



*Passive*

**INSTALLATION AND  
USAGE OF THE  
BB ALERT® PASSIVE  
BED BUG MONITOR**



**MIDMOS**

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# BED BUGS

Bed Bugs are small, secretive, normally nocturnal insects that feed on blood. They spend most of their time hidden in tiny cracks and spaces close to where their host rests, and usually only venture out to feed when it is dark and quiet. Their small size, secretive behavior, and preferred harborage make them the perfect hitchhiker, and one of the easiest pest insects to inadvertently transport between locations on personal belongings and furniture.

Initial infestations of Bed Bugs usually consist of just a few insects, sometimes only one female or even a few eggs, and at this stage the problem is rarely detected. However, most modern buildings provide everything needed for Bed Bugs to thrive. They contain numerous safe places to hide with no natural predators, ample food provided by the human hosts, and controlled temperatures close to optimal for their development. Under these conditions a small Bed Bug population can rapidly grow to a significant size.

Given everything they need, Bed Bugs are prolific. Females start to produce eggs only 3 days after mating, lay between 3 and 5 eggs each day, and each female may scatter up to 500 eggs in the local environment during her life. The eggs hatch in about a week, and the young Bed Bug that emerges will pass through five developmental stages in one to two months, each requiring at least one blood meal. The male and female adults also feed on blood, and the females require at least one blood meal in order to produce eggs. Under these conditions, just a few Bed Bugs can develop into a population of several thousand over a period of 6 months.

The available resources will become limited as the Bed Bug population grows. Even though Bed Bugs may take between 5 and 8 times their body weight in blood at each feed, the first resource to become stressed is usually the availability of suitable hiding places near to the host. This causes the population to spread through the structure, and even migrate to connected or adjacent buildings. If the Bed Bug population grows large enough they may even be found living outside cracks in plain view, and have been found to feed on household pets and even chickens if their food supply becomes limited.

The BB ALERT® Bed Bug monitors are scientifically designed to exploit the Bed Bug's natural behavior. The BB ALERT® ACTIVE Bed Bug monitor and detector simulates clues that Bed Bugs use to find their host, and will attract both adult and immature Bed Bugs in search of the blood meals they require. The BB ALERT® PASSIVE monitor (also available from Midmos Solutions) provides the ideal secure harborage Bed Bugs prefer, and is very attractive to Bed Bugs when placed close to the potential host's resting site. When used as part of a Bed Bug monitoring program, the BB ALERT® products can provide early evidence of Bed Bug activity while the population is still small and contained, a factor critical to minimizing the extent, disruption, and cost of remedial treatment.



# BB ALERT® PASSIVE

The BB ALERT® PASSIVE monitor provides routine monitoring and early detection of Bed Bugs. It is designed to be both easy to use and quick to inspect, and exploits the insect's natural behavior by providing a perfect secure resting site for Bed Bugs. It should be placed close to the Bed Bug's normal feeding site, which in most instances is the bed. The BB ALERT® PASSIVE monitor does not provide Bed Bug control, and should be used as part of an integrated Bed Bug management process.

The BB ALERT® Passive monitor has no moving parts and contains no pesticides or other consumable components. It will provide continuous Bed Bug monitoring for up to 12 months.



# PLACEMENT OF BB ALERT® PASSIVE

Bed Bugs will travel considerable distances between their daytime resting sites and the host, but will almost always prefer to rest very close to their feeding site if a suitable secure harborage is available. The BB ALERT® PASSIVE monitor should therefore be positioned as close to the potential feeding site as possible, bearing in mind that it should not be subject to continuous disturbance and will need to be available for routine visual inspection. The actual placement will vary from situation to situation, but some suggested sites are:

- On the head end of the bed box springs (if available) between the headboard supports.
- On the underside of the top slat of the bed at the head end.
- Placed between the mattress and the bed box springs or platform at the headboard end of the bed.
- On the rear of the headboard.
- On the wall below the headboard of the bed, level with the mattress.

The BB ALERT® PASSIVE monitor has a sticky coating on its back to secure it to surfaces. While this can be used in many installations, it should not be used to secure the detector to surfaces that may be damaged when it is removed. Examples of unsuitable surfaces are wallpaper, polished wood furnishings, or mattresses that are protected against Bed Bug entry by encasements (Bed Bug mattress covers).

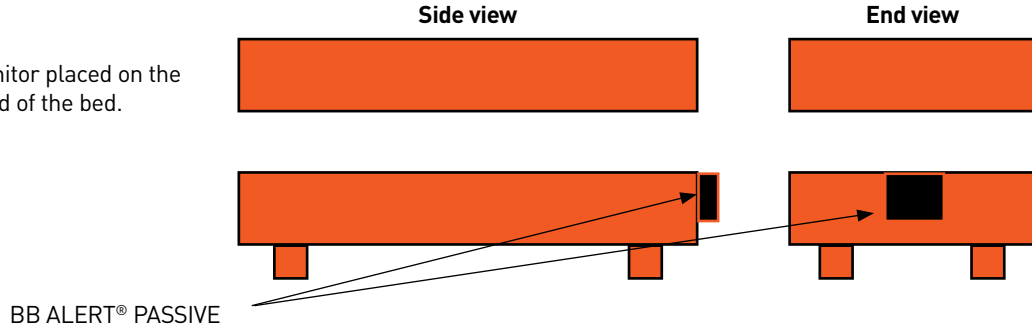
For sensitive surfaces the BB ALERT® PASSIVE monitor should be used without removing the protective cover on the sticky coating.



**Example Bed Installation Placements**

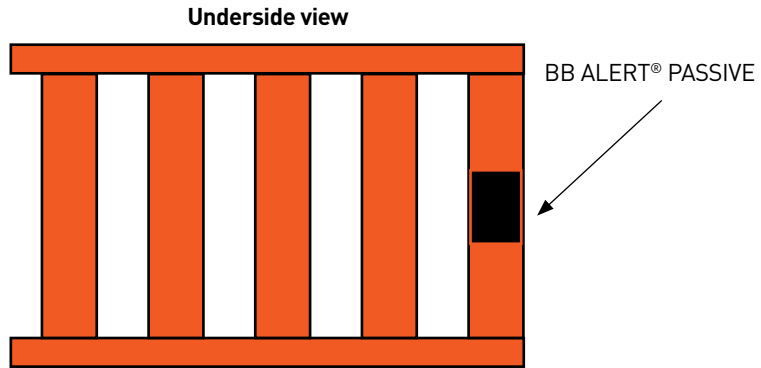
**Bed with Box Springs**

BB ALERT® PASSIVE monitor placed on the box spring at the head end of the bed.



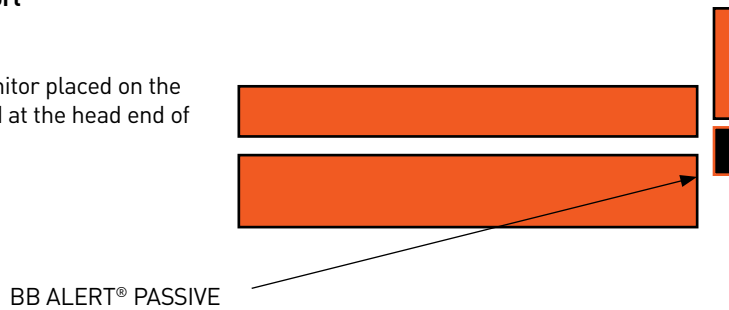
**Bed with Slatted Mattress Support**

BB ALERT® PASSIVE monitor placed on the underside of the wooden mattress slats at the head end of the bed.



**Bed with Platform Support**

BB ALERT® PASSIVE monitor placed on the wall below the headboard at the head end of the bed.



# INSPECTING BB ALERT® PASSIVE

Inspection of the BB ALERT® PASSIVE monitor should be made at a minimum interval of once per month for general monitoring, and as often as once per week in high risk situations. The monitor's cover includes a calendar grid which should be used to note the inspection date. If no evidence of Bed Bugs is found, the BB ALERT® PASSIVE monitor should be left in place.

## Bed Bug Signs – Fecal Traces

The BB ALERT® PASSIVE monitor has a white border surrounding the core harborage material. Bed Bugs that have fed will void the excess liquid from their meal before returning to their daytime resting site. This leaves black marks (known as fecal traces) on the surfaces nearby. These marks are always present when Bed Bugs are active in an environment. Bed Bugs that are attracted to the BB ALERT® PASSIVE monitor will leave these markings on the unit's white border, where they can be easily identified.



Bed Bug fecal traces can be confirmed by dragging a cotton swab that has been moistened with water through the marks, which will smear if they are caused by Bed Bugs.

The number of fecal traces found on the BB ALERT® PASSIVE monitor is indicative of the number of Bed Bugs present or the length of time that they have been active.



### Bed Bug Signs – Cast Skins

Nymph Bed Bugs must shed their skin five times during their growth, and the cast skins from developing Bed Bugs may also be found on the monitor's border.

The cast skins look like hollow, paper thin copies of the nymph Bed Bug and are often dispersed by air currents. They are attracted to the surface of the BB ALERT® PASSIVE monitor's white border by their electrostatic properties.



# WHEN BED BUG ACTIVITY IS DETECTED

If you find evidence of Bed Bug activity on the BB ALERT® PASSIVE monitor you should place it in a sealed plastic bag (such as a re-sealable zipper storage bag) and remove it from the location - there may be live Bed Bugs sheltering in the unit and they should be contained to prevent spreading the problem. It is recommended that any insects found are saved for identification by a pest control professional or other qualified person. You should not assume that removing Bed Bugs with the BB ALERT® PASSIVE monitor has eliminated the Bed Bug problem. Some Bed Bugs may be hiding in other locations as well as in the monitor, and there may be Bed Bug eggs that remain in the environment.

Bed Bug problems almost always start off very small (usually with just one or two Bed Bugs), and at this stage they normally remain totally undetected. BB ALERT® PASSIVE's continuous monitoring may therefore indicate the presence of Bed Bugs before any other signs of their activity have been noticed. This is the stage in the development of a Bed Bug problem where prompt remedial action is easiest to implement, and complete elimination of the Bed Bug population can be achieved with the minimum of disruption and cost. It is therefore important to take action promptly.

There are pest control products available to the general public for the control of Bed Bugs. However, Bed Bugs are considered by professional pest control operators to be one of the most challenging pests to eliminate, and it is not recommended that you embark on an elimination program without careful research into Bed Bug biology, behavior and control techniques. Most people will seek professional assistance with a Bed Bug elimination program.

## PESTICIDE APPLICATION

Bed Bugs are known to be able to detect and even avoid pesticides in their environment. In general, area wide treatment with pesticides is not recommended during Bed Bug monitoring, and application of pesticides in close proximity or directly to the BB ALERT® monitors will negatively impact their ability to detect Bed Bugs. If the area where you are installing the BB ALERT® monitor has been recently treated with pesticides, you should very thoroughly clean the surfaces immediately surrounding the area prior to installation, and if you have a professional pest control operator providing service at your location, you should advise him of the BB ALERT® monitor placements in order that the application is compatible.



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# CONFIRMING BED BUG ELIMINATION

Having a Bed Bug problem is distressing and, however thoroughly treatment is performed, there is often the fear that a Bed Bug elimination program has somehow failed to find every last insect.

The BB ALERT® products offer a cost effective method to provide reassurance that the property is Bed Bug free after treatment, and to then continuously protect the premises against the undetected re-establishment of Bed Bug populations.

The BB ALERT® ACTIVE Bed Bug monitor (also available from Midmos Solutions) is designed to attract Bed Bugs that are seeking a blood meal, and can provide visual feed-back on the progress of a Bed Bug elimination program as well as confirmation of its success. Research has shown that periodic use of the BB ALERT® ACTIVE monitor in conjunction with the BB ALERT® PASSIVE monitor provides the highest level of Bed Bug detection, and is recommended for all locations with the potential for Bed Bug problems.

## MIDMOS SOLUTIONS

Midmos Solutions manufactures monitors to attract all stages of Bed Bugs looking for a blood meal, behavioural monitors that provide the perfect harbourage for Bed Bugs after they consume a blood meal, and specialty systems to treat Bed Bug infestation without the use of pesticides. Further information on Bed Bugs and the BB ALERT® products is available from: [www.BedBugsAlert.com/manuals](http://www.BedBugsAlert.com/manuals)





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