



Heat Guardian Online Help



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The Heat Guardian system consists of a **base** unit that sits flat on a table and a **mobile** unit. The base sends battery level, signal, and temperature to the mobile. The mobile unit has a display that shows the remote temperature.

Both units can talk to your mobile phone for updating.

You may use the system by keeping the mobile unit in-hand or in-sight or by having it linked to your cellphone - which can also show the current temperature and audibly alert you when things go wrong.

[Click here for help for the 1.0 Heat Guardian Pair](#)

The Display

When you look at the mobile unit, it's showing the temperature, battery, and signal strength at the base.

Temperature: the temperature is displayed to the nearest degree. It is guaranteed accurate to $\pm 2^\circ$ Fahrenheit with typical accuracy of $\pm 0.2^\circ$ F. The two units communicate every thirty seconds or so. The temperature sensor is inside the Heat Guardian box so it may take a few minutes to stabilize to ambient temperature. At room temperature it will display slightly warmer (about 3° F) than ambient due to heating from the internal components. At warm temperatures it becomes more precise.

Battery: in normal use (with good signals) it should last an entire weekend (3 days of 10 hours a day). Each unit may be charged by a standard USB power supply or computer.

Signal: this is just like a cell phone. When the signal gets below 1 bar it may still be sending and receiving data but it may not.

Typical Range

If one unit is on a flagpole in a flat open field the range will be about 5 miles. In real life they may go less than $\frac{1}{2}$ a mile in dense woods or in metal buildings. **Mount the unit in your vehicle in a window** so that the signal goes through a window instead of a car or rv wall.

When the display shows 4 or 5 bars you have plenty of signal and should not worry at all about positioning or location. When the display shows 0 or 1 bars it may help to move/straighten the antennas.

When *out of range* or if there is interference, the Heat Guardian will (a) within 40 seconds start counting the time since it last received a packet (b) after a minute it will blink red and start warbling every 20 seconds (c) after two minutes it will show a nearly-constant red light.

In all cases, the blinking light confirms connection status. Every few seconds it blinks green or red.

We offer a long range antenna as an option on the mobile unit. They can be unwieldy but they increase the range by about 30%. We also offer roof-mountable antennas for the base unit in RVs if you need extreme range.

How to Turn It Off and On

The unit has one button.

Press and hold the button for about 7 seconds to **turn the unit on**. On the mobile unit the display shows Heat Guardian info.

Press and hold the button for about 7 seconds (on the mobile the display says *off*), and then release the button to **turn it off**.

See more information

Click the mobile's button to briefly show the settings for the unit you are holding, instead of the remote settings. The status will show "Local" (for Local settings) when that happens.

Heat

The plastic shell and circuit boards for the unit should be good up to about 180° F. The replaceable battery may fail at as low as 150° F. *Do not charge the unit at temperatures above 110° F.*

Charging

To charge the Heat Guardian (base and mobile), plug a power supply micro-usb cable into the side. When it is charging an orange LED light will appear near the plug. When it is fully charged the light turns off.



Charging time will usually be less than 2 hours.

Battery Life

A lithium battery is usually rated for about 700 charge cycles, so if you use the battery every week it *should* last 10 years. It is user replaceable.

Out of Distance Range

When the Heat Guardian units are out of range of each other:

- After 40 seconds the status bar will show how long since the last connection
- After 60 seconds the Heat Guardian will warble every ten seconds (or so) for 30 seconds and the blinking light will turn red.
- After 2 minutes the Heat Guardian temperature display will flash on/off every ten seconds and the **blinking light** will stay **red**.

Out of Temperature Range

When the remote Heat Guardian unit is too hot or too cold (based on your temperature range settings) the blinking light on the local unit will become almost solid red (blinking just enough to let you know the unit is working correctly).

The Heat Guardian will also warble an out-of-temperature-range warning until you click the button.

The almost-solid red light will continue until the temperature comes within range.

Normal Operation

When the unit is working normally you will see a green blinking light through the front near the cute dog.

If you see the Green LED blinking the units are communicating and temperatures are OK.



Typical Usage

Mounting

The mobile Heat Guardian can be hung by the loop. The antenna is in the loop so try to ensure the antenna is upright.

The base Heat Guardian is designed to be set on a pet crate or table. Ensure the antenna points straight up (or down) and that the antenna has a view through a window. In extreme cases the antenna can be mounted on top of a vehicle.

If you lay the Guardian on its side (so the antenna is horizontal) the range will decrease. If you put the Guardian in a metal box the range will decrease.

Handling

Please don't push on the display. Don't use at temperatures above 140F. The Heat Guardians are pretty robust but don't throw them at walls.

Antenna Upgrade

We offer a more expensive mobile unit with a long (nearly 6") screw-in antenna instead of the loop. This will increase the range but it is quite ungainly.

Interference

The radio band used by Heat Guardian is also used by some garage door openers. So, you may get interference and the *every-30-seconds packet* can sometimes be lost. This is not a disaster.

When one unit does not receive a packet it immediately starts sending more frequently - trying to find the other unit at the cost of battery life. Usually they will resynchronize within a minute if it was a household appliance interfering.

Multiple Heat Guardians may also interfere with each other. Heat Guardians work on a specific channel (of which there are about 500 available) so it's unlikely they will interfere but not impossible. In addition to channels, each Heat Guardian has a unique ID so they will only communicate with their paired unit. Contact us if you want to change the channel.