Frequently Asked Questions about LifeLocator® III+

LifeLocator System

1 **When should I use LifeLocator over other methods to locate victims?**

The GSSI LifeLocator is a complementary tool to traditional methods of search and rescue. However, unlike canine searches, the LifeLocator is not subject to scent drift and does not get tired. Since the LifeLocator specifically detects motion and breathing, it narrows the search & rescue effort to locating living victims. LifeLocator does not require complete silence as is the case with audio-based systems. And unlike video monitoring systems, LifeLocator does not require void spaces for line of sight access and can detect motion up to 10 meters from the sensor.

2 **How difficult is LifeLocator to use?**

The LifeLocator is very easy to operate. After system power up, the user can select "Expert Mode" or a simple "Run Mode" that displays information via a graphical user interface. In Run Mode, detected motion is indicated on screen with a black square, breathing with a red circle. When motion or breathing is detected, the distance to the source is indicated on screen.

As with any tool, operator proficiency comes with regular practice using LifeLocator - highly recommended.

3 **What Do the Three LEDs (Blue, Red, Green) signify on the sensor?**

When the sensor is powered up, the Blue LED illuminates. After approximately 45 seconds, the Red LED will flash, indicating that wireless communication is ready to be established between the sensor and the PDA. The Red LED will illuminate steady once wireless communication with the PDA is established. At this point, the Green LED will illuminate, indicating that the sensor is transmitting radar energy and LifeLocator is ready for use.

4 **The PDA will not connect (wirelessly) to the sensor – what should I do?**

a) Confirm that the WLAN is connected to "LFGSSIAH" and that the Bluetooth is set to "Off".

b) Confirm that the PDA is paired with the proper antenna. Under "MAIN MENU" the check box in the "CONNECT TO" submenu should be populated ("V") and the serial number should match the serial number of the sensor. (The serial number on the sensor is located under the handles.)

c) Check that the red LED is flashing on the sensor. With the "MAIN MENU" displayed, the PDA should indicate a green square moving back and forth along the bottom of the display. Select "Run Mode".

d) Should the above steps fail, power down the sensor and reboot the PDA (press the Power button for 5 seconds).

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Survey Setup and Results

1   **What is the best way to plan a search?**

Whenever possible, the layout of a square grid pattern will ensure adequate coverage of an area. The grid should be laid out such that the both the positioning of the sensor along one line and the line to line spacing is 4 meters. Offset the position of the sensor for alternate lines by 2 meters. When viewed from above, this will create a diamond pattern.

Be sure that the operator is standing back 15 meters (and no more than 30 meters) from the sensor.

2   **What is the search volume of the LifeLocator?**

Put simply, it is the volume of a cone 10m deep. The angle of the cone varies depending on soils and moisture, but is generally 15 to 20 degrees from horizontal.

3   **Why does the size of the black square (indicating movement while operating in Run Mode) seem to change size?**

The size of the red circles and black squares changes with detection confidence, the larger the icon, the higher the confidence level.

4   **The distance indicated on the PDA to the victim is somewhat erratic and indicates a rapid change between multiple depths – why?**

There may be a source of noise located above ground in close proximity to the sensor. The operator may be standing too close to the sensor (it is recommended that all personnel stand back a minimum of 15 meters from the sensor). Or the source of noise could be wind-blown vegetation.

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UWB Technology

1   **Is the signal coming out of the sensor harmful?**

No. The signal coming out of the sensor is approximately 1/100 the power level emitted from a cell phone and is completely safe for humans and animals.

2   **What are the advantages to using "Expert Mode" over "Run Mode"?**

Pros:

- Data in viewed in real time, allowing the user to make judgments on motion detection.

- Good for troubleshooting, confirming that the system is properly working, identifying spurious sources of noise (i.e., someone walking too close to the sensor)

Cons:

- Expert Mode does not employ the automated detection and signal processing capabilities of Run Mode – faint breathing may be impossible to visually detect in Expert Mode.

3   **What does the "Gain" function do in "Expert Mode"? How should this value be set?**

Gain is a display tool to adjust screen contrast. Increase the Gain setting to increase the contrast when the displayed data is too faint, decrease the Gain setting when the displayed data is "over gained" or saturated. To set, increase the Gain until the display begins to saturate - indicated by the presence of bright jagged artifacts - and back down one setting (numerically lower).