is not allowed; 9999 variations 5 digits: 00000 is not allowed; 99999 variations 6 digits: 000000 is not allowed; 999999 variations The number of digits is programmable in System - No. of code digits.
Invalid PIN entries to cause user interface to disable	10 by default. Programmable in Keypads - Global settings
Set conditions	Set state indicated by time limited message on keypads. Opening of entry / exit door initiates an entry procedure.
Notification options	Grade 1: options B and C Grade 2: options B, C and D
Automatic soak test end	End determined by programmable timer set in Timers - System - Soak test time
No. of intrusion alarms for automatic zone inhibit	5 by default. Programmable in Devices / Zones - Global Settings - Swinger inhibit count

	GSD i70
ACE Type	N / A
Non-volatile memory	Static RAM with memory support battery: CR2032. Battery life 5 years.
Settings required to comply with EN50131. Note: compliance labelling should be removed or adjusted if non-compliant configurations are selected.	All grades Alarm event log limit: 3 - 10 Int siren cut-out time: 90s - 15 min. Ext siren cut-out time: 90s - 15 min. Ext siren delay time: ≤ 10 min. Mains fault delay: ≤ 60 min. Entry fault delay: ≥ 30 s Entry time 1: ≤ 45 s Entry time 2: ≤ 45 s Grade 1 No. PIN digits: 4 - 6 Code tamper attempts: ≤ 10 Code tamper repeat attempts:≤ 10 Setting Supervision time: ≤ 60 min. Reporting test call period: ≤ 24 hours Grade 2 No. PIN digits: 5 - 6 Code tamper attempts: ≤ 10 Code tamper repeat attempts: ≤ 10 Tamper Supervision time: ≤120 min. Setting Supervision time: ≤ 20 min. Reporting test call period: ≤ 24 hours
Additional functions	Fire alarm processing, medical alarm processing, inactivity alarm processing. All of these are reset by user with required access level.

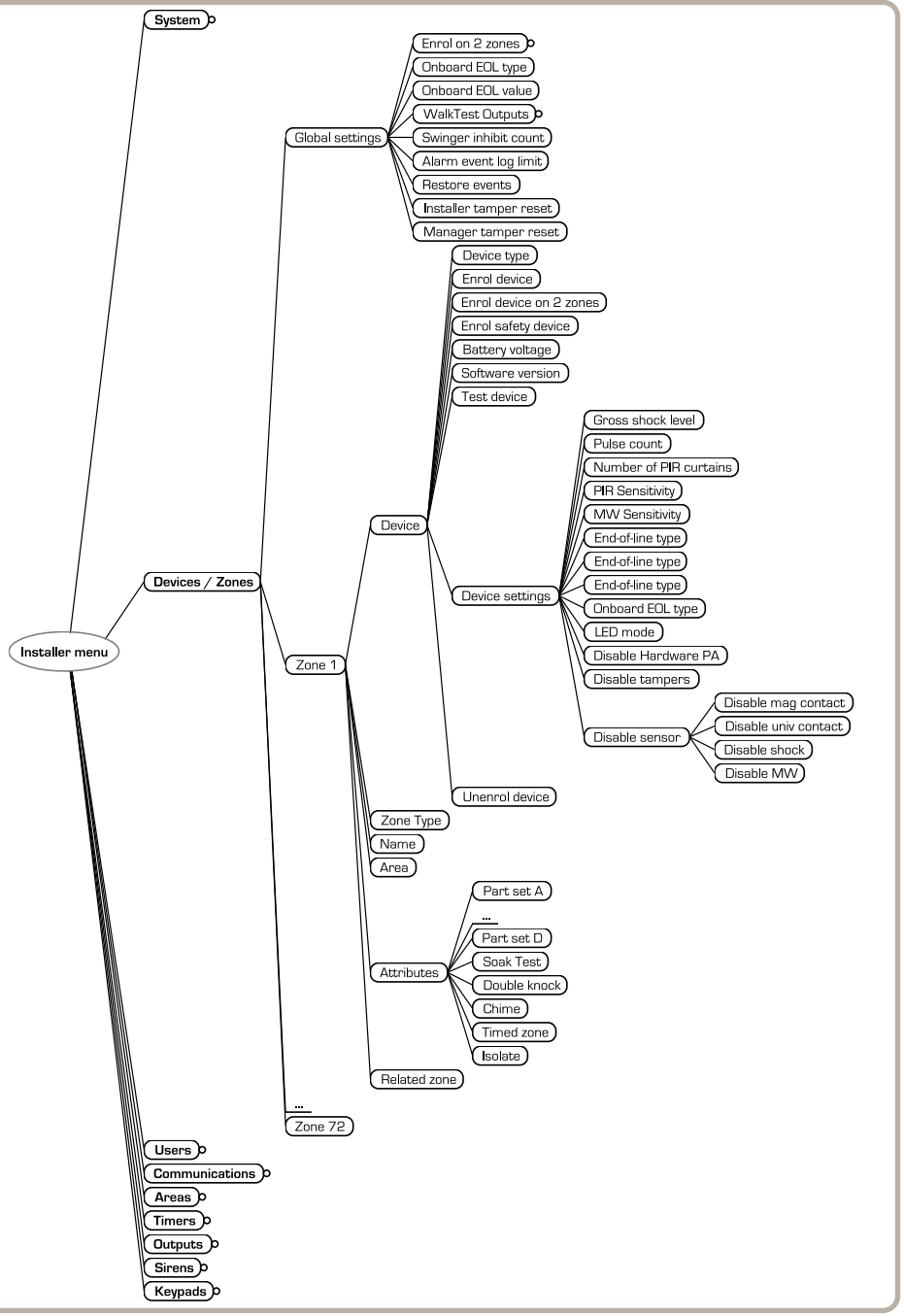
Installer menu Overview



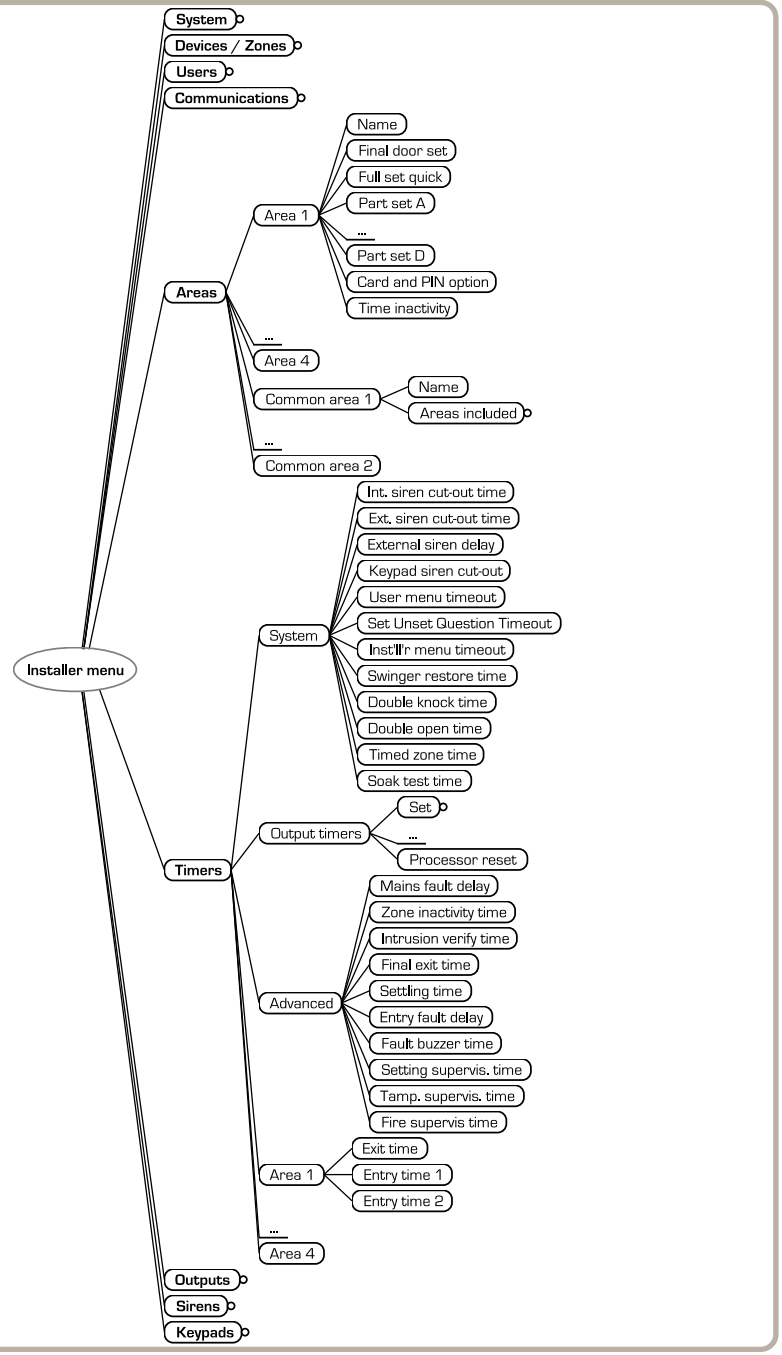
Installation Wizards & Tools



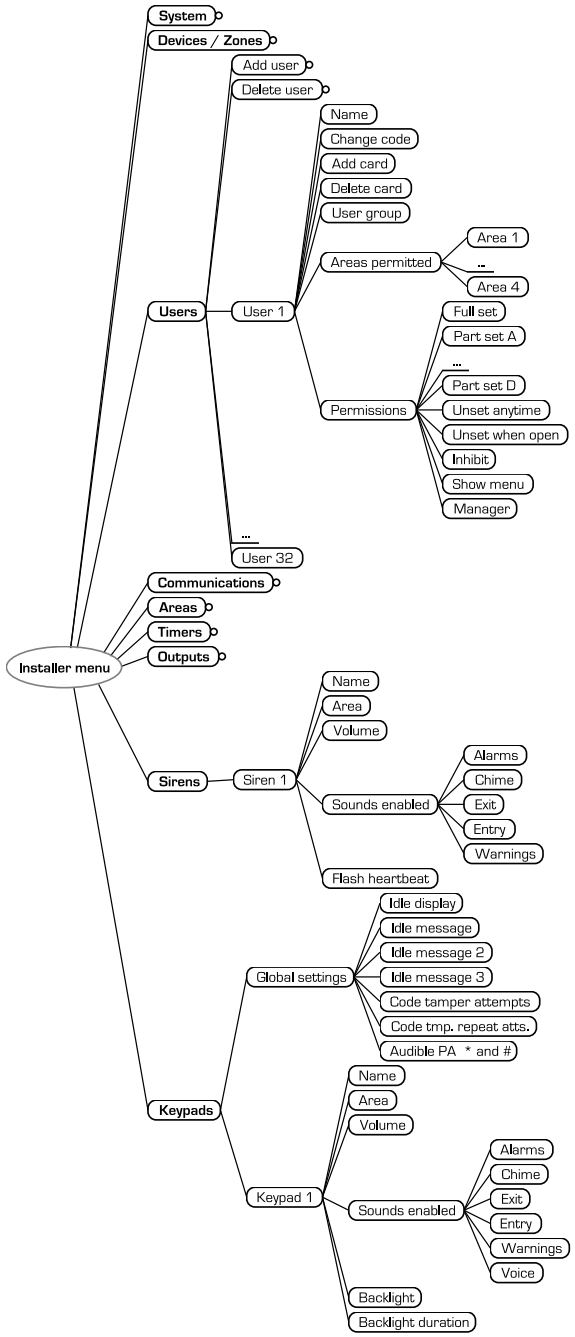
Devices / Zones



Timers & Areas



Users, Sirens & Keypads



Communications & Outputs