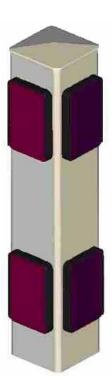
Version : 1.3

# INFRARED BARRIER SYSTEM FOR SWIMMING POOL

**BIPROTECT** 



# User and Installation Notice

To read attentively and to conserve for further consultation

The alarm system Biprotect conforms with the NF P 90-307

#### Table of contents

<ol> <li>Warranty, Responsibility</li> <li>Safety notice</li> </ol>			
2		3	
3		nctional Description of the Biprotect system	4
4		mponents and features of the Biprotect system	5
	1.1	Central alarm unit	6
	1.2	Remote	6 6
	1.3		6
	1.4	The poles	6 7
5		tallation	7
	5.1	Segment of protection :	7
	5.2	Examples of setting up :	8
5	5.3	Mounting the poles	9
5	5.4	Positioning the central unit	10
5	5.5	Connections	10
5	5.6	Activating the system	12
5	5.7	Matching and aligning the infrared beams:	13
5	5.8	Setting position of the infrared cells	14
5	5.9	Shutting down the system	15
5	5.10	Technical Characteristics:	15
6	Util	isation	16
6	5.1	Activating the alarm system	16
6	6.2	Temporary deactivation of the alarm system	16
6	5.3	Turning off the siren	16
6	6.4	Use of the sensor bracelet	16
7	Tes	sting and diagnostics	17
7	7.1		18
7	7.2	Testing the siren	18
	7.3		19
8	Ado	ding new components	20
9		intenance	20
g	9.1	Changing the batteries of the sensor bracelet	21
ç	9.2	Changing the batteries of the remote control	21
10	Inte	erpretation of sounds and visual signals of the alarm system	22
11		ase of problems	22
12		ety Notice	23

#### 1 Warranty, Responsibility

Our products are guaranteed for any manufacturing defect.

All our products (batteries not included) are guaranteed for two years from the purchase date.

The present warranty is limited to the replacement of recognized defected parts by Firstinnov' company. All parts must be returned in their original packaging and shipping costs are in the charge of the purchaser.

This guarantee does not cover any damage caused by improper installation, wiring, or by connecting to an improper power source, mechanical alterations, dropping, misuse, lack of maintenance.

The manufacturer and his suppliers decline any responsibility towards any person for any damage or complaint resulting from a non-observance of this manual or failure to observe the safety instructions. Such cases void the guarantee.

You are only authorized to change the batteries and it should be done in the beginning of the season. Fuses should also be changed in case of over voltage.

#### Warning

- 1- The content of this manual is subjective to modifications without notice
- 2- Due to printing restrictions, the symbols displayed in this manual may differ from the ones in the product.
- 3- The content of this manual may not be reproduced without the manufacturer authorization.

#### 2 Safety notice

It is strongly advised to use a professional for installation and maintenance of the alarm system.

Depending on the distance from your residence to your pool it may be necessary to deport the safety signals, the alert and the failure signals in order to be heard. During the installation, Verifying you can hear the siren is imperative. Extra sirens can be purchased as an option.

Read the instructions carefully before installing or using the alarm system.

In case the alarm is ON, do not approach the siren too closely .Prolonged exposure to an excessive sound level may cause hearing loss.

Using radio frequency devices that operates in the 434 MHz band (for example wireless head sets) will not interfere with the transmission, and will not trigger the alarm. However it may reduce the range of the radio units.

Firstinnov' declines any responsibility for injury or material damages resulting from the use of the alarm system.

When the system is in failure mode, you must take all the necessary measures in preventing the access to the pool to any child under five years old until the system is repaired..

The user that deactivates the system must be aware that human surveillance is mandatory. The highest caution from parents or responsible adults is necessary between the end of the swimming until the reactivation of the alarm system.

The safety bracelet is used for children under five years old.

# Do not use the safety bracelet in sea water or in a swimming pool with a high concentration of salt

Keep the remote out of reach of children at a minimum height of 1 meter 60.

#### 3 Functional Description of the Biprotect system

The alarm system Biprotect forms an invisible infrared barrier that detects the access of children to the borders of the pool. A perimeter is materialised by transmitting and receiving poles that are connected by infrared beams.

A double infrared beam is positioned in two different heights in order to form two zones of protection: One at 20 cm and the other one at 45 cm from the ground.

By pressing the buttons located on the central unit or on the remote, the alarm beams are temporarily deactivated to allow adults to swim. However, the temporary deactivation action of the system is secured.

Biprotect can also come with the following extra features:

- A safety bracelet that detects the presence of water (element of the alarm system Blueprotect) which is recommended as an extra security device when the barrier alarm system is deactivated.

- A wireless door sensor that can be placed on the access gate to the pool, the door or the window of your residence.

#### 4 Components and features of the Biprotect system

Infrared transmitting cell : White case	Infrared receiving cell: Grey case
pole for infrared cells fixation	Wired central alarm unit that commands the temporary on / off functions, integrating indicator LED, a siren and a rechargeable battery
Multi function remote allowing to command the temporary on/off function and to put the central alarm unit in test mode.	Complementary safety bracelet useful during the temporary deactivation of the infrared alarm system.

Figure 1 : Ordinates of the Biprotect system

- 1. Transmitting or receiving cells
- 2. Integrated siren
- 3. Logo FI for recognition of radio units
- 4. Activation or temporary deactivation buttons on the central alarm unit.
- 5.Test button of the alarm system
- 6.Activation button on the remote

- 7. Temporary deactivation button on the remote
- 8. Test button of the alarm system
- 9. Water-sensitive sensor electrodes
- 10. Logo FI, for recognition of the bracelet
- 11. Bracelet locking security clasp

The alarm system Biprotect is composed of a central alarm unit, 2,3 or 4 poles, a remote control and a sensor bracelet.

#### 4.1 Central alarm unit

The central alarm unit is equipped with an integrated siren (2) which is activated by crossing the infrared beams or the immersion of the safety bracelet in water. You can shut down the siren by pressing one of the two buttons (4 or 5) or by pressing one of the the buttons in the remote.

The buttons (4) and (5) allow activation/ temporary deactivation and the testing of the system. The indicator LED red and green indicates the state of the central alarm unit (activated, deactivated in test mode, main power failure signal, fall in the water etc.).

The logo FI indicates the recognition zone (3) (see paragraph about adding new components).

The three fixation points allow a safe mounting of the central alarm unit to guarantee a good positioning. A hole in the back allow introduction of power cable of the central alarm unit.

#### 4.2 Remote

The (6) and (7) buttons command the activation and the temporary deactivation.

The logo sticker FI (3) indicates the location of the zone used when adding new components not originally delivered with the system (see paragraph about adding new components).

The (8) button allow to enter the system in test mode.

#### 4.3 The sensor bracelet

The two electrodes (9) detect the presence of water. The logo sticker FI (10) indicates the zone used for adding new elements to the system (see paragraph about adding new components).

Each sensor bracelet is equipped with a mechanical security clasp to prevent accidental removal.

#### 4.4 The poles

The poles are composed of receiving and/or transmitting infrared modules.

#### 4.4.1 Parts of the poles :

According to the number of segments of protection around the pool, three types of poles can be installed.

#### Single segment protection :

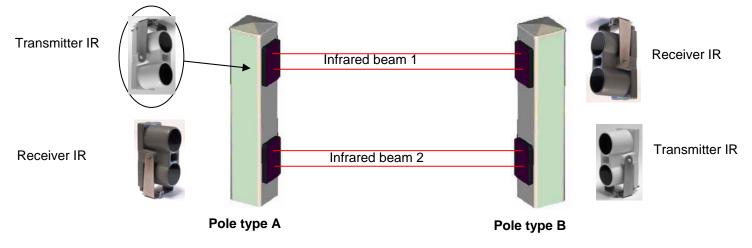


Figure 2 : Single straight pole, segment of protection

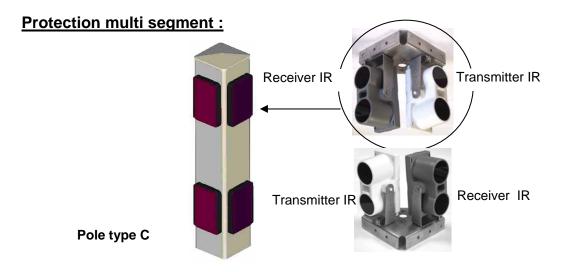


Figure 3 : Angle pole multi segment protection

#### 5 Installation

A correct installation is imperative for proper functioning of the system. Please read carefully the following instructions :

#### 5.1 Segment of protection :

The perimeter surrounding the pool is divided into segments of protection. Each segment is constituted of two infrared beams materialized by transmitting and receiving modules.

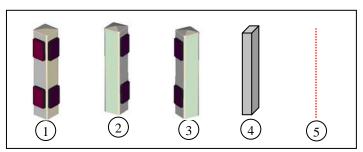
To ensure protection, all segments must be:

- either continuous (4 segments of protection around the pool).

- or discontinuous (1, 2 or 3 segments of protection around the pool) with one physical element such as a wall, a façade that comes in between the perimeter of protection and prevents from its size and shape any crossing ...with a minimum height of 1,10 m between two supporting points.

The physical element must conform with the fences norm NF P 90 306.

#### 5.2 Examples of setting up :



Legend of the different elements

- 1 Poles type C
- 2 Poles de type B
- 3 Poles de type A
- 4 Obstacle
- 5 Infrared beam

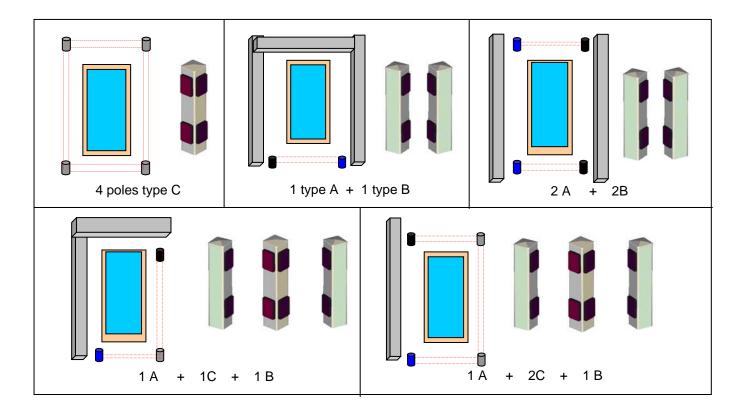
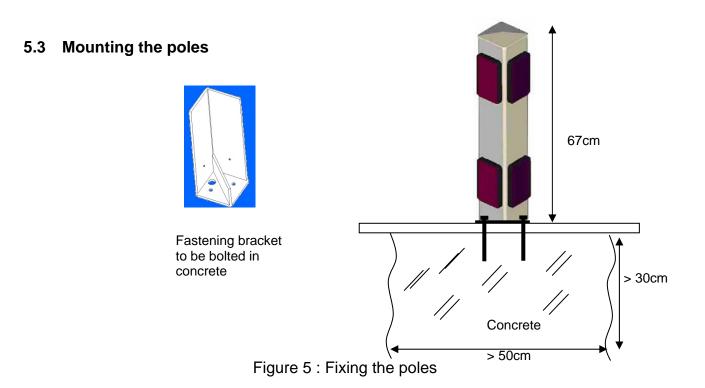


Figure 4 : Examples of installation.



**WARNING**: Before drilling holes of the fastening bracket, remove the glass from the poles by sliding them towards the bottom (see figure 6). Pre-position the poles in such way that each white infrared cell is facing and is at the same height as the grey- coloured cells. Ensure the continuity of the segments of protection around the pool. The poles must be placed at a minimum distance of 4m and a maximum distance of 20m.

Remove the 4 screws from the bottom of the pole in order to free the fastening bracket. The bedding must be done with care.

To obtain the best resistance of the poles it is advised to use an anchor bolt which is at least 800x10 mm. The drilling diameter is 12 mm.



Figure 6 : Removing the panes

9

#### Positioning the poles

Do not expose the poles neither directly and intensely to the sun nor too close to a reflecting surface (1.5m minimum). Whichever season it is, do not let any vegetation cut through the infrared beams.

#### 5.4 Positioning the central unit

Place the central unit sheltered from the rain and sun in order to avoid premature ageing of the case.

An improper installation may alter the performance of the alarm system which represents a danger for the safety of your child.

Place the central unit on a support (wall, board, etc.) at approximately a height of 1 meter 60, like shown in Figures 7 or 8.Use the drilling kit provided. Do not drill the fixation holes directly through the case. Do not touch the electronic chip card and its antenna during installation. Run the power cables through the opening in the back of the case in order to plug the central unit. The central may be connected to any pole at your convenience.

While using the sensor bracelet, the maximum range between the central unit and the further corner of the pool is 30m depending on the configuration of the pool. The alarm system range will depend on the pool environment. To obtain the best efficiency, there should be no obstacle between the central and the edges of the pool ( wall, tree...).

When the sensor bracelet is not used, you must respect a maximum distance of 30 meters between the central and the nearest pole.

The central unit must be positioned at 3.5m minimum from the side of the pool.

#### 5.5 Connections

**WARNING**: A power cable of a one hundred meter long (2 conductors) is supplied to connect the different elements of the Biprotect system. If you use another cable to connect the central unit to the poles, do not use a cable exceeding a 100m length .The wire section must be  $1mm^2$  minimum.

Place the sheathed power cables underground for protection The electrical installation must conform to the norm NF C15 100.

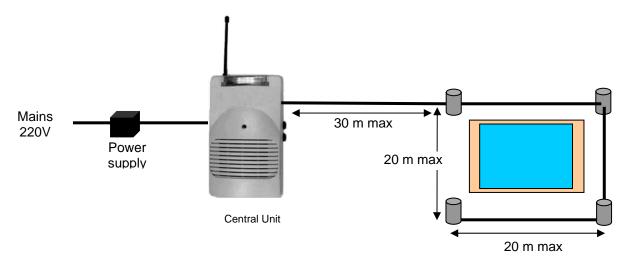
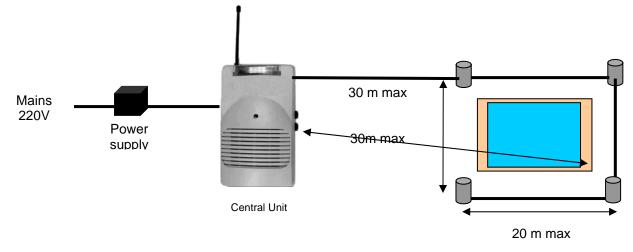
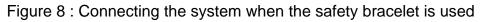


Figure 7 : Connecting the system when the safety bracelet is not used





To facilitate the electrical installation, you do not have to respect polarity to connect the wires. This applies to all the Biprotect system accessories.





Figure 9a : Connecting the bus of the Central Figure 9b : Connecting the power supply

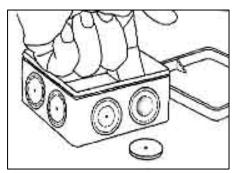


Figure 10a : Dismantling the rubber grommets for the Wires of the distribution box



Figure 10b : Connecting the poles

Unscrew the cap of the pole and open the distribution box. Dismount the rubber grommets by pushing the interior membrane of the interior towards the outside of the box. Run the wires through the hole of the plastic membrane and connect. Each pole is equipped with two connectors

Use one or two connectors according to the position of connection of the pole (see figure 7 or 8).

#### WARNING

Never connect more than one wire on the same point of connection of the pole (do not make a loop wire connection. The connection wires will run on maximum 3 sides of the swimming pool.

#### 5.6 Activating the system

Connect the power supply unit to the mains, open the central unit using a screwdriver and dismount the panes of the poles. Put the switch of the central unit in ON position. When, the central unit is initialised, it emits a beep. The green indicator light comes ON and the red indicator blink. The indicators LED of all the infra-red cells inside the poles blink. The alarm system is temporarily OFF for 15 min.

**WARNING:** When activating the alarm system, please check that all the LED and all the infrared cells are turning ON. If one of the indicator is OFF, check the connection of the system again before proceeding to the matching and alignment as explained in the paragraph 5.7.

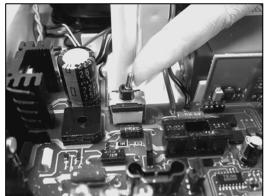


Figure 11 : Activating the system

12

#### 5.7 Matching and aligning the infrared beams:

This procedure consists of selecting and activating one beam at a time in order to adjust and align the two infra-red cells which materialize it.

To protect the pool, there can be from 1 to 4 segments of protection (see §5.2).

Each segment of protection consists of two beams positioned with two different heights (see § 4.4.1). Repeat the procedure for each infrared beam.

Follow the procedure below:

1 – Remove any obstacle which is in the beam alignment way

2 – Position the FI logo of the black alignment tool (see figure 12) on the blue corner of the first cell of the pole at the extremity of the beam (see figure 13). The central unit emits a beep.

3 - Position the FI logo of the black alignment tool on the corner of the second cell at the other end of the same beam (cell of the opposite pole at the same height)

The central unit emits 2 beeps and the LED indicator of the two selected cells blinks. Check that the indicator of all the other cells is OFF.

4 If the central unit emits a double repetitive beep and that the indicator of the grey cell is red, the beam is not aligned.

Adjust the position of the white cell and then that of the grey cell (see §5.8). The adjustment must be made so as to direct the two cells, one towards the other, in direction of the beam axis, until the central emits one single repetitive beep. If the central unit does not emit any beep, please see paragraph 11 in case of a problem.

5 – Position the optical filter on one of the two cells (see figure 14). The central must continue to emit a single repetitive beep and the indicators of the two cells must be green. Otherwise, refine the adjustment of the cells..

 $\hat{6}$  – When the beam is aligned, position the FI logo of the black alignment tool on the second cell in order to validate the beam alignment.

7 – Repeat the same procedure for each beam



Figure12: Alignment tool



Figure13: Positioning the tool

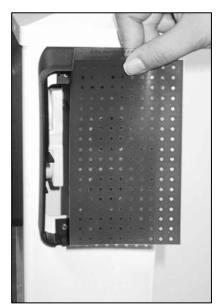


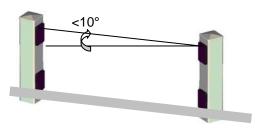
Figure 14 : positioning the optical filter

<u>ATTENTION</u>: The matching procedure of the infra-red cells is mandatory at the first use. It must be carried out on all the beams of the installed system. Do not use the remote control and the bracelet during this procedure

At the end of the procedure mount the panes on the poles and press twice on one of the buttons of the central unit to activate the system. The system is functional and ready to be used.

If you encounter any difficulty, refer paragraph 11 in case of a problem.

#### 5.8 Setting position of the infrared cells



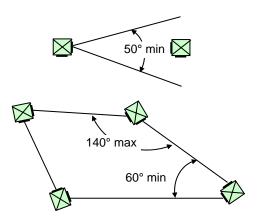


Figure 15a : Vertical adjustment

Figure 15b : Horizontal adjustment

Proper functioning of the Biprotect system depends on the alignment of the poles. The posts must be fixed on a flat ground preferably in concrete with a flatness of more or less 1 cm.

The cells can be directed horizontally according to the position of the poles around the pool and vertically in the event of a slope of the ground around the swimming pool. The slope of the ground should not exceed 10° (see figure 15a).

The poles must be positioned the ones compared to the others with an angle lower than 140° (see figure 15b).



Figure 16a : Horizontal Orientation



Figure 16b : Vertical Orientation

### 5.9 Shutting down the system

In case of strong snow fall (17cm) or intense white frost, you can shut down the alarm system by positioning the switch on OFF position.

# 5.10 Technical Characteristics:

Height of the beams:	20cm and 45cm above the ground
Power supply :	12V AC
Audible alarm:	105dBA at1m (+/-5dB)
Autonomy of the rechargeable battery of the central :	6 h
Autonomy of the bracelet batteries:	2 years
Autonomy of the remote batteries:	5 years
Frequency of radio transmission:	433.92MHz
Operating temperature:	-25 to +70°C
Distance between two posts:	4m minimum and 20m maximum
Alignment angles of the detectors :	$\pm 25^{\circ}$ horizontal et $\pm 10^{\circ}$ vertical

The Biprotect system is in conformity with the European Directive on radio frequency equipments R&TTE 1999/5/CE and with the French norm on swimming pool alarm systems NF P 90-307.

#### 6 Utilisation

As a reminder, the Biprotect system is a monitoring help. It does not exempt in any case the presence and vigilance of a responsible adult.

#### 6.1 Activating the alarm system

The system can be activated by pushing the button of the central unit or the remote control:

On the central unit : press the button (4).

On the remote : press the button (6).

When the alarm system is activated, the red indicator of the central is lit continuously.

#### 6.2 Temporary deactivation of the alarm system

The deactivation is secured in order to prevent the risk of deactivation by children, or a non intentional action. The system can be deactivated by pushing the button of the central unit or the remote control:

By the central : press the button (4) of central for at least 3s (it emits a beep). While pressing the button (4), press on the button (5). The second action must be done in less than 10s.

By the remote : While pressing the button (7), press the button (6). The central unit then emits a beep.

The system is deactivated for 15 min after the last crossing of one of the infra-red beams. After this time, the central automatically activates the alarm system, the central then emits beeps to warn you of the reactivation of the alarm system.

#### 6.3 Turning off the siren

The alarm goes off in the two following cases :

- The crossing of one of the beams when the alarm system is activated

- Presence of an obstacle throughout 15 minutes when the alarm system is deactivated.

The siren can be stopped by pressing on any button of the central or the remote control.

#### 6.4 Use of the sensor bracelet

When the system is installed and tested, you just need to put the bracelet around the child's wrist.

Never cover the sensor bracelet with clothing

#### 6.4.1 Locking the sensor bracelet around the wrist

Before using the sensor bracelet ensure that the two electrodes are clearly visible. The sensor bracelet is equipped with a security clasp which makes its accidental or involuntary removal difficult for a child .

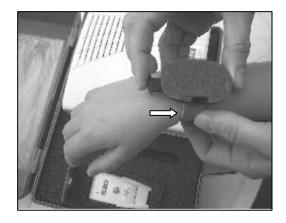
Make sure that the bracelet is working (see paragraph « testing et diagnostics ».

1. Unlock the bracelet. Pinch the first end of the casing to release the catch and slide the tongue out by pulling on the other end. It is necessary to carry out this handling simultaneously to slide the tongue

2.Follow the steps below to fit the sensor bracelet around the wrist.



Insert the strap into the slot underneath the bracelet body and adjust it to the size of the wrist. Not too tight



Lock the sensor bracelet

Figure 17 : Locking the sensor bracelet

#### 6.4.2 Removing the sensor bracelet

To open the catch under the bracelet, simultaneously pinch the first end of the casing to release the catch and slide the tongue out by pulling on the other end. Then remove the strap by pulling gently.

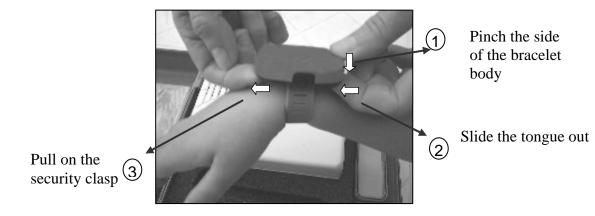


Figure 18 : Removing the bracelet

#### 7 Testing and diagnostics

The Biprotect system is equipped with a certain number of diagnostic functions that allow you to test the functions and to alert you in the event of any malfunction of the alarm system.

After installation, carry out a complete testing of the system. Do not forget to regularly test the Biprotect system according to the following procedure.

## 7.1 Test Procedure

The activation of the test mode is protected to prevent the risk of activation by children or caused by a non intentional action.

Put the central unit into test mode by pressing the button on the central unit or on the remote control.

By the central unit: press the button (4) of central for more than 12s (the central emits a double beep). While pressing the button (4), press on the button (5).

By the remote : While pressing the button (8), press the button (6).

The central unit emits a beep and the red indicator LED turns off. The system is in test mode throughout 20s.

The test mode allows you to check the correct operation of the infrared beams and the sensor bracelet. This handling will have to be repeated for the testing of each one of these two elements.

#### 7.1.1 Testing the crossing of the infrared beams

Cut through the infrared beams using an obstacle of a section superior to 10x10cm. The central unit emits two beeps.

The central unit has well detected the obstacle. Withdraw the obstacle, the central emit a triple beeps.

1. The crossing test is valid and it is possible to renew this procedure for another beam as many times as necessary.

2. If the central unit does not emit any beep, undertake the alignment procedure again and check that there are no objects reflecting around the posts

#### 7.1.2 Testing the bracelet

1. Dip the sensor bracelet into the pool (bellow 10cm deep), if the system is working correctly the central unit will emit a double beep. The central has well detected the immersion of the sensor bracelet during the test. Remove the bracelet from the pool, the central will emit a triple beep.

The test of range is valid and it is possible to renew the procedure at another place of the swimming pool (as many times as necessary).

2.If the central unit does not emit beep, check the batteries of the various elements of the system or refer the paragraph "adding new components".

It is highly advised to test the bracelet before each use.

#### 7.2 Testing the siren

After the installation, start the siren. According to the establishment of the residence compared to the swimming pool, it might be necessary to offset the signals of safety, alarm and failure so that they are heard from the dwelling.

A checking is essential after the installation. Additional sirens can be provided as an option.

#### 7.3 Power supply failure

#### 7.3.1 Indication absence of the mains

In case of mains power failure, the green indicator LED starts blinking. The red indicator LED turns OFF except in alarm mode or in temporary deactivation mode. After 4 minutes a beep is emitted every 30 seconds.

<u>WARNING</u>: In case of the mains failure the system is fed by the rechargeable battery.. If the failure lasts more than 6 hours, the infrared beams are deactivated. the green indicator LED keeps blinking for at least 24 hours until the battery is completely discharged.

#### 7.3.2 Indication defect battery of the central unit

In the event of presence of the mains and defect of the battery the green indicator LED blinks and a beep is emitted every 30 seconds

The red indicator LED stays ON except when the alarm goes ON or when it is temporary deactivated.

#### 7.3.3 Indication of weak batteries of the sensor bracelet or the remote

The batteries lifetime are respectively 2 years for the sensor bracelet and 5 years for the remote control. These components transmit to the central unit the state of their batteries. Note that if one of the components is stored for a long time in a place where the communication with the central unit is not established, it is possible that the batteries are discharged without the central announcing it.

To identify the failing element:

1. Ensure correct operation of the component. If it does not function, see paragraph 11 in the case of problems.

2.Ensure that the alarm system is in Alert mode. The red indicator LED is ON continuously

3. Position the Firstinnov' FI logo of the failing component in front of the Firstinnov' FI logo of the central unit (few millimetres). The red indicator LED goes OFF.

- If the red LED become ON continuously, the battery is OK. Try with another component.
- If the red LED stays off, the battery is not in function
- If the red LED blink, you have identified the component with the weak battery.

4. When you replace the batteries of the failing component, try the functionality. The weak battery signal automatically disappears. If the central unit continues to emit a beep, it means that another component has a weak battery. In this case repeat the procedure

#### 8 Adding new components

The sensor-bracelet and the remote control, as provided at the time of the delivery, are operational, i.e. that it is not necessary to carry out the recognition procedure. If however, a doubt remains or if other sensor-bracelets are added to the basic equipment, the recognition is thus necessary ( see the procedure hereafter).

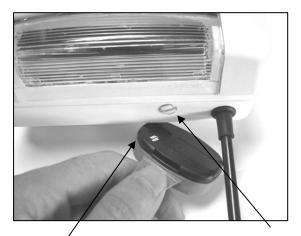
1. Deactivate the alarm system

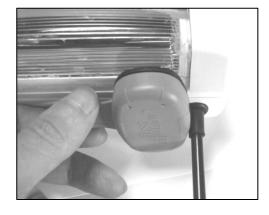
2. Locate the Firstinnov' FI logo of the new component on the lower part of the housing of the component to be identified.

3. Position the Firstinnov' FI logo of the new component in front of the Firstinnov' FI logo of the central unit

4. The central unit emits a beep to indicate the success of the operation.

If the procedure fails see the paragraph 11 in case of problems.





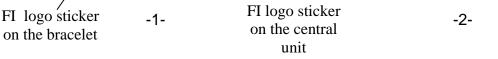


Figure 19 : Example of a bracelet recognition :

#### 9 Maintenance

It is advised to regularly test the correct operation of the Biprotect system and to test the sensor bracelet before each use.

Do not wash the central unit with large amount of water.Use a wet sponge to clean the case.

A maintenance record is stuck inside the central alarm unit and allows you to track the dates of the interventions or other repairs.

It is important to keep the bracelet clean. Wash the two electrodes with a soft brush, soap and water (Warning ! Do not put inside the washer or use abrasive products etc.).

#### 9.1 Changing the batteries of the sensor bracelet

The sensor bracelet battery life is about two years .If the indicator announces « weak battery bracelet » change it ( battery type 3V CR2032) as follows :

1. Locate the opening slots on the back of the bracelet. Insert a broad-bladed screwdriver into each slot alternately and gently prize the bottom housing out.

2. Extract the old battery (type 3V CR2032) from its holder and replace it by the new one of the same type (making sure that the + marking is uppermost).

3. Close the housing and test the bracelet (see paragraph 5 installation)





Figure 19 : Changing the batteries of the sensor bracelet

#### 9.2 Changing the batteries of the remote control

The remote control battery life is about three years. If the indicator announces « weak battery remote control» change the two batteries (type CR1220) as follows :

1. Open the remote with a cross headed screwdriver.

2. Carefully extract the old batteries from its holder and replace them by the new batteries (making sure that the + marking is facing up). Do not forget to put back the plastic ring surrounding the batteries.

3. Reassemble the housing, screw it shut and test the remote control (see paragraph 6: use).

**WARNING** : During the replacement of the batteries, do not touch the circuit board. Any deterioration of the circuit board is not guaranteed by Firstinnov..

#### instructions concerning the batteries

The batteries should not be thrown in the household disposals. To be in accordance with the local norm please dispose of used batteries in an environmentally-friendly fashion by using the public collection system or by returning them to your retailer or manufacturer.

# 10 Interpretation of sounds and visual signals of the alarm system

# **Operational System**

Green LED	Red LED	Sound signal	State of the system
Lit	Lit	none	Alarm system activated
Lit	Slow blinking	none	Alarm system temporarily deactivated
Lit	Fast blinking	The siren starts	Detection of the crossing of the infrared beams or immersion of the bracelet in water
Lit	Slow blinking	Beeps every second	Imminent reactivation of the system
OFF	OFF	none	System in out of order mode

# Failing System

Green LED	Red LED	Sound signal	Failure causes
Blinks	OFF	Beeps every 30s	the mains failure for more than 4 min
Blinks	Lit	Beeps every 30s	Battery failure
Lit	Lit	Beeps every 30s	Bracelet or remote Battery failure
Lit	Fast blinking	Release of the siren during 2s followed by a beep every 30s	Defect wiring

# 11 In case of problems

Problem	Probable Cause	Solution
The LED of the central unit or the cells don't light up The central does not emit a repetitive beep	<ul> <li>Central switch OFF</li> <li>Failing fuses</li> <li>Wires connections</li> <li>Mains failure</li> <li>the two cells at the end of the same beam are the same colour</li> </ul>	<ul> <li>Turn ON the central</li> <li>Change the fuses</li> <li>Check the connections</li> <li>Check the power supply</li> <li>Re-examine the positioning of the poles</li> </ul>
at the time of the alignment procedure The siren starts	<ul> <li>(white or grey)</li> <li>Connection</li> <li>Bad alignment</li> <li>Object occulting the beams</li> <li>Connection</li> <li>Beam reflected by neighbouring surfaces (glazed surface, reflective wall)</li> </ul>	<ul> <li>Check the wiring</li> <li>Re-do the alignment procedure</li> <li>Release the object</li> <li>Check the wiring</li> <li>Re-examine the installation and the positions of the various poles</li> </ul>

Problem	Probable Cause	Solution
The sensor bracelet does not work	-The electrodes are obstructed - Weak battery - Functioning range between the bracelet and the central unit is higher than 30m	<ul> <li>Clean the electrodes</li> <li>Change the battery</li> <li>Re-examine the installation and the positions of the central</li> </ul>
The remote does not work	- Weak battery	- Change the battery

#### 12 Safety Notice

The Biprotect is an alarm system for private unenclosed swimming pools, for individual or collective use, which present a danger. The fast intervention of a responsible person is obligatory.

This alarm system is a safety device which announces a danger (or risk of danger). The fast intervention in less than 3 min of a responsible adult is obligatory when the signal of alarm starts. It is imperative to react when the failure signal resounds.

This alarm system replaces neither the common sense nor the individual liability. Its purpose is not to replace the vigilance of the parents and/or the responsible adults, which remains the main factor of protection of children under five years old.

The safety of your children only depends on you! The higher risk is when the children are under five years old.

Accidents do not only happen to others! Be ready to face it ! Please follow the safety instructions below :

#### SUPERVISE AND ACT:

- The children monitoring must be close and constant
- Designate only one person in charge of the safety
- Reinforce the monitoring when there are several users in the swimming pool
- Teach your children how to swim as soon as possible
- Wet the neck, arms and legs before entering the water
- Learn the first aid techniques and especially those specific to the children;
- Prohibit the dive or the jumps in the presence of young children;
- Prohibit the race games or sharp plays around the swimming pool
- Do not authorize the access to the swimming pool without waistcoat or life jacket to any unaccompanied child who does not know how to swim
- Do not leave any toy near or in the unsupervised pool
- Take out any attractive floating objects from the pool which can encourage children to lean and fall into the water.
- Never leave a child alone near the swimming pool or any water area with 10 or 20cm deep
- Keep the water clean and limpid
- Store all water treatment products out of children's reach

23

#### TO PLAN:

- An accessible phone near the pool in order not to leave your children without supervision while you're on the phone
- Lifebuoy and pole near the pool
- Memorize and post up the first aid phone numbers near the swimming pool:

Fire brigade : (18 for France);

SAMU : (15 for France) ;

Antipoison Centre: .....

#### **INSTRUCTIONS IN CASE OF AN ACCIDENT :**

- Do not panic.
- Take the child out of the water as soon as possible
- Call for help immediately and follow the instructions given over the phone;
- Replace the wet clothes with a warm cover

The severity of the drowning depends on the time of the discovery, sometimes it takes longer than we think, due to the initial panic that prevents the surroundings from acting and starting the first aids.

The label containing the pictogram recalling the adults their duty to supervise young children and announcing the electronic monitoring must remain stuck on the central unit near the swimming pool.

**Firstinnov'** 5, rue du Chant des Oiseaux 78360 Montesson France France Email : <u>dsp10@firstinnov.com</u>