



Frequently Asked Questions About Victor® Sonic PestChaser®

How does the PestChaser® work?

The PestChaser® emits high frequency ultrasonic sound waves between 32 and 62 kHz to create an acoustically hostile environment that repels rodents from sound-protected rooms. It's kinder than traps, safer than poisons, and completely inaudible to people and non-rodent pets. Unlike traps and poisons, the PestChaser® minimizes human contact with disease-bearing rodents (no dead rodents to dispose of).



Why can't I hear the PestChaser®?

Ultrasonic sound is a frequency too high to be heard by the human ear (your eardrum can't vibrate fast enough). People can hear sounds ranging from 20 to 20,000 cycles per second, while dogs and cats can hear up to 27,000 cycles per second. The range of other animals can be even higher. When measured electronically, these frequencies are expressed in "hertz", defined as a unit equal to one cycle per second. Ultrasonic sound waves are frequencies over 20,000 hertz, or 20 kilohertz (kHz). The PestChaser® is designed to continually and automatically sweep an ultrasonic frequency range between 32 and 62 kHz, well above the hearing range of humans and common pets (cats, dogs, birds, fish). Rodents and some other pests can clearly hear these frequencies. At high intensity the sound can induce auditory stress.

How does ultrasound affect rodents?

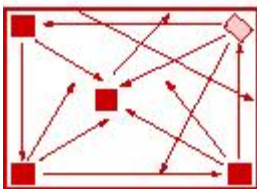
Ultrasound can repel rodents by subjecting them to intense auditory stress. Very simply, ultrasound hurts their ears. In a nutshell, this is a classic animal behavior modification technique. Unlike traps and poisons, ultrasound does not kill rodents. The PestChaser® has the ability to provide long-term reductions in rodent populations by creating a "rodent-unfriendly" environment that discourages rodent infestations.

Will rodents get used to the PestChaser®?

No. The PestChaser® uses a complex "swept" frequency with multiple "peaks" between 32 and 62 kHz. Intensity, complexity and changing frequencies prevent rodents from getting used to the sound. **There are a number of ultrasonic repellents made which emit only a single continuous tone and/or turn the tone on and off at a regular interval. These units will fail to repel rodents for more than a short period of time, if at all.**

Can ultrasound be heard by my rodent family pets?

Yes, absolutely. Rodent pets include mice, rats, hamsters, guinea pigs, ferrets, and squirrels. Never install a PestChaser® in rooms inhabited by rodent pets as the sound will cause your pet severe auditory stress.



Does ultrasound go through walls?

No. In fact, ultrasonic waves behave more like light than sound. For example, music from your stereo can fill your entire house and, if loud enough, can be heard through closed doors by your neighbors. Ultrasound cannot penetrate any solid surface (walls, floors, ceilings) or travel around corners. This is why you need a PestChaser® for each room where you have a rodent problem. To visualize how ultrasound travels, imagine that the PestChaser® speaker is a flood light. The sound will radiate outward

in a cone shape, throwing "shadows" behind solid objects and casting very little "light" into other rooms. The diagram illustrates how ultrasound "bounces" off hard surfaces to fill an average-sized room with ultrasonic sound waves.



How much square footage will each PestChaser® cover?

It can vary greatly depending on each individual room or space. Ultrasound is a directional sound wave. Its physical properties do not allow it to penetrate any solid surface. In addition, ultrasound is a fragile sound wave which dissipates (attenuates) rapidly with distance, and may have little effect on rodents more than 20 feet from the

sound speaker. The rule regarding square footage coverage is simple: an ultrasonic device can only cover the room in which it is installed; in a 10' x 10' room it covers 100 sq. ft., in a double car garage it covers 400 sq. ft. If the room is as large as 1000 square feet, adequate coverage can be delivered if there are not a lot of obstructions like furniture or stored products in the space. With obstructions, you will need to install more than one unit for maximum effectiveness.

How much does the PestChaser® cost to operate?

The PestChaser® costs less than 20 cents per month to operate on a 24 hour basis. Keep it plugged in at all times. The PestChaser® draws only 2 watts. Assume an electricity rate of .13 per KWH (which is a high-end estimate). $2 \text{ watts} \times 24 \text{ hrs.} \times 31 \text{ days} = 1488 \text{ watts per month} / 1000 = 1.5 \text{ KWH} \times .13 = .195 \text{ ¢ per month.}$

When can I expect results?

The field test studies that Sonic conducted for Canadian registration showed a marked reduction in rodent activity in 6 to 10 days on average. One should never expect instantaneous results.

If I can't hear the PestChaser®, how do I know it's working?

When the PestChaser® is plugged in, you will see a red LED light behind the speaker grill. This light tells you the PestChaser® is working properly. Even though the Table Top model has two speakers, there is only one LED. You may also hear a very slight audible sound component if you are within 2 feet of the PestChaser®.

How long will the PestChaser® last?

The estimated service life of each unit is from 5 to 7 years. However, many PestChaser®s are still working after 10 or more years in service. No adjustment or service is required.

Does ultrasound affect insects?

Some insect species can produce or perceive sound in ultrasonic frequencies and are affected by high-frequency sound. That is not to say that it can effectively repel them or control them. There has been little true scientific research to determine if ultrasonic sound generators could produce effective insect control results. You may find that some insects seem to respond to ultrasound while others are oblivious to it. Sonic makes no claims that the PestChaser® can be used for insect pest control. We believe that it is improper for any company to make specific insect claims unless backed by validated scientific studies.

What about the so-called "electromagnetic" pest repellents that claim to repel pests behind walls?

These direct plug-in devices claim to somehow alter the electromagnetic output of common house wiring to turn your whole house into a giant pest repeller and drive all species of pests out of the walls of your home. In fact, there is scant credible scientific research to suggest that electromagnetic fields have any repellent effect whatsoever on any living creature, much less specific pest species (mice, insects, etc.) to the exclusion of other non-pest species (people, pets, etc.). Furthermore, the degree to which these devices actually alter the electromagnetic output of house wiring is questionable. No manufacturer specifies exactly what the devices do or how they do it. In 1980 the EPA and U.S. Postal Service took action to remove all "electromagnetic" (not ultrasonic) pest control devices from the market. Health Canada has banned the sale of electromagnetic pest repellents in Canada. And finally, there are serious questions as to the advisability of increasing one's exposure to electromagnetic energy.

Can ultrasonic sound waves be effective in repelling bats from attics and other inside areas?

Sonic Technology Products makes no specific claims regarding the effectiveness of the PestChaser® in repelling bats because the way bats respond to high frequency sound can vary significantly depending upon the time of year. Between December and June, bats are roosting and hibernating. They will not leave their nest, even if you introduce high frequency sound. They give birth to their young in mid-February and will absolutely not abandon them, no matter how noxious the sound is to them. The only time high frequency sound produces a repellent effect is from July through the end of October, after their young have flown off and before they roost again for the winter. In our view, bats are extremely beneficial and their habitat should be protected. Bats are the single best controller of the insect kingdom. Bats may eat as many as 600 mosquito-size insects in an hour. An average size bat colony may eat 1/2 million insects in one evening.