SELF-POWERED SOUNDER/FLASHER FOR OUTDOOR USE

Certified CEI 79-2 by
IMQ - Security systems

IVY

inim® ELECTRONICS

INSTALLATION AND PROGRAMMING MANUAL

Table of contents

Chapter 1

OVERVIEW

The IVY series offers a range of self-powered sounder/flashers especially designed to allow maximum outdoor-installation flexibility.

The on-board microprocessor monitors the device parameters and assures high-reliability and first-rate performance. A voltage-free-relay manages tamper signals and allows full-integration with every type of system, while a fault output allows remote-management of fault conditions.

Optimized flexibility allows you to choose the most suitable wiring method (activation and signalling using 2 or 3 wires, etc.), and ready-to-go factory settings (refer to *Table 7 "Programming Menu"*) ensure fast and easy installation with few or even no setting adjustments.

INIM Electronics s.r.l. also offers Ivy unit units which can be connected to SmartLiving intrusion control panels via I-BUS (for remote programming and management purposes), thus providing first rate security-system customization capabilities.

Manufacturer's Details 1-1

Manufacturer:	INIM Electronics s.r.l.
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ATTENTION!

Any persons authorized by the manufacturer to repair or replace any part of this device hold authorization to work on INIM Electronics devices only.

Manual details 1-2

Issue:	2.70
Month and year:	October 2013
Code:	DCMIINE0IVY

Product description and models 1-3

Description: Self-powered outdoor sounder/flasher
Year of production: 2013
Applied Normative: CEI 79-2:1998+Ab:2000 (level 2)
Certification agency: IMQ – Sistemi di sicurezza

Table 1: **Models**

Name	Description
Ivy	Standard model
Ivy-F	Standard model with foam-tamper protection
Ivy-M	Standard model with chrome-look casing
Ivy-FM	Standard model with chrome-look casing and foam-tamper protection
Ivy-B	BUS connectable model
Ivy-BF	BUS connectable model with foam-tamper protection
Ivy-BM	BUS connectable model with chrome-look casing
Ivy-BFM	BUS potential model with chrome-look casing and foam-tamper protection

Table 2: **Operating features**

Features	Ivy	Ivy-F	Ivy-M	Ivy-FM	Ivy-B	Ivy-BF	Ivy-BM	Ivy-BFM
Power and alarm input	*	*	*	*	*	*	*	*
Programmable input-polarity (**START/STOP**)	*	*	*	*				
Programmable ancillary-signal input (**LED**)	*	*	*	*	*	*	*	*
Signal output with programmable polarity (**FAULT**)	*	*	*	*	*	*	*	*
Tamper signal relay with programmable polarity	*	*	*	*	*	*	*	*
Super bright LED-technology flasher with high-power driver circuit	*	*	*	*	*	*	*	*
Blow torch protection	*	*	*	*	*	*	*	*
Magneto-dynamic horn with automatic function control	*	*	*	*	*	*	*	*
Dislodgement and Open-casing protection	*	*	*	*	*	*	*	*
Metal guard inside	*	*	*	*	*	*	*	*
4 tone sounder	*	*	*	*	*	*	*	*
"Squawk" tone					*	*	*	*
Programmable sound-output time					*	*	*	*
Programmable volume					*	*	*	*
Programmable flasher sequence	*	*	*	*	*	*	*	*
Programmable flasher time					*	*	*	*
Backup battery with test circuit	*	*	*	*	*	*	*	*
Houses 12V, 2.1 Ah backup battery	*	*	*	*	*	*	*	*
IP34 Rated	*	*	*	*	*	*	*	*
CEI 79-2:1998 and 79-2/Ab:2000 compliant (level 2)	*	*	*	*	*	*	*	*
Foam protection		*		*		*		*
Chrome-look casing			*	*			*	*
Ancillary alarm input (**START**)	*	*	*	*				
Stop alarm and alarm-immunity input (**STOP**)	*	*	*	*				
Inputs **D** and **S** for I-BUS connection					*	*	*	*
Direct control via SmartLiving intrusion-control panel*					*	*	*	*
SmartLiving intrusion-control panel activation of LEDs: **STATUS** and **PRG**					*	*	*	*
SmartLiving intrusion-control panel activation of outputs: **TAMPER** and **FAULT**					*	*	*	*

Box contents 1-4

Inside the box you will find:

- IVY Sounder/Flasher
- 2 securing screws for the metal guard
- 2 securing screws for the plastic casing
- 5 wall plugs for mounting the backplate and tamper bracket
- Drilling pattern
- Installation and Programming manual
- Programming Table

Technical description 1-5

Table 3: **Description of parts**

A	Programming button (PAGE)
B	Programming button (SEL)
C	Magneto-dynamic horn
D	Battery housing
E	Battery wires
F	Terminal board
G	LED flasher - left group
H	LED flasher - right group
I	Foam protection
J	Blow-torch protection
K	Dislodgement/Open tamper protection
L	Wire entry
M	Wall-plug locations
N	Tamper-screw location
O	Metal-guard screw locations
P	External-casing screw locations
Q	STATUS LED - Red LED
R	PRG LED - Green LED
S	Magneto-dynamic horn connector
T	External casing in plastic
U	Casing hinges
V	Metal guard

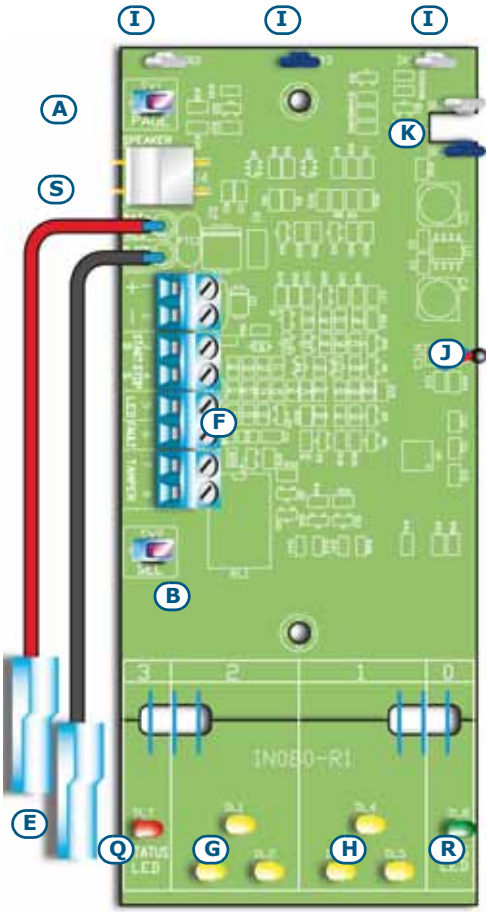
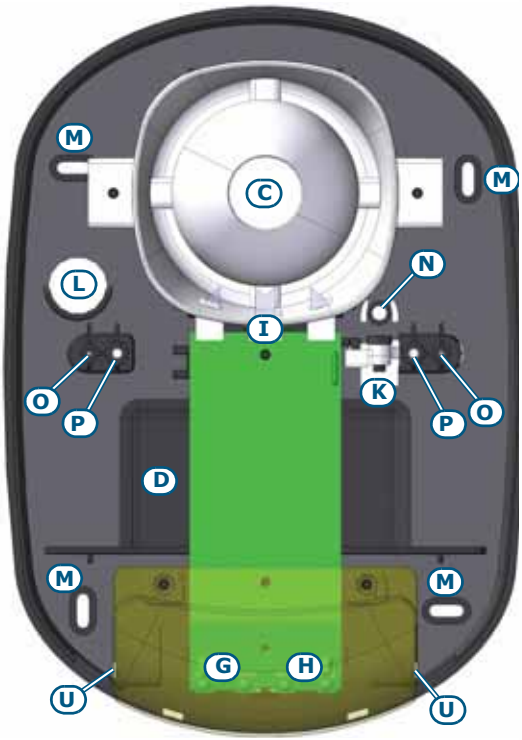


Table 4: **Terminal board**

no.	icon/ name	Description
1	+	Positive power terminal supports 13.8V
2	-	Negative power terminal
3	START D	Ancillary terminal with programmable polarity for alarm activation Input D for I-BUS
4	STOP S	"Stop Alarm" terminal, with programmable polarity for alarm deactivation. Input S for I-BUS
5	LED	Input for audible/visual signalling activation
6	FAULT	Open-collector output for fault signalling I max = 100 mA
7	TAMPER	Voltage-free terminals of the relay
8		



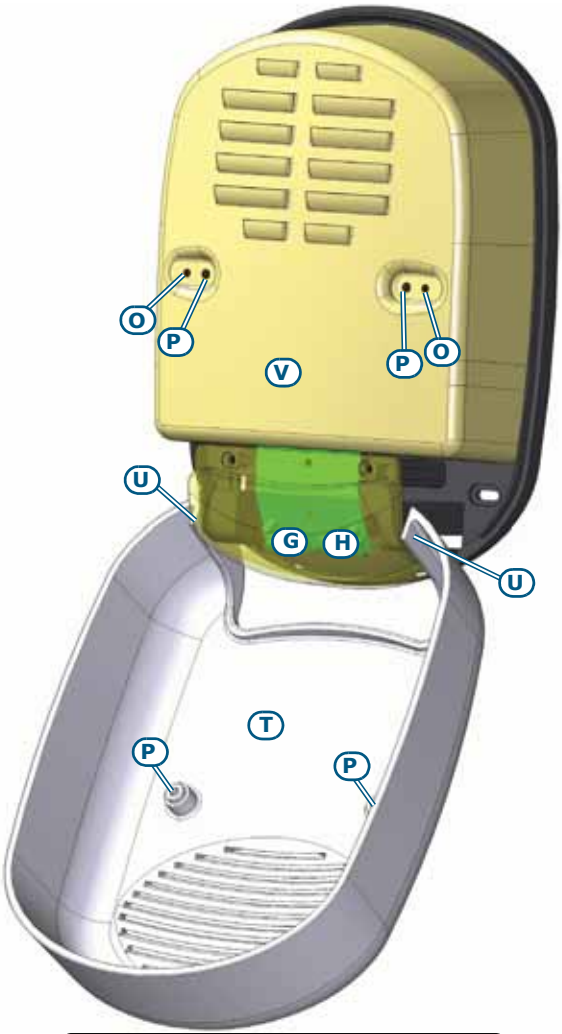


Table 5: **Technical specifications**

Operating voltage	**nominal**	13.8 V
	maximum	14.0 V
	minim	13.2 V
Minimum current draw		15 mA
Maximum current draw from panel		150 mA
Maximum current draw from battery		900 mA
Sounder output (l=3m)		104 dB(A)
Carrier frequency		1148 Hz
Flash rate per minute (programmable)		36 - 46 - 56
Maximum alarm-time (programmable)		3 - 6 - 9 min
Protection class		IP34
Performance level (CEI 79-2)		2
Operating temperature		-25 to +55 °C
Backup battery		12V - 2.1Ah
Dimensions (W x H x D)		21 x 29 x 9.5 cm
Weight (without battery)		2.2 Kg

CEI 79-2 LEVEL 2 CERTIFICATION

The compliance with CEI 79-2 level 2 is valid only if the installer does as it follows:

- the siren is installed as indicated in this manual
- the alarm sound is set to "Sound 1", at the maximum volume
- the alarm status is activated by mains failure, or by a START input signal, positive or negative removed, or by alarm signal via bus (this option is possible only for bus versions).

Chapter 2

INSTALLATION

The Ivy unit should be mounted high up on a smooth surface, in such way that it is out of reach but on view and, therefore, may serve as a visible deterrent against break-in.

Installation guidelines 2-1

1. Remove all electrical power.
2. Open the bottom-hinged casing (*Table 3, U*).
3. Remove the metal guard (*Table 3, V*).
4. Pull the connection wires through the cable entry (*Table 3, L*).
5. Using the wall plugs, attach the plastic backplate to the wall (*Table 3, M*). The wall plug locations are clearly marked on the drilling-pattern (included).
6. Insert the tamper-protection screw into its location (*Table 3, N*).
7. Locate the battery in its housing (*Table 3, D*), then connect it by means of the battery wires (*Table 3, E*). Ensure that the battery polarity is correct.
8. Complete the device wiring. During this phase, the STATUS LED will blink at 1 second intervals.
9. Configure the device.

Note

If the factory default settings suit the installation requirements, device configuration will be unnecessary.

10. Replace the metal guard and the plastic casing. The STATUS LED will blink at 0.5 second intervals.
11. Powerup the device. The STATUS LED will go On (solid) for 10 seconds. The LED will go Off when the Ivy unit enters the operating phase (standby). If the Ivy unit is connected via I-BUS, the PRG LED will signal the BUS status for 60 seconds:
    - LED On solid = the BUS is not connected.
    - LED blinking at 1 second intervals = the I-BUS is working but the Ivy unit has not been enrolled on the intrusion control panel.
    - LED blinking at 0.2 second intervals = the I-BUS is working and the Ivy unit has been enrolled on the intrusion control panel.

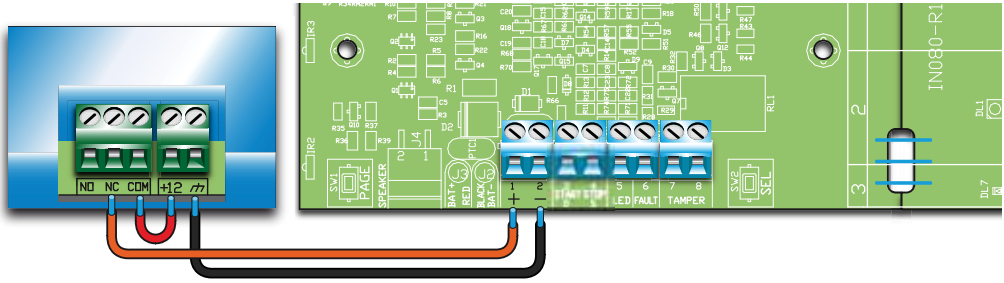
Wiring the device 2-2

The following paragraphs describe the various ways of connecting the Ivy unit to an intrusion control panel (in particular to a SmartLiving intrusion-control panel manufactured by INIM Electronics s.r.l.).

All connections involve the terminals on the motherboard (*Table 3, F*). Each terminal can be configured separately during the programming phase.

2 WIRE CONNECTION

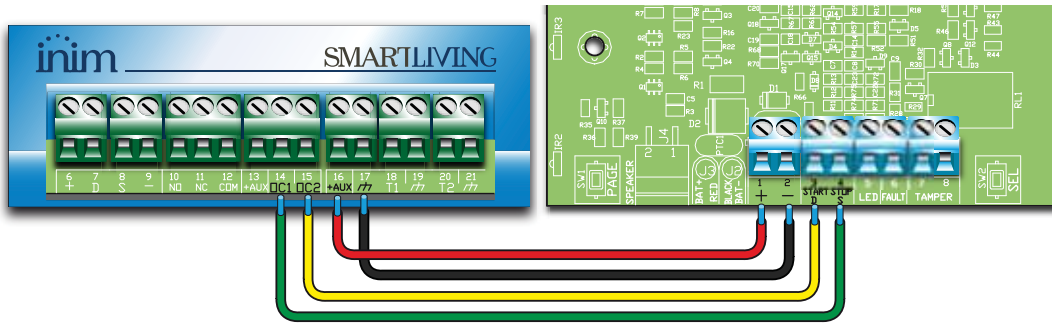
This standard wiring method activates the alarm signal by means of a positive-power-removed signal.



4 WIRE CONNECTION

This wiring method activates signalling via the START terminal and deactivates it via the STOP terminal. The polarity of both inputs is programmable.

The sounder/flasher is activated by an open-collector output (on the intrusion control panel). By means of a second open-collector output, you can deactivate alarm signals and disable (block) the sounder/flasher from the intrusion control panel, for example, during maintenance sessions.

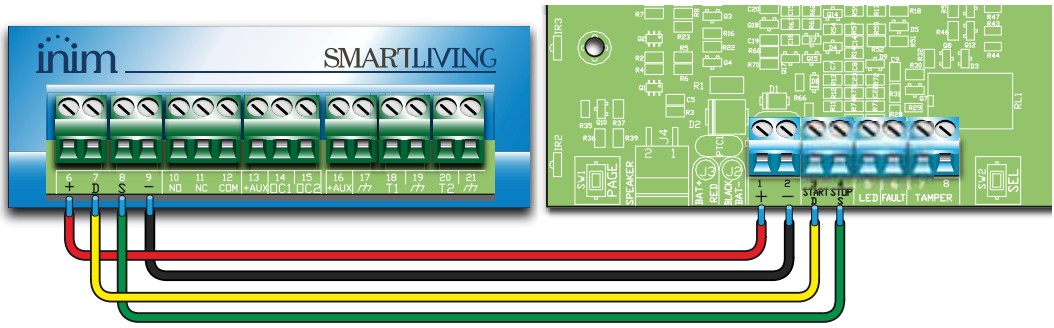


I-BUS CONNECTION

Only the Ivy-B, Ivy-BF, Ivy-BM and Ivy-BFM models can be connected to the I-BUS wire. This connection allows you to program the device and activate alarm-signalling directly from the panel.

In addition, connection of the I-BUS wire to terminal "+", provides a power source which enables the Ivy unit to activate alarm-signalling (in accordance with its programmed parameters) in the event of wire-cutting tamper.

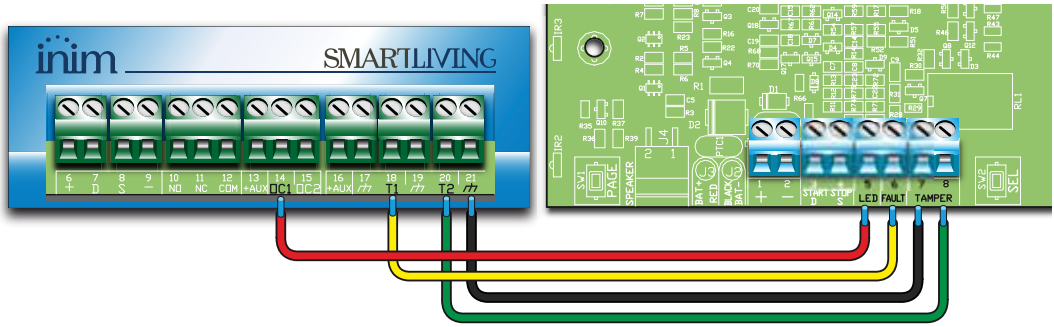
Each time the SmartLiving panel resets the BUS and restarts the connected peripherals, the Ivy unit will run a 60-second status check on the BUS, as described in paragraph *2-1 Installation guidelines*.



EXTRA CONNECTIONS

Connection of the LED terminal to an open-collector output, will allow management of the STATUS and PRG LEDs, flasher and horn directly from the intrusion-control panel (as programmed).

Connection of the FAULT and TAMPER outputs to a terminal on the intrusion control panel allows signalling of the associated events. This function allows fault and tamper signals to be transmitted without activating the visual-signalling components.



Battery connections 2-3

This device requires a 12V, 2.1Ah battery (not included), which must be connected by means of the respective wires (*Table 3, E*) . Take care to respect the battery polarity during the installation phase (red=positive; black=negative).

The battery-efficiency test will run 60 minutes after installation and every 10 minutes thereafter. In the event of an alarm, the battery test will be delayed by 60 minutes.

Failure of the battery-efficiency test will generate the respective signal (*Table 6, Battery inefficient*). If the battery voltage drops below 11V during an alarm event, the horn will deactivate automatically, however, all other signalling will continue until the voltage drops below 10V.

All functions will be re-established when the battery voltage restores to 12V.

Chapter 3

ACTIVATION METHODS

The Ivy unit can be triggered by signals from the panel, depending on the wiring method used and also by events generated by the Ivy unit itself.

signalling will cease when one of the following conditions occurs:

- the alarm condition clears;
- the maximum alarm time expires (in this case, only the audible signalling will cease);
- the STOP signal activates.

If, during an active alarm, the maximum audible-alarm time expires (*Table 7, Max. duration of audible signalling*), audible signalling will cease but visual signalling will continue until the trigger condition clears.

Types of signal 3-1

SOUNDER/ FLASHER EVENTS

The Ivy unit processes the signals it picks up and then generates the respective events (which can be associated with one or more signals).

The Ivy unit can generate the following events:

- Power failure
- Low battery
- Battery inefficient
- Open casing
- Device dislodgement
- Foam tamper (or similar) in the horn
- Blow torch tamper
- Horn damage
- I-BUS loss

Note

The audible and visual signalling triggered by "open casing", "foam tamper" and "blow torch tamper" events will clear after 30s, or immediately on receiving the STOP signal.

Note

The event "Open casing" of a Ivy connected by BUS unit does not trigger audible signalling when the connected anti-intrusion control panel is in "Programming" mode.

MAINS FAILURE

This signalling method is widely applied as it ensures intrinsic protection against wire-cutting. This activation method triggers audible and visual signals (sounder and flasher) when the primary mains power fails.

START INPUT

The START ancillary input is completely programmable, therefore, it can activate the sounder/flasher by means of either positive signals (Applied/Removed) or negative signals (Applied/Removed).

STOP INPUT

The STOP signal allows you to force the Ivy unit to standby status thus blocking all signalling. Once this signal is removed, the device will restart the evaluation process and if the alarm conditions are still active, it will trigger the respective signals.

Note

Although the STOP input is fully programmable, the manufacturer strongly recommends an "applied" signal configuration rather than a "removed" signal configuration, in order to avoid the risk of disablement in the event of wire cutting.

LED INPUT

This input (activates when connected to negative) operates as an ancillary channel which the panel can use to activate any type of signal, in accordance with the configuration of the Ivy unit.

I-BUS

All I-BUS related activations must be programmed via the intrusion -control panel. Panel events are capable of generating signalling directly on the sounder/flasher, without activating terminals or outputs.

Each event is capable of sending 8 programmable patterns to one or more Ivy-B sounderflashers configured in the control panel "Outputs" or "Other outputs".

Ivy-B sounderflashers can be deactivated from the control panel using the previously mentioned conditions and also by means of the "Stop alarms" shortcut, when the control panel is in maintenance status with the appropriate disarm scenarios, or with the events associated with the 5 possible "Causes of cut off" (refer to paragraph *5-3 Programming from a PC*).

3-2 Managing multi-alarm conditions

There is no priority amongst the various signals. If the Ivy unit detects signals, it will activate the programmed signalling cycle and, in the event of concurrent activations, add on the respective signals.

Restoral of a detected signal annuls the respective alarm cycle automatically, but it does not annul alarm cycles relating to other signals. The Ivy unit will restore to standby status when all alarm conditions cease.

Chapter 4

SIGNALLING

The Ivy unit provides various signals: audible, visual, activation of the FAULT and TAMPER outputs (connectible to the intrusion-control panel).

Each signal type can be programmed separately, combined with other signals, or deactivated.

Types of signalling 4-1

VISUAL SIGNALLING

The super-bright flasher uses new-generation Light Emitting Diode technology which provides maximum visual-signal clarity with extra-low power consumption. The flasher circuit is divided into two groups, the left group (*Table 3, G*) and the right group (*Table 3, H*). This type of circuitry allows you to select the options on the Programming menus.

STATUS LED PRG LED

The two ancillary LEDs, reveal the device status and guide you through the programming operations (STATUS LED - *Table 3, Q*; PRG LED - *Table 3, R*). These can be activated by the control panel events, using SmartLeague software programme (refer to paragraph *5-3 Programming from a PC*).

These two LEDs, if suitably programmed, will signal device faults and tamper events, for details refer to paragraph *4-2 Tamper memory and fault signalling*.

AUDIBLE SIGNALLING

The magneto-dynamic horn provides a choice of 4-tones, which can be programmed with a maximum alarm time and assigned to indicate different alarm types.

Ivy units, connected via I-BUS to the intrusion-control panel, provide a choice of 5 tones with programmable duration and volume options.

FAULT OUTPUT

Open-collector output with 100mA maximum current draw capacity. During the programming phase, it is possible to select the standby status (Normally open or Normally closed) and assign the events.

TAMPER OUTPUT

The voltage-free relay can be used to signal tamper conditions to external devices. During the programming phase, it is possible to select the standby status (Normally open or Normally closed) and assign the events.

Tamper memory and fault signalling 4-2

The STATUS and PRG LEDs provide visual signalling of horn faults and tamper memory by emitting a series of fast blinks (at 0.5 second intervals). This visual signalling phase lasts for approximately 5 seconds after which, the LEDs emit slow blinks (duration of 1 second) which signal the type of fault or tamper.

If several conditions are detected simultaneously, both LEDs are capable of signalling the events consecutively.

The following table shows the various event types and how they are signalled on the LEDs (the number of slow blinks which signal the type of event concerned and the related Programming-menu option which will allow you to enable/disable the respective signalling capacities:

Table 6: **Fault and tamper signalling**

LED	Number of blinks	Event		Menu options	
				Number	Option
STATUS	1	Faults	Horn trouble	13	3 2 1 0 ○ ○ ○ ●
	2		Low battery	14	3 2 1 0 ○ ○ ● ○
	3		Battery inefficient	14	3 2 1 0 ○ ○ ○ ●
PRG	1	Tamper memory	Power failure	9	3 2 1 0 ○ ● ○ ○
	2		Open casing	10	3 2 1 0 ○ ● ○ ○
	3		Foam tamper	11	3 2 1 0 ○ ● ○ ○
	4		Blow torch tamper	12	3 2 1 0 ○ ● ○ ○

Fault signalling will stop automatically when the cause of the fault clears.

Tamper memory signalling will clear only after two consecutive alarm events.

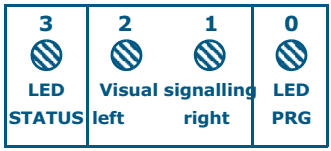
Chapter 5

PROGRAMMING

The programming session cannot begin until after first startup, therefore, it is necessary to ensure that:

- all power sources to the Ivy unit (mains and battery) are disconnected;
- the tamper protection is open;
- the Intrusion control panel will allow you to work on the Ivy unit without generating alarms (for example; put the intrusion-control panel in Programming status).

The Programming menu allows you to program and change the device configuration. Access to programming is indicated by blinking on the LEDs (STATUS LED , left flasher, right flasher and PRG LED). The PAGE button (*Table 3, A*) allows you to access the menus.



The Programming steps 5-1

1. Remove the cover.
2. Powerup the device; the STATUS LED will blink at 1 second intervals. The device will exit the programming phase and step back to this point if no command is received within the allowed time.
3. Press and hold the PAGE button until the STATUS LED goes Off.
4. Use the PAGE button to move to the different options on the menu The LED combination (the LEDs which blink) identifies the option concerned.
5. Press the SEL button (*Table 3, B*), to select the required option. The LED combination (the LEDs which are On solid) indicates the current setting of the option concerned.
6. To change a setting, press the SEL button again until the LED combination indicates the desired setting.
7. The PAGE button will allow you to select the desired menu.
8. To exit the Programming session, wait 20 seconds (do not press any buttons); the LEDs will blink to signal that the session has ended. If you wish to exit without saving, select "0" from the menu.
9. To complete the installation phase, work through the steps indicated in paragraph *2-1 Installation guidelines* from point 10.

Programming Menu 5-2

The following table shows, under the caption "Menu", all the options on the Programming menu and their respective LED combinations:

Table 7: **Programming Menu**

Menu			Options				
Num.	LED combinations 3 2 1 0	Options	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0
0	○○○○	**Exit without saving**	/	/	/	/	Exit
		Address *	+ 8	+ 4	+ 2	+ 1	/
1	○○○▨	**START Input**	Negative applied	Positive applied	Negative removed	Positive removed	Deactivated
		Signal loss duration I-BUS *	+ 8 minutes	+ 4 minutes	+ 2 minutes	+ 1 minutes	Deactivated
2	○○▨○	**STOP Input**	Negative applied	Positive applied	Negative removed	Positive removed	Deactivated
		I-BUS lost *	FAULT Output	TAMPER Output	Visual signalling	Sounder	Deactivated
3	○○▨▨	**Audible signalling**	Tone 4	Tone 3	Tone 2	Tone 1	/
4	○▨○○	**Max. duration of audible signalling**	**	9 minutes	6 minutes	3 minutes	/
5	○▨○▨	**Flashes**	Blinking on the LEDs of the LED Input	50 flashes/ minute	42 flashes/ minute	33 flashes/ minute	/
6	○▨▨○	**Outputs: TAMPER and FAULT**	TAMPER normally closed	TAMPER normally open	FAULT normally closed	FAULT normally open	/
7	○▨▨▨	**Activation of the START input**	LED STATUS	LED PRG	Visual signalling	Sounder	Deactivated
		(empty) *	/	/	/	/	/
8	▨○○○	**Activation of the LED input**	LED STATUS	LED PRG	Visual signalling	Sounder	Deactivated
9	▨○○▨	**Power failure**	FAULT Output	TAMPER Output PRG LED	Visual signalling	Sounder	Deactivated
10	▨○▨○	**Open-casing signal**	FAULT Output	TAMPER Output PRG LED	Visual signalling	Sounder	Deactivated
11	▨○▨▨	**Foam tamper signal**	FAULT Output	TAMPER Output PRG LED	Visual signalling	Sounder	Deactivated
12	▨▨○○	**Blow-torch tamper signal**	FAULT Output	TAMPER Output PRG LED	Visual signalling	Sounder	Deactivated
13	▨▨○▨	**Horn trouble**	FAULT Output	TAMPER Output	/	STATUS LED	Deactivated
14	▨▨▨○	**Battery fault**	FAULT Output	TAMPER Output	STATUS LED (low battery)	STATUS LED (battery inefficient)	Deactivated
15	▨▨▨▨	**Restore default**	Default ●●●●				Exit

*: Options present on I-BUS- connectable Ivy models only

**: When this option is enabled, the STATUS LED becomes ON solid

- **0** - PRG LED
- **1** - Right LEDs on flasher circuit
- **2** - Left LEDs on flasher circuit
- **3** - STATUS LED
- ○ - LED Off
- ● - LED On solid
- ⊘ - LED blinking

Instead (under the caption "Options"), the programmable settings for each item, highlighted on a grey background (▭) are the options enabled at default.

The following section describes the menu options.

0 - **Exit without saving**; when you come to this option, wait 20 seconds for the device to exit the programming phase without saving.

- **Sounderflasher address on BUS**; the following table shows the correlation between the LED combinations and the sounderflasher address:

Table 8: **LED combinations**

Address	3	2	1	0
1	○	○	○	●
2	○	○	●	○
3	○	○	●	●

Address	3	2	1	0
4	○	●	○	○
5	○	●	○	●
6	○	●	●	○

Address	3	2	1	0
7	○	●	●	●
8	●	○	○	○
9	●	○	○	●
10	●	○	●	○

1 - **START input**; allows you to select the polarity of the START input.

- **I-BUS Loss delay**; allows you to select the time (15 minutes at default) which must pass before the loss of the I-BUS is signaled.

2 - **STOP input**; allows you to select the polarity of the STOP input.

- **BUS Loss**; allows you to select the type of signalling associated with the loss of the I-BUS.

3 - **Audible signalling**; allows you to select the type of sound emitted by the horn.

4 - **Maximum audible-signal time**; allows you to select the maximum time the horn will sound for, after which only other types of signalling will continue until the Ivy unit restores to standby.

5 - **Visual signals**; the first option allows blinking on the STATUS and PRG LEDs activated by the LED input; the other options allow you to select the visual signal on the flasher.

6 - **TAMPER and FAULT Outputs**; allows you to select the type of contact (normally open or normally closed) of the outputs during standby status.

7/8 - **START/LED Input Activation**; allows you to select the signalling associated with the activation of this input.

9/14 - **Power failure; Open-casing tamper; Foam tamper, Blow-torch tamper; Horn damage; Battery fault**; allows you to select the signalling associated with the event.

15 - **Restore Default / Address**; if you select the option with "all LEDs On solid", the current programming will restore to factory default settings. Selection of the BUS Address is achieved by the summing the value corresponding to each LED On solid (max. 10); restoral to default does not change the assigned address.

Programming from a PC 5-3

Only BUS-connectable Ivy units can be programmed via PC. The SmartLeague software will allow you to program/change the previously mentioned parameters/settings of the Ivy unit.

PATTERN

Additionally, the software application allows you to program the "patterns", that is to say, the type of signalling, duration and volume of the audible signals.

Using the SmartLeague software programme, open a "SmartLiving" solution, select the Sounderflasher option from the control panel layout (on the right side of the page) then, access the "Programming" section (on the left side of the page) which contains the parameters of each pattern:

- **Pattern description** - 16 character description of the pattern
- **Activate sounder** - enables/disables sounderflasher activation
- **Duration (sounder)** - sounder activation time, expressed in seconds (from 1 to 125) or in minutes (from 1 to 125)
- **Sound type** - the sound of the audible signal; 5 tones available
- **Volume** - 17 volume levels available
- **Activate flasher** - enable/disable flasher activation
- **Duration (flasher)** - flasher activation time, expressed in seconds, minutes or " Endless". If " Endless" is selected, the flasher will signal continuously or at least until receives a cut-off pattern signal. If the event that triggers the " Endless" signalling mode is a zone alarm, terminal tamper, partition alarm, partition tamper the flasher will be cut-off by memory reset operations.
- **Flash mode** - 4 visual signals are available.
  - 1=36 flash/min
  - 2=46 flash/min
  - 3=56 flash/min
  - 4=On solid
- **Activate STATUS LED** - enable/disable activation of the STATUS LED
- **Activate PRG LED** - enable/disable activation of the PRG LED
- **Activate TAMPER output** - enable/disable activation of the TAMPER output
- **Activate FAULT output** - enable/disable activation of the FAULT output

The 8 available types/patterns, preset at default, are programmed as indicated in the table:

Table 9: **Pattern - default**

n	Description of pattern	Activate sounder	Sounder duration (seconds)	Sound type	Volume	Activate flasher	Flasher duration (seconds)	Flash mode (flash/min)	Activate STATUS LED PRG LED TAMPER output FAULT output
1	Burgulary	ON	180	Tone 1	16	ON	180	56	OFF
2	Low-volume burgulary	ON	180	Tone 1	6	ON	180	56	OFF
3	Fire	ON	180	Tone 3	16	ON	180	56	OFF
4	Tamper	ON	180	Tone 1	16	ON	180	36	OFF
5	Prealarm	ON	30	Tone 1	0	ON	30	36	OFF
6	Automation	ON	3	Tone 1	6	OFF			OFF
7	Squack	ON	1	Tone 5	0	ON	3	On solid	OFF
8	Chime	ON	3	Tone 4	0	ON	3	On solid	OFF

A Cut-off pattern can be:

Total cut off	OFF	ininfluent	OFF	ininfluent	OFF

Select a sounderflasher from the control panel layout (on the right side of the page), then access the "Programming" section (on the left side of the page) where you will find the following 5 sections:

REAL TIME

Press the "Real time" button to view the current values of the following sounderflasher options:

- **Battery voltage** - internal battery voltage of the sounderflasher
- **Line voltage** - voltage measured of terminals 1 and 2
- **Temperature** - internal temperature value measured by the heat gauge (*Table 3, J*)
- **Left/Right foam detector** - value detected by the foam-tamper protection device (*Table 3, I*)
- **Tamper** - condition detected by the tamper protection sensor (*Table 3, K*)

SOUNDER/ FLASHER PARAMETERS

The "Read device" and "Write device" buttons will allow you to download and set the device parameters listed in this section, which coincide with those describe in paragraph *5-2 Programming Menu*.

Additionally, the device provides the "**IBUS monitor**" parameter which, when activated after control panel reset, monitors the BUS for one minute. The BUS status is indicated on the PRG LED:

- On solid - BUS disconnected
- 1 blink per second - BUS connected and sounderflasher not enrolled
- 2 blinks per second - BUS connected and sounderflasher enrolled

TEMPERATURE DETECTED

If the temperature inside the sounderflasher indicated in the "Real time" is inaccurate, you can use this section to set the real value of the temperature adjusting the "Temperature detected" gauge to the real vaule and by pressing "Offset".

LED ACTIVATION EVENTS

This section allows you to programme the PRG and STATUS LEDs of each sounderflasher. Each LED can be activated by up to 5 control panel events.

If the "**Invert**" option is disabled, LED activation occurs when the respective event is active. If the "**Invert**" option is enabled, LED activation occurs when the respective event is not active.

Note

If the assigned event is a "pulse" event, the Off status of the LED will occur only when you exit the control panel programming session.

SOUNDER/ FLASHER CUT OFF EVENTS

In this final section, you can select up to 5 control panel events which cut-off the sounder and flasher.

If the "**Invert**" option is disabled, the sounder and flasher will cut-off when the respective event activates. If the "**Invert**" option is enabled, the sounder and flasher will cut-off when the respective event deactivates.

Note

If the assigned event is a "pulse" event, its inversion is unable to trigger sounder and flasher cut-off.

Appendix A

ORDER CODES

Code	Product
DCMIINE0IVY	Installation and programming guide
Ivy	Self-powered outdoor sounder/flasher
Ivy-B	Self-powered outdoor sounder/flasher connectable to BUS
Ivy-BF	Self-powered outdoor sounder/flasher connectable to BUS with foam tamper protection
Ivy-BFM	Chrome-look self-powered outdoor sounder/flasher connectable to BUS with foam tamper protection
Ivy-BM	Chrome-look self-powered outdoor sounder/flasher connectable to BUS
Ivy-F	Self-powered outdoor sounder/flasher with foam tamper protection
Ivy-FM	Chrome-look self-powered outdoor sounder/flasher with foam tamper protection
Ivy-M	Chrome-look self-powered outdoor sounder/flasher
LINKIBUS	Temporary I-BUS link cable
SmartLeague	Programming and management software for INIM devices
SmartLiving505	Intrusion control panel with 5 terminals, 5 partitions, 1.2 A switching power supply, metal casing for 7Ah battery
SmartLiving515	Intrusion control panel with 5 to 15 terminals, 5 partitions, 1.2 A switching power supply, metal casing for 7Ah battery
SmartLiving1050	Intrusion control panel with 10 to 50 terminals, 10 partitions, 3A switching power supply, metal casing for 7Ah battery
SmartLiving1050L	Intrusion control panel with 10 to 50 terminals, 10 partitions, 3A switching power supply, metal casing for 17Ah battery
SmartLiving10100L	Intrusion control panel with 10 to 100 terminals, 15 partitions, 5A switching power supply, optional TCP/IP connectivity, metal casing for 17Ah battery

Notes

Warranty

INIM Electronics s.r.l. (Seller, Our, Us,) warrants the original purchaser that this product shall be free from defects in materials and workmanship under normal use for a period of 24 months. As INIM Electronics s.r.l. does not install this product directly, and due to the possibility that it may be used with other equipment not approved by Us; INIM Electronics s.r.l. does not warrant against loss of quality, degradation of performance of this product or actual damage that results from the use of products, parts or other replaceable items (such as consumables) that are neither made nor recommended by INIM Electronics. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. In no event shall INIM Electronics s.r.l. be liable to the purchaser or any other person for any loss or damage whether direct ot indirect or consequential or incidental, including without limitation, any damages for lost profits, stolen goods, or claims by any other party caused by defective products or otherwise arising from the incorrect or otherwise improper installation or use of this product.

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage arising from improper maintenance or negligence
- damage caused by fire, flood, wind or lightning
- vandalism
- fair wear and tear

INIM Electronics s.r.l. shall, at its option, repair or replace any defective products. Improper use, that is, use for purposes other than those mentioned in this manual will void the warranty. Contact Our authorized dealer, or visit our website for further information regarding this warranty.

Limited warranty

INIM Electronics s.r.l. shall not be liable to the purchaser or any other person for damage arising from improper storage, handling or use of this product.

Installation of this Product must be carried out by qualified persons appointed by INIM Electronics. Installation of this Product must be carried out in accordance with Our instructions in the product manual.

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Directive 2004/108/CE (EMC) compliance

Hereby INIM Electronics s.r.l. declares that IVY sounders are in compliance with the essential requirements and other relevant provisions of Directive 2004/108/CE.

The full declarations of conformity of the above-mentioned devices are available at URL: www.inim.biz

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