

The ZappBug Oven 2™

Owner's Manual



**IMPORTANT NOTICE:
Read Warnings Before Use!**

SAFE PROVEN EXTERMINATION

This page is intentionally left blank

Table of Contents

Important Safety Information	4
WARNING!	5
Hints & Tips	7
Components Included.....	8
Use & Operation.....	9
1. Unfold the ZappBug Oven 2.....	9
2. Connect the Two Heating Units.....	9
3. Select Appropriate Support Configuration.....	10
4. Locate Two Independent Power Outlets.....	10
5. Wireless Thermometer Set Up.....	11
6. Turn on Heating Units.....	14
7. Insert Items for Heat Treatment.....	15
8. Run Time.....	15
9. Remove Items After Heat Treatment.....	16
10. Folding and Storing the ZappBug Oven 2.....	16
Heat Treatment Chart.....	17
Troubleshooting.....	18
Warranty Information.....	20



Important Safety Information

You must comply with all safety information and operating instructions when using this product. Please read all Warnings outlined in this manual.

Failure to comply could result in personal injury, damage to property, or fire hazards.



Read This WARNING! Before Proceeding

WARNING!

Power outlets with poor electrical connections can become dangerously overheated and may result in severe injury, damage to property, or fire.

High-power appliances require more electric current than most household items. Old or high-use outlets can have poor or loose connections. The high current required by this product, combined with a poor electrical connection can cause outlets to overheat and melt. It is important to make sure that any outlets used with this product have strong electrical contact.

Follow the steps below for safe use of ANY high-power appliances:

1. Inspect outlet connection and contact strength.

Insert a standard, two-prong plug (without third, Ground connection) into outlet. Ensure that both prong connections offer equal and strong resistance when inserted. If the two-prong plug does not offer strong resistance or one prong feels easier to insert than the other, this outlet could be unsafe for high-power appliances. Have an electrician inspect and/or replace outlet before use.

2. Inspect outlets and plugs after each use

3. If you are unsure about an outlet, have an electrician inspect and/or replace the outlet.

Warning: Extension Cords

Some extension cords are not adequate to carry the load of current drawn by this heating unit without becoming dangerously overheated. If an extension cord must be used, do not use a cord rated less than *1500 watts or 15 amps*, and of a minimum size of 16 gauge. Only use an extension cord with the UL seal. Use of an inadequate extension cord may result in overheating of the extension cord or fire.

Warning: Old Electrical Wiring and Outlets

Each ZappBug heating unit will draw 12-15 amps of current (1500 Watts) and must be run on circuits rated **15 amps and above only**. Some old electrical wiring and outlets may not be capable of sustaining these loads. If you are unsure of the electrical wiring or outlets in your location, contact an electrician before operating ZappBug or any other high-current products. Old or faulty electrical wiring could lead to damage, injury, or fire. If an electrical cord appears deformed or feels hot to the touch, unplug it immediately and contact ZappBug customer service.

Additional Warnings

- Failure to comply with the warnings presented by this manual may result in severe injury and/or damage to property.
- Incorrect assembly or improper use may result in hazardous conditions. Only assemble the ZappBug Oven 2 according to instructions in this manual.
- **Do not block air intake or exhaust vents on heater.** Obstructions of the intake or exhaust vents can cause the heating unit to overheat and pose a fire hazard. Always maintain **6 or more inches of clearance** around the heating unit during operation.
- Do not use outside or in a wet environment. This product is designed for indoor use only.
- Do not reach into or insert objects into the ventilation fan while the heating unit is running. This may result in personal injury or damage to the unit.
- Do not place flammable objects or aerosols inside the ZappBug Oven 2.
- Some items may be damaged during heat treatment. Use caution when heat treating fragile items made of materials such as antique leather and wood.
- Consult the manufacturer of items in question, such as electronics, for a maximum safe temperature before placing them in the ZappBug Oven 2. Always monitor the temperature to ensure it does not exceed the recommended level.

Hints & Tips

BED BUGS

- Researchers have found that bed bugs at **all life stages** die quickly at temperatures at or above **120°F**.
- Bed bug eggs are nearly translucent and incredibly difficult to detect.
- A best practice is to **heat treat all items** that may have been in the vicinity of bed bugs even if no bed bugs are found. For pictures of bed bugs and bed bug eggs, please visit zappbug.com/bed-bug-pictures.
- Bed bugs can survive for up to **18 months without feeding**. It is critical that all potentially infested items are heat treated or, alternatively, sealed and stored for 18 months.
- Bed bugs can flatten their bodies and **slip into tiny cracks**.
- Bed bugs are unable to climb smooth, nonporous surfaces like the lining of the ZappBug Oven 2.
- For more information please visit zappbug.com/get-rid-of-bed-bugs.

THE ZAPPBUG OVEN 2

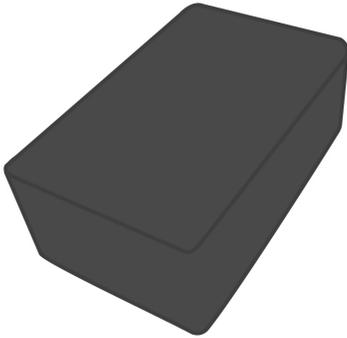
- Always use provided support blocks and/or net to ensure maximum air circulation around your belongings. If your belongings are densely packed together it will take significantly more time for them to reach bed bug killing temperatures.
- Make sure to turn the heating units on **before placing potentially infested items inside the ZappBug Oven 2**.
- Only use indoors with an **ambient room temperature at or above 70°F**. The heating unit works by adding heat to the air from the room in which it is located. If the ambient temperature is below 70°F, the ZappBug Oven 2 may not reach bed bug killing temperatures.
- Always **monitor the temperature** inside the ZappBug Oven 2 with the thermometer and thermometer probe provided.
- Do not place the ZappBug Oven 2 directly on cold floors such as concrete. **Always place the ZappBug Oven 2 on surfaces at or above 70°F**.

Components Included

The following components are required for proper use of this product. If you did not receive all of the components listed below, contact ZappBug immediately by phone at (206)-430-5514 or by e-mail at service@ZappBug.com.

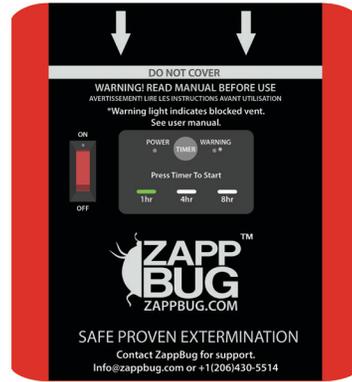
Note: Some components may appear different from the representations below.

Support Block



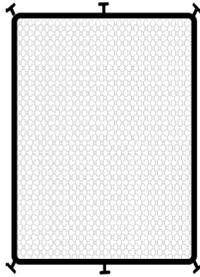
X4

ZappBug Heating Unit with Integrated Timer



X2

Support Net



X1

Extension Cord



X1

Carry Bag & Folding Oven



X1

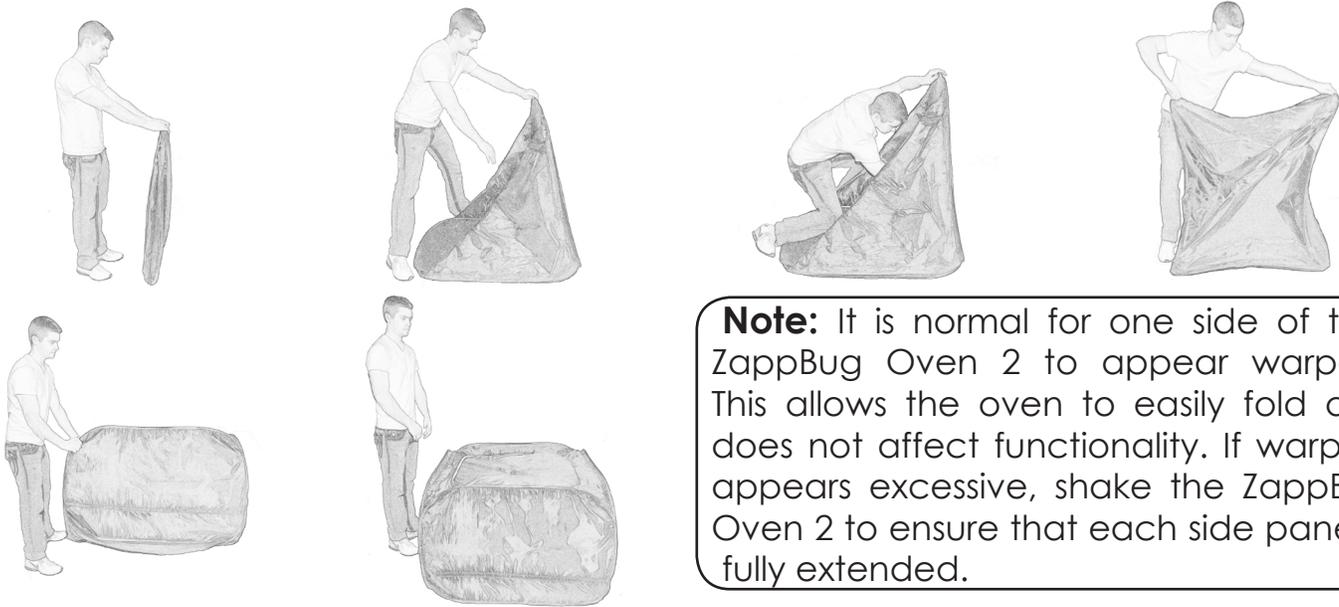
Wireless Thermometer



X1

Use & Operation

1. Unfold the ZappBug Oven 2



Note: It is normal for one side of the ZappBug Oven 2 to appear warped. This allows the oven to easily fold and does not affect functionality. If warping appears excessive, shake the ZappBug Oven 2 to ensure that each side panel is fully extended.

2. Connect the Two Heating Units



Locate Ventilation Tube



Place Base of Heating Unit in Tube



Stretch Tube Around Heating Unit
(Observe "Do Not Cover" markings)

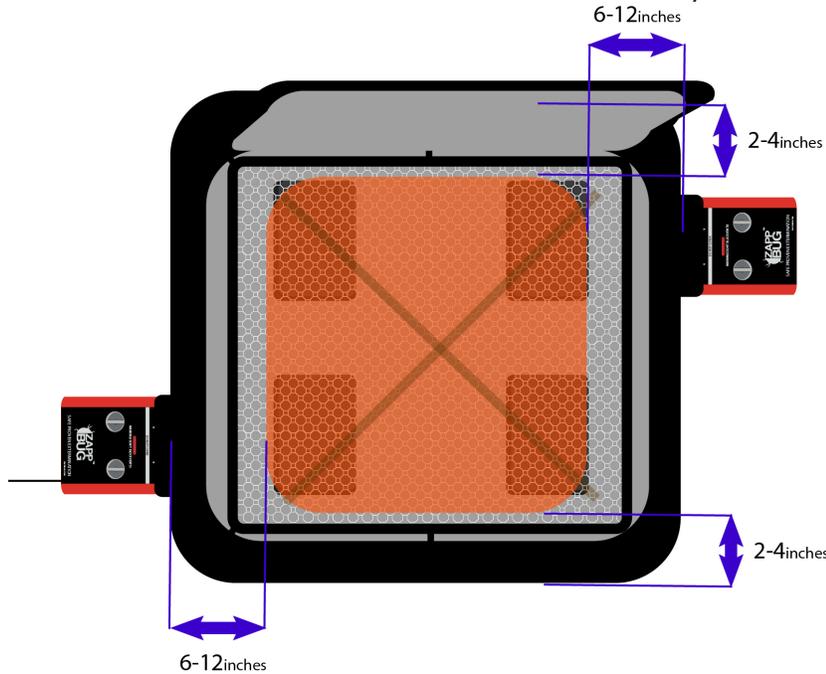
Note: It is normal for small gaps to appear between the textured side of the heating unit and the ventilation tube. Bed bugs **will not escape** through these gaps if the heating unit is on. Bed bugs experience thermal shock and are not capable of moving toward the heating unit. Always ensure that the heating units are on when placing potentially infested items inside the ZappBug Oven 2.

Safety Note: Always maintain a minimum clearance of 6 inches around the heating units when operating.

Use & Operation (continued)

3. Select Appropriate Support Configuration

The ZappBug Oven 2 has a unique and modular support system which is designed to accommodate a wide range of items. Support blocks allow for ventilation around rigid, heavy items such as luggage and small furniture. A combination of **support blocks** and the **support net** allow for ventilation around loose items such as books and clothing. Follow the appropriate support configuration for your items as shown below. It is critical that air is allowed to flow freely around the items you are heat treating



Place support blocks **under** the support net

Attach **support net** to loops located **inside** the ZappBug Oven 2

4. Locate Two Independent Power Outlets

NOTE: Each heating unit must be powered from its own circuit. Typical residential and commercial buildings have one circuit per room. Use the included extension cord to reach outlets in other rooms if necessary.

One extension cord is included with each ZappBug Oven 2. Plug one heating unit directly into a nearby electrical outlet.

Locate an electrical outlet in another room or area that operates on a separate electrical circuit. Typically, each room will have its own independent electrical circuit. Use the included extension cord to connect the remaining heating unit to a separate electrical outlet.

Use & Operation (continued)

5. Wireless Thermometer Set Up

The ZappBug Oven 2 comes with thermometer base station and a remote probe.



Thermometer Base Station



Thermometer Probes

Note: Set up the thermometer base station first

Use & Operation (continued)

Thermometer Base Station Set Up

1. Remove the battery door on the back of the base station as, shown in **Figure 1** below.
2. Insert one AA battery. All of the LCD segments will light up for a few seconds to verify that all segments are operating properly.
3. The thermometer base station will instantly display the ambient temperature. The probe temperatures will update on the display within a few minutes after you place batteries in the thermometer probe. **See Thermometer Probe Set Up on page 13.**

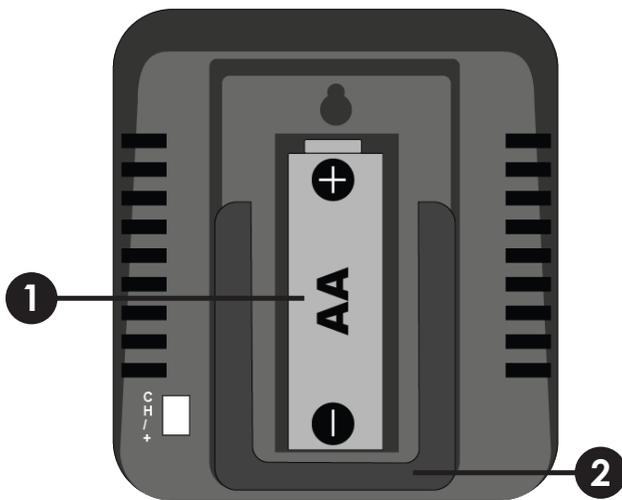


Figure 1

Figure 1

1. Battery Compartment
2. Stand Mount

IMPORTANT: Insert batteries and set up thermometer base station first

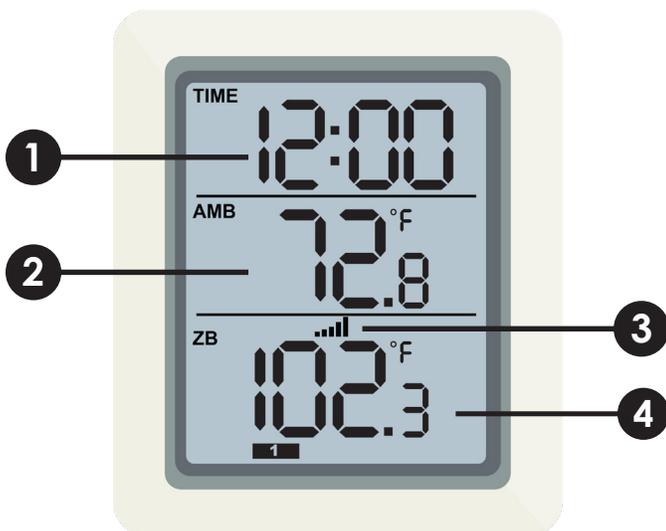


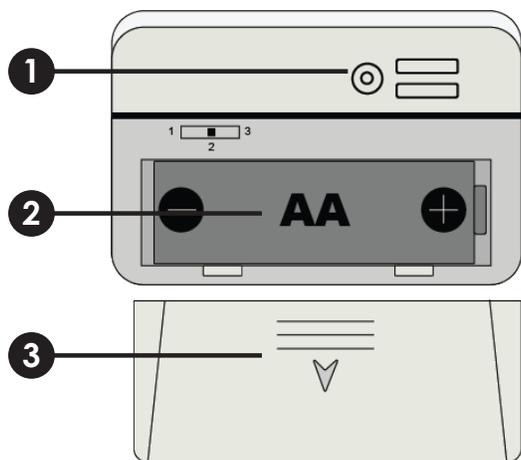
Figure 2

Figure 2

1. Time
2. Ambient Room Temperature
3. Reception Icon
4. Probe Sensor Temperature

Use & Operation (continued)

Thermometer Probe Set Up



Thermometer Probe

1. Wireless Transmitter LED
2. AA Battery
3. Battery Door

Remove the battery door on the back of the thermometer probe by sliding the door down and insert one AA battery.

1. After inserting the battery, the remote sensor LED indicator will light for 4 seconds, and then flash once per minute, thereafter. Each time it flashes, the sensor is transmitting data.
2. Close the battery door. While in search mode, the reception icon  will flash on the thermometer base station. **See Figure 2.**
3. Place the wireless thermometer probe in the deepest, most insulated part of the item being treated. Allow the ZappBug Oven 2 to run for 60 minutes or longer after the temperature reaches 120°F.
4. If you are not present while the unit is running, we advise setting the timers to 8 hours, however this is generally more time than required for the ZappBug Oven 2 to reach 120°F and maintain it for one hour.
5. If the base station does not update, view troubleshooting tips on **page 18.**

Use & Operation (continued)

6. Turn on Heating Units

1. Plug the heating unit into power outlet.
2. Place power switch in ON position.
3. Press the TIMER button to select desired run time.

We recommend using the 8-hour setting for large loads and the 4-hour setting for small to medium loads. Always use the included thermometer and thermometer probe to confirm that the temperature reaches lethal levels. See Heat Treatment Chart **on page 17** for more information.

Safety Note: Each heating unit draws 1500 watts of electrical power. Do not use extension cords rated below 1500 watts. **Each heating unit should be plugged into a separate circuit**, using the included extension cord if necessary.

Warning Light

If the unit overheats, the warning light will turn on and the unit will begin to beep.

If the warning light is on, turn the heating unit off by switching the power switch to the OFF position. Remove the heating unit from the ventilation tube and allow it to cool for 20 minutes.

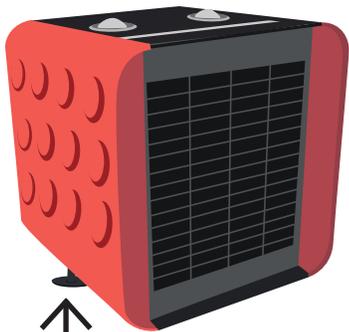
The unit overheats when hot air is being blocked from exiting the heating unit. **Before restarting the treatment**, be sure that all ZappBug enclosure contents are at least 6 inches away from the heating unit to ensure proper air circulation.

If the problem persists, contact ZappBug customer service.



Use & Operation (continued)

Safety Tip Over Switch



Safety Tip Over Switch

If the heating unit and timer are plugged into an outlet, and the timer is ON, the heating unit should automatically begin to run. If the unit is plugged in but not operating, check the safety tip-over switch located on the bottom of the heating unit. The safety tip-over switch is a small black button that must be pressed in to run the heating unit. This switch is a safety feature to stop the unit from running if it is tipped over.

Safety Note: The heaters draws 1500 watts of electrical power. Do not use extension cords rated below 1500 watts. Each heating unit should be plugged into a separate circuit, using the included extension cord if necessary.

7. Insert Items for Heat Treatment

Place items inside the ZappBug Oven 2 on top of support blocks and/or support net. To **ensure adequate airflow**, items should not touch the walls or ceiling of the chamber. Place the wireless thermometer probe in the deepest location in the items being treated to ensure all the materials will be exposed to the 120°F necessary to kill bed bugs. After that, zip the top cover closed.

Hint: Always open luggage and **arrange items loosely** to ensure proper air circulation. If items are densely packed, they take longer to heat.

8. Run Time

Once the remote sensor reaches a temperature of 120°F or above, run the heating unit for 60 minutes.

Bed bugs die at temperatures of 120°F or above in less than two minutes. The higher the temperature, the less time it takes to kill them. The standard practice for heat treating is to measure the temperature at one, representative location. When the temperature at this location reaches 120°F and is held at 120°F (or above) for one hour, you can be confident that any bed bugs in your belongings are dead.

Use & Operation (continued)

9. Remove Items After Heat Treatment

WARNING: Items may be hot after heat treatment. Wait for items to cool before handling. Items such as metal zippers can remain hot after heat treatment and cause burns.

Hint: If your home is infested with bed bugs, place all items into sealed plastic bags or containers immediately after heat treatment to prevent re-exposure.

10. Folding and Storing the ZappBug Oven 2



Zip Top Closed, Leaving 4" Gap for Air to Escape



Place Oven on Side
Step On Corner &
Collapse Oven as Shown



Allow Air to Escape



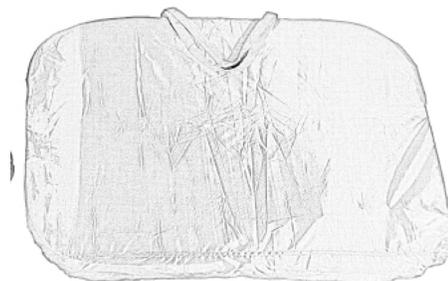
Ensure Side Panels Fold Flat



Fold Sides Inward



Complete Fold



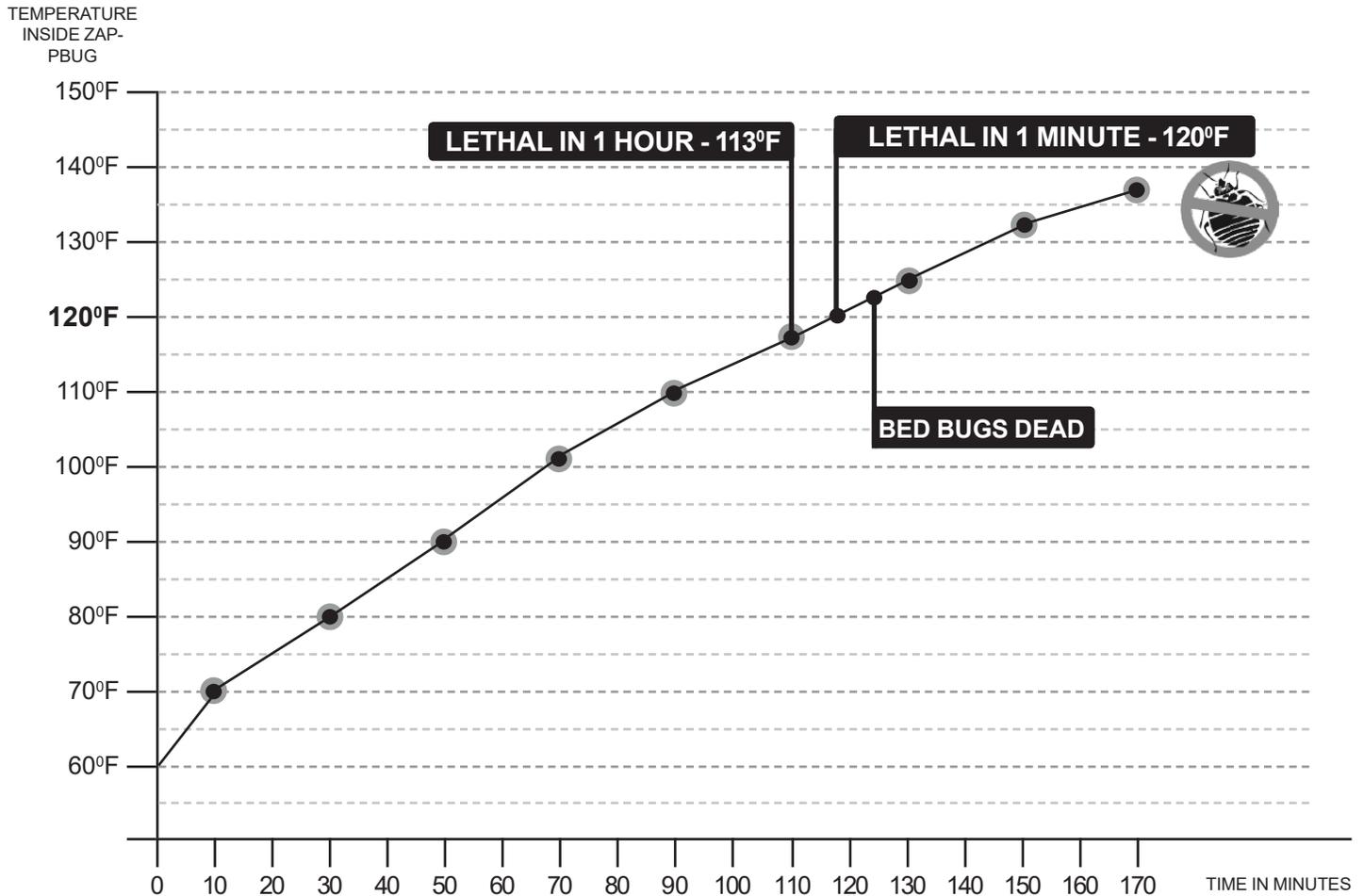
Store Oven & Support Blocks in Carry Bag

Store the **folded ZappBug Oven 2, thermometer and thermometer probe, support blocks** and **net** inside the carry bag. Store in a dry place.

Heat Treatment Chart

Typical Heat Treatment

(Actual Treatment Times Will Vary)



PEST	TREATMENT TEMPERATURE	HOW LONG BEFORE THEY DIE	PEST	TREATMENT TEMPERATURE	HOW LONG BEFORE THEY DIE
Ants	120°F	5 mins	Termites	125°F	10 mins
Bed Bugs	120°F	1 min	Scabies	122°F	10 mins
Cockroaches	130°F	7 mins	Lice	130°F	30 mins
Dust Mites	140°F	8 mins	Moths	120°F	30 mins
Fleas	140°F	10 mins	Carpet Beetles	120°F	30 mins

ZappBug recommends adding one hour to the suggested treatment time to ensure extermination.

Troubleshooting

Thermometer Reset

If you're having issues getting a temperature reading, you may need to reset the thermometer and probe. To do that, remove the batteries from the sensor and the display screen at the same time. Put the batteries back in the **display screen first**, followed by the probe.

Keep in mind that the display screen may lose signal if it is too far away from the thermometer probe, or if the unit heats above 140°F. If this happens, simply follow the reset instructions above.

Safety Tip Over Switch

If you plug in and turn on the heating unit and it still does not turn on, please check the safety tip over switch which is a little black button on the bottom of the red square heating unit. This button needs to be pressed in for the heating unit to turn on and is designed so that if the unit is knocked over, possibly blocking the vents, it turns off for safety. When the heating unit is plugged into a wall outlet and is flat on the ground the button should naturally be pressed in and the heating unit should turn on.

Getting Up to Temperature

It can take a while for the unit to fully heat up, sometimes 2-3 hours or more depending on ambient temperature or the size of the treatment load.

The most common reasons why the unit struggles to get up to 120°F are ambient conditions and item arrangement. The ZappBug Oven 2 works best in rooms that are 70°F or above.

Whenever possible do not place the ZappBug Oven 2 on concrete flooring. If you must, place insulation such as cardboard or area rugs between the ZappBug Oven 2 and the floor in order to limit heat loss.

Always arrange items as spread out as possible to allow air to flow easily throughout the ZappBug Oven 2.

Thermometer Probe Channel

If you are aren't able to receive a signal from the thermometer probe you may need to set the probe channel. To do that, take the back off of the thermometer probe and change the channel by sliding the button to position 1. The probe needs to be on the correct channel in order to monitor treatment correctly.

Circuits popping

Each heating unit should be run on its own circuit to avoid electrical overload.

Warranty Information

One Year Limited Warranty for the ZappBug Oven 2™

ZappBug™ warranty obligations are limited to the terms set forth below:

ZappBug warrants this product against defects in materials and workmanship for a period of 365 days from the date of original retail purchase. This warranty is good only to the original purchaser.

What Does This Warranty Cover?

This warranty covers any defects or malfunctions in the ZappBug Oven 2. This includes ZappBug Oven 2 items such as: two heating units, one ZappBug Oven 2 shell, one carry bag, one support net, four support blocks, and one wireless thermometer and probe set. Coverage terminates if you sell or otherwise transfer the ZappBug Oven 2.

What Does This Warranty Not Cover?

This warranty does not cover the following:

1. Any defect or malfunction of the ZappBug Oven 2 caused by abuse, misuse, neglect, carelessness, or accident.
2. Any defect or malfunction caused by alteration or modification of the ZappBug Oven 2.
3. Any defect or malfunction of the ZappBug Oven 2 which would not have occurred if instructions in the owner's manual had been followed.
4. The cost of repairing or replacing any electronics that are placed in the ZappBug Oven 2. (In our experience, the ZappBug Oven 2 operates at temperature ranges that are safe for most electronics, but we do not cover any damage to electronics that might occur while using the ZappBug Oven 2).
5. The cost of repairing or replacing any property which is damaged when the ZappBug Oven 2 does not work properly.
6. The cost of repairing or replacing any property which is damaged due to not following the instructions in the owner's manual.

What is the Period of Coverage?

Coverage under this warranty is for 365 days from the original date of purchase. Coverage terminates if you sell or otherwise transfer the ZappBug Oven 2.

What Will We Do to Correct Problems?

If there is a problem, we will replace or repair (at ZappBug's discretion) the ZappBug Oven 2, free of charge. You are responsible for shipping charges to send the ZappBug Oven 2 to us for repair or replacement. We are responsible for shipping charges to return the repaired or replaced ZappBug Oven 2 to you.

How Do You Get Service if There is a Problem?

E-mail us at service@zappbug.com or call us at (206) 430-5514. Tell us the problem and when and where you purchased the ZappBug Oven 2. We will e-mail you back with instructions on how to send us the ZappBug Oven 2 for repair or replacement.

How State Law Applies

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This page is intentionally left blank



ZappBug™ Customer Service

service@zappbug.com

(206) 430-5514

Experts are waiting to assist
9a.m. - 5p.m. PST, Monday-Friday