

Noise-Canceling Devices for a Good Night's Sleep

By FARHAD MANJOO

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BEFORE my son was born last fall, I'd always been puzzled by the idea of "white noise." Have you seen those CDs and expensive alarm clocks (usually sold in airline catalogs) that offer the sounds of nature: waves crashing, rain drizzling, and so on? The products claim that a flat, featureless, continuous sound somehow encourages slumber. The idea seemed bizarre to me: When I sleep, I want quiet, not noise — not even the pitter-patter of angels dancing in the clouds.



Clockwise from top right: A \$10 device that keeps headphone volume safe even if you turn the dial up; the Etymotic ER-20, \$13 a pair, is designed for music lovers; a SnoreMasker earplug has a tiny white-noise device and a big price, \$399 a pair; a Marpac white-noise machine (\$50); a BlastBuster earplug blocks only loud noises (\$8.75 a pair).

But babies do like sound in order to sleep, it turns out. And so do their parents. At the baby shower last year, my wife and I received several white-noise-enabled toys; you turn over the cuddly giraffe or sheep to reveal a control panel for a variety of soothing sounds.

We've also each downloaded [White Noise](#), an [iPhone](#) app that costs about \$2 and has a sprawling menu of sleep-aiding noises. The app has been indispensable to our son Khalil's sleep; with the sound on, he sleeps fitfully, but without it we have the sort of disaster that would make Jerry Bruckheimer proud.

The app has also made me something of a sommelier of sounds. I can now recognize what are widely described as the various ["colors" of noise](#): blue noise is a muted, more summery version

of white, while brown noise is bassy and deep. And pink noise, our son's favorite, sounds like the tone you'd hear were you to take up residence inside a conch shell.

Over the last few weeks, I have tested several other gadgets designed to help you sleep or save your ears. Some of them emit sounds (usually white noise or a variant) in an effort to mask distracting noises. Others block sounds in ingenious ways.

Used correctly, these gadgets could change your life — you might finally get a reprieve from your [snoring](#) spouse, or vice versa; you might finally get your baby to sleep (so you can spend more time with your snoring spouse), or you might finally drown out those unashamedly loud neighbors.

The most basic gadget is the [Marpac Sound Screen 980A](#), which hasn't changed much since it went on the market in the 1960s. The Sound Screen, a small beige cylinder about the size of a large salad bowl, creates white noise mechanically: it uses an internal fan and has no electronics at all. The device, which costs about \$50 on Amazon, has two switches — one for a soft sound, one for a loud one — and air vents that you can adjust to change the pitch of the noise.

It is, in other words, drop-dead easy to use. But that's true of my White Noise app, too. Why buy the Sound Screen instead? For one thing, the stand-alone device can be kept on all day and night, while you will occasionally need to use your phone for other things. Also, the Sound Screen's noise is seamless and continuous; most electronic white-noise machines use a digital loop to generate sound and, according to Jimmy Sloan, Marpac's owner, some people can be distracted when the loop restarts every 30 minutes or so.

My wife and I found the Sound Screen's sound to be less tinny, and thus more soothing, than that of other, cheaper white-noise devices. It wasn't a vast difference (I suggest trying the cheaper ones before moving on to the Sound Screen), but there was something deeply pleasing about it.

What makes such white-noise devices effective? Tom Bergman, the marketing director at the [Ear Plug Superstore](#), a site that sells a variety of noise-masking devices, said white noise works by “raising your threshold of hearing.” Your ears automatically get less acute as the level of ambient sound rises, he explained; that's why you can't hear a dripping faucet in the daytime, when there are many other noises, but at night, when everything's still, the faucet becomes ear-shattering.

At the same time, because white noise does not have any recognizable variance, most people eventually don't notice they are hearing anything at all.

For these reasons, white noise is one of the best ways to mask unwanted sounds — say, those annoying birds that chirp near your window every morning.

The trouble is, some people don't get used to white noise and even find it too annoying to sleep with. Now, imagine this scenario: One half of a couple snores interminably, but can't stand a white-noise machine. The other half can't stand the snoring. What can save this marriage?

Mr. Bergman said that many people in these straits look for high-tech solutions, like noise-canceling headphones. These use microphones to detect patterns of ambient sound and create an “anti-noise” signal to cancel out those sounds. But that technology works best for constant, low-

frequency noise, like that on airplanes. For other ambient sound patterns, low-tech may be the better bet.

What should our incompatible couple do? Try foam earplugs first, Mr. Bergman suggested. The best earplugs (rated NRR 33, meaning they reduce ambient noise by 33 decibels) will provide significant relief from unwanted sound, but only if they are worn properly. “You have to roll it carefully into a thin cylinder, push it into your ear, and hold it there until it expands to fill your ear canal,” Mr. Bergman said. “When you do that correctly, most people are amazed at how much sound an earplug blocks.”

For some snoring victims, though, earplugs are not enough. Enter the [SnoreMasker Pro](#), which combines an earplug with white noise. The SnoreMasker is a hearing-aid-size earpiece that fits snugly, blocking most outside sound. But it also has a small speaker inside; as you turn the tiny volume knob on the earpiece, you hear soothing white noise, right inside your head.

I don't have a snoring spouse, so I can't comment on the SnoreMasker's effectiveness. But I can say that when I inserted it and turned it on, I did feel enveloped in white noise, an entirely pleasing sensation. But an expensive one: Ear Plug Superstore sells the SnoreMasker Pro for \$399 a pair.

Another sophisticated noise-suppression product is the “filtered earplug,” a plastic device that reduces the volume of outside sound but does not alter its character. This can be useful in many scenarios. For instance, The BlastBuster Variable Noise Reduction Shooter's Ear Plugs, which sell for [\\$8.75 a pair at Ear Plug Superstore](#), let you hear all sounds at a normal conversation level. But they block extremely loud sounds. If you're hunting with friends, say, you can keep talking, but when a gun fires your ears will be protected.

Another device, the [Etymotic ER-20 high-fidelity earplugs](#), are best for listening to (or playing) music: They reduce the volume of outside sound but preserve the pitch — meaning that tunes won't sound muffled when these are in your ears. They cost about \$13 a pair.

Then there's the high-tech take on the BlastBuster concept, the [Etymotic EB-15 earplugs](#), about \$500 a pair. These plugs, which have a tiny acoustic chip, allow all quiet sounds to pass through; at low or normal levels of sound, you feel as if you have nothing in your ears. But when the outside sound spikes (like a loud crash on a construction site), the EB-15's sound-blocking kicks in, and your ears are saved. I found these pretty amazing.

And [Mack's Ear Saver](#), about \$10, reduces the volume coming through your music player's headphones. Many people listen to portable audio players at dangerously loud volumes, Mr. Bergman said. The Ear Saver is a small wire that sits between your player and your headphones. You plug the Ear Saver into your player, and you plug your headphones into the Ear Saver, and that's it: no matter how high you turn the volume, you will never hear sound at a damaging level.

Mr. Bergman said that parents often buy the Ear Saver for their children's portable music players. How do you make sure your child doesn't just pull out the Ear Saver and crank up the volume? “Some people glue it on the end of their headphones, so they can't remove it,” Mr. Bergman said. Or you could threaten to replace all their tunes with white noise.