

SELF-POWERED SOUNDER/FLASHER FOR OUTDOOR USE



INSTALLATION
AND
PROGRAMMING
MANUAL

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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 signaling 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.

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

ATTENTION!

Document details 1-1

Issue: 2.60
 Month and year: October 2013
 Code: DCMIINE0IVYN

Box contents 1-2

- 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

Product description and models 1-3

Description: Self-powered outdoor sounder/flasher
 Year of production: 2013

Table 1: Models

Name	Description
Ivy-N	Standard model
Ivy-NF	Standard model with foam-tamper protection
Ivy-NM	Standard model with chrome-look casing
Ivy-NFM	Standard model with chrome-look casing and foam-tamper protection

Table 2: Operating features

Features	Ivy-N	Ivy-NF	Ivy-NM	Ivy-NFM
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	*	*	*	*
Programmable flasher sequence	*	*	*	*
Backup battery with test circuit	*	*	*	*
Houses 12V, 2.1 Ah backup battery	*	*	*	*
IP34 Rated	*	*	*	*
CEI 79-2:1998 and 79-2/Ab:2000 Compliant	*	*	*	*
Foam protection		*		*
Chrome-look casing			*	*
Ancillary alarm input (START)	*	*	*	*
Stop alarm and alarm-immunity input (STOP)	*	*	*	*

Technical description 1-4

Table 3: Technical specifications

Operating voltage	nominal	13.8 V
	maximum	14.0 V
	minim	13.2 V
Minimum current draw		15 mA
Maximum current draw		150 mA
Sounder output (I=3m)		110 dB(A)
Flash rate per minute (programmable)		36 - 46 - 56
Maximum alarm-time (programmable)		3 - 6 - 9 min
Protection class		IP34
Operating temperature		-25 to +55 °C
Backup battery		12V - 2.1Ah
Dimensions (W x H x D)		21x29x9.5 cm
Weight (without battery)		2.2 Kg

SIRENA AUTOALIMENTATA PER USO ESTERNO
SELF-POWERED SOUNDER/FLASHER FOR OUTDOOR USE
SIRENA/FLASH EXTERIOR AUTOALIMENTADA

MADE IN ITALY

INIM Electronics s.r.l.

Alimentazione Power	13.8 V _{nom}
Voltage operativo	
Assorbimento MAX MAX power absorption Consumo máx corriente	0.15 A

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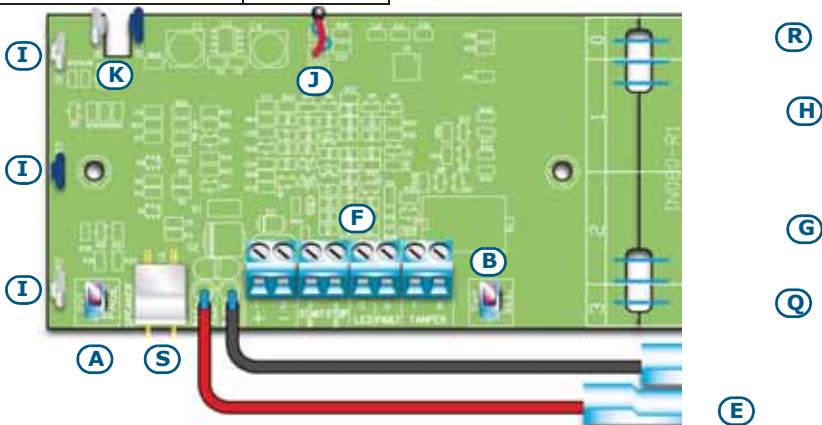
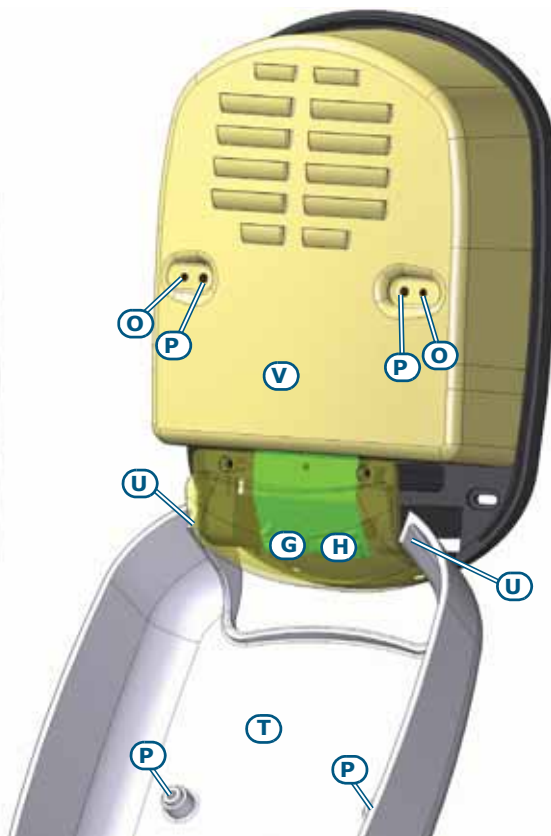
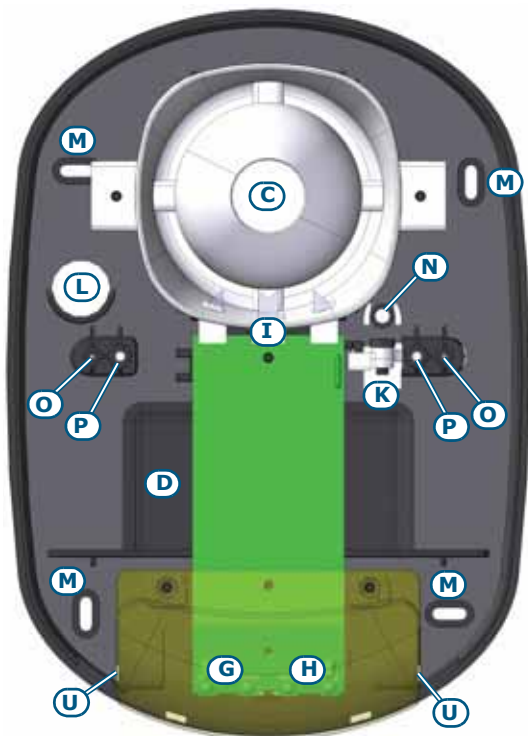


Table 4: Description of parts

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 5: Terminal board

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



Chapter 2

INSTALLATION

The Ivy unit should be mounted high up on a smooth surface, in such a 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 4, U*).
3. Remove the metal guard (*Table 4, V*).
4. Pull the connection wires through the cable entry (*Table 4, L*).
5. Using the wall plugs, attach the plastic backplate to the wall (*Table 4, M*). The wall plug locations are clearly marked on the drilling-pattern (included).
6. Insert the tamper-protection screw into its location (*Table 4, N*).
7. Locate the battery in its housing (*Table 4, D*), then connect it by means of the battery wires (*Table 4, 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.

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

Note

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).

Battery connections 2-2

This device requires a 12V, 2.1Ah battery (not included) which must be connected by means of the respective wires (*Table 4, 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.

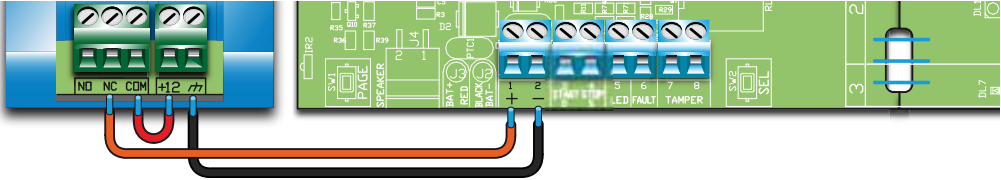
Failure of the battery-efficiency test will generate the respective signal (*Table 6, Inefficient battery*). If the battery voltage drops below 11V during an alarm event, the horn will deactivate automatically, however, all other signaling will continue until the voltage drops below 10V. All functions will be re-established when the battery voltage restores to 12V.

Wiring the device 2-3

The following paragraphs describe the various ways of connecting the Ivy unit to an intrusion control panel. All connections involve the terminals on the motherboard (*Table 4, F*). Each terminal can be configured separately during the programming phase.

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

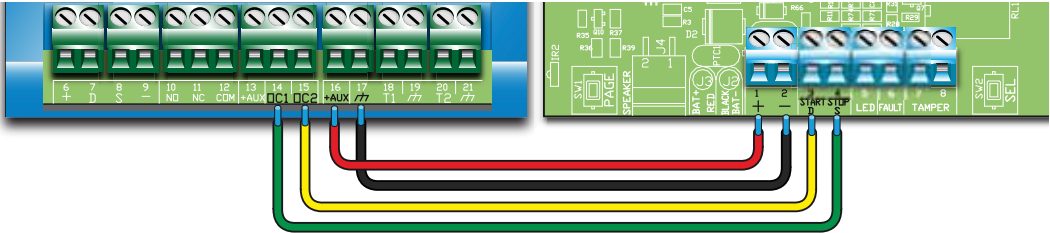
2 WIRE CONNECTION



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

4 WIRE CONNECTION

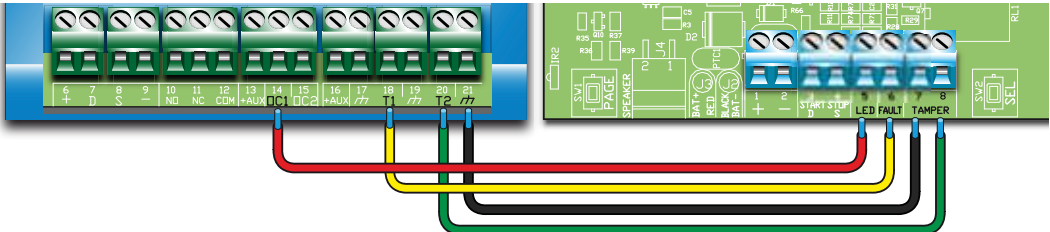
The sounder/flasher is activated by an open-collector output (on the intrusion control panel). By means of a second open-collector output, you can deactivate alarm signals and disable (block) the sounder/flasher from the intrusion control panel, for example, during maintenance sessions.



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

EXTRA CONNECTIONS

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



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.

Signaling will cease when one of the following conditions occurs:

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

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

Types of signal 3-1

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

SOUNDER/ FLASHER EVENTS

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

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

Note

This signaling 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.

MAINS FAILURE

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).

START INPUT

The STOP signal allows you to force the Ivy unit to standby status thus blocking all signaling. 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.

STOP INPUT

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.

Note

This input, which activates when it connects 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.

LED INPUT

Managing multi-alarm conditions

3-2

There is no priority amongst the various signals. If the Ivy unit detects signals, it will activate the programmed signaling 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

SIGNALING

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

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

Types of signaling 4-1

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 4, G*) and the right group (*Table 4, H*). This type of circuitry allows you to select the options on the Programming menus.

VISUAL SIGNALING

The two ancillary LEDs, reveal the device status and guide you through the programming operations (STATUS LED - *Table 4, Q*; PRG LED - *Table 4, R*).

STATUS LED - PRG LED

These two LEDs, with proper programming, signal faults and tampers of the sounder/flasher; please refer to paragraph 4-2 *Tamper memory and fault signaling*.

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.

AUDIBLE SIGNALING

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.

FAULT 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 OUTPUT

Tamper memory and fault signaling 4-2








The STATUS and PRG LEDs provide visual signaling of horn faults and tamper memory by emitting a series of fast blinks (at 0.5 second intervals). This visual signaling 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 signaling

LED	Number of blinks	Event		Menu option	
				Number	Option
STATUS	1	Faults	Horn fault	13	
	2		Low battery	14	
	3		Inefficient battery	14	
PRG	1	Tamper memory	Power failure	9	
	2		Open casing	10	
	3		Foam tamper	11	
	4		Blow torch tamper	12	

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 4, A*) allows you to access the menus.

3  PRG LED	2  Visual signaling left	1  right	0  PRG LED
--	--	---	--

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 4, 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	Menu options	3	2	1	0	3	2	1	0	3	2	1	0	3	2	1	0	
			●	○	○	○	○	●	○	○	○	○	●	○	○	○	○	●	○
0	○ ○ ○ ○	Exit without saving	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	Exit
1	○ ○ ○ ●	START Input	Negative applied	Positive applied	Negative removed	Positive removed	Deactivated												
2	○ ○ ● ○	STOP Input	Negative applied	Positive applied	Negative removed	Positive removed	Deactivated												
3	○ ○ ● ●	Audible signaling	Tone 4	Tone 3	Tone 2	Tone 1	/												
4	○ ● ○ ○	Maximum duration of audible signaling	*	9 minutes	6 minutes	3 minutes	/												
5	○ ● ○ ●	Flashes	Blinking on the LEDs connected to 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	STATUS LED	PRG LED	Visual signaling	Sounder	Deactivated												
8	● ○ ○ ○	Activation of the LED input	STATUS LED	PRG LED	Visual signaling	Sounder	Deactivated												
9	● ○ ○ ●	Power failure	FAULT Output	TAMPER Output PRG LED	Visual signaling	Sounder	Deactivated												
10	● ○ ● ○	Open-casing signal	FAULT Output	TAMPER Output PRG LED	Visual signaling	Sounder	Deactivated												
11	● ○ ● ●	Foam tamper signal	FAULT Output	TAMPER Output PRG LED	Visual signaling	Sounder	Deactivated												
12	● ● ○ ○	Blow-torch tamper signal	FAULT Output	TAMPER Output PRG LED	Visual signaling	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	● ● ● ●	Reset default	Default ● ● ● ●					Exit											

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

- 0 - PRG LED
- 1 - Right LED on flasher circuit
- 2 - Left LED 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.
- 1 - **START input:** allows you to select the polarity of the START input.
- 2 - **STOP input:** allows you to select the polarity of the STOP input.
- 3 - **Audible signaling:** 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 signaling 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 signaling 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 signaling 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.

Appendix A

ORDER CODES

Code	Product
DCMIINE0IVYN	Installation and programming guide
Ivy-N	Self-powered outdoor sounder/flasher
Ivy-NF	Self-powered outdoor sounder/flasher with foam tamper protection
Ivy-NFM	Chrome-look self-powered outdoor sounder/flasher with foam tamper protection
Ivy-NM	Chrome-look self-powered outdoor sounder/flasher

The Manufacturer (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 the Manufacturer does not install this product directly, and due to the possibility that it may be used with other equipment not approved by Us; the Manufacturer 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 the Manufacturer. 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 the Manufacturer be liable to the purchaser or any other person for any loss or damage whether direct or 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

The Manufacturer 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.

The Manufacturer 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 the Manufacturer. Installation of this Product must be carried out in accordance with Our instructions in the product manual.

The information contained in this document is the sole property of the Manufacturer. No part may be copied without written authorization from the Manufacturer.

All rights reserved.

Hereby the Manufacturer 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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Warranty

Limited warranty

Copyright

Directive 2004/108/CE (EMC) compliance

