

## Harmony on Wheels: Making RV Generators Work Quietly

By Mary McCanta

Whether you're ready to choose a new generator or need some tips about making your generator as quiet as possible, this article can help you prepare for the coming year.

What concerns us most about generator noise is how well it carries through the campground. We want the noise to carry poorly, so nearby campers – and you – aren't disturbed by it.

### How Quiet is Quiet?

First, let's talk about how we measure sound. Sound measurement isn't linear the way weight is. If we are talking about weight, 10lbs is twice as heavy as 5lbs ( $2 \times 5 = 10$ ). That's linear. But our ears don't perceive sound in a linear manner.

Instead, a mere 3 decibel (dB) increase in sound level corresponds to a doubling of perceived sound. So, a sound that is 63 dB is twice as loud to our ears as one at 60 dB!

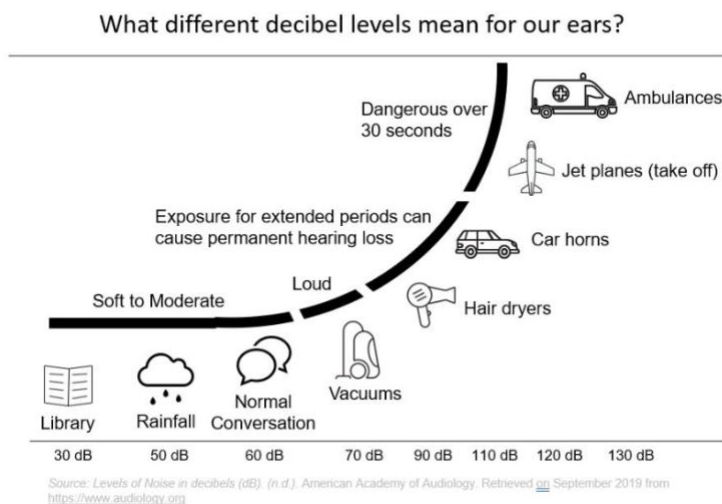
That means that a generator with a volume of 70 dB is ten times as loud as a generator with a volume of 60 dB. This is really important when comparing noise ratings of generators. While a 5 dB difference may not seem like much, our ears hear it as four times louder.

When we call a generator quiet, we are generally talking about less than 65 dB when measured from 23 feet away. (Note: This is the standard distance for sound measurements of generator noise. And no, I have no idea how they came up with that distance, but it's probably close to the distance between rigs at a spacious campground.)

### What Factors Influence Generator Noise Levels?

Whether you are looking for a new generator to replace your loud, inexpensive model, or looking for ways to muffle the sound of a quality portable generator, there are numerous ways to reduce your noise footprint.

Here is an easy way to gauge decibel levels of different generators; a traditional vacuum cleaner generates about 70 decibels while normal human conversation is around 60 decibels.



Factor	Affects	Quieter Option	Noisier Option
Power Source	All	Solar	Gas or Propane Motor
Location	All	Internal (built-into RV)	External/Portable
Structure	Portables	Closed Frame	Open Frame
Technology	Portables	Inverter Generator	Standard/Dynamo Generator
Maintenance	All	Regular oil, spark plug and muffler maintenance	Wait, I was supposed to do something to it?
Enclosure	All	Sound dampening and extended muffler installed	No sound dampening or muffler installed

The “Affects” column notes if each factor impacts both built-in and external/portable generators. Most motorhomes and large fifth wheels, including Class A, B, and C, come with built-in generators. Generators that aren’t built into the rig I’m classifying as external or portable.

For example, the “Power Source” and “Location”, factors apply to both built-in and portable generators. That doesn’t mean that all the factors are things we can change! Especially when it comes to “Location”. But most of the factors present opportunities to reduce the volume and carry distance of the generator noise.

### Internal (Built-in) Generators






If you have a motorhome or trailer with a built-in generator, there are still a lot of things you can do to reduce the noise.

1. Bring a solar generator to run everything electric except the microwave and air conditioning. Every item of technology can be charged from your solar generator and a solar generator is easy to charge up by placing a portable solar panel in a sunspot or by moving your rig out from under trees that shade your rooftop solar panels.
2. Run your fridge on propane if it’s an option. If you have a 12V or 120V refrigerator, add a couple lithium batteries and more solar to stay out longer in the shade without turning on the generator. You may even be able to plug that 120V fridge into your solar generator! The price of lithium batteries has dropped considerably, making this option even more attractive.
3. Have annual maintenance done on your generator. Changing the oil, checking the integrity of the muffler and changing spark plugs regularly can smooth out and quiet the running generator.

4. Install sound dampening and an extended muffler in your generator bay. You can find DIY guides online or buy the parts and hire an RV technician for installation.
5. If you ever need a new built-in generator, purchase an inverter generator to replace the standard dynamo generator. This is the single most effective way to ensure a quiet RV generator.

### Choosing a Quiet External / Portable Generator

If you are ready for your first generator or need to replace a loud contractor generator, I've compiled a quiet-to-loud hierarchy of generator technologies.

Quietest		
Solar generator (solar panels connected to a large battery storage device)	0dB	
Closed frame inverter generator	48-55db	
Open frame inverter generator	60-68db	 <small>Wheel kit sold separately.</small>
Open frame standard/dynamo generator	65-75dB	
Contractor Generator	70-90+db	
Loudest		

This blog post on *RV Electricity* has a good explanation of the differences between the different types of generators shown above: <https://rvelectricity.substack.com/p/whats-all-this-noise-about-generators-d6f>

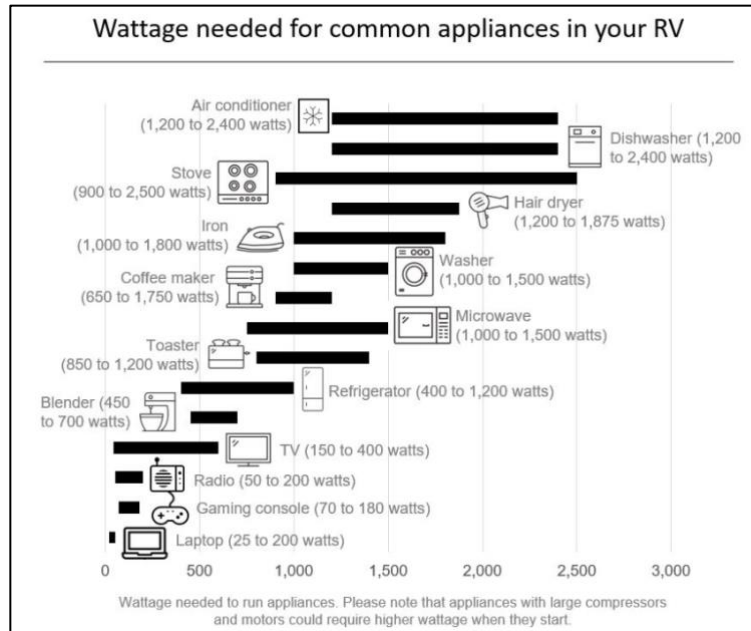
## Other Factors When Buying a Generator

### How Big a Generator do you Need?

While RV and generator manufacturers often suggest generators with 3600 to 12000(!) watts of power, the reality for most of women RVers is that these large generators are too heavy for us to consider portable.

Some solutions to the heaviness problem are crank-operated lifting devices or having the generator mounted on the back of a cargo rack. But the best option is to get the smallest generator you can that meets your needs.

If you primarily need to power your microwave once or twice a day, keep your batteries topped up to keep your fridge running or to run your air conditioning on a hot afternoon, find out what wattage your fridge or air conditioner requires and get one that can handle that level.



This graphic, from Cummins.com (makers of the ubiquitous Onan generators), shows the wattage needed for many commonly used appliances. But the amounts shown here aren't the whole story!

Air conditioners, appliances that are quite likely to drive an RV owner to turn on a generator, have a much higher starting wattage than this chart indicates. Let's look at an example.

### Minimize The Start Surge on Your A/C

Estimated Wattage	
CATEGORY	WATTAGE (WATTS)
Running Watts	1350 - 1500
Startup Surge Watts	3500 - 4500

The Coleman-Mach 3 is a 13,500btu is a commonly used air conditioner used in moderate size travel trailers and motorhomes (approximately 16-27').

By default, this air conditioner requires 1500-1800 watts while running, but during startup it may draw as much as 4500 watts!

A properly sized generator for this air conditioner would need to ensure that it could provide 4500 watts for a short time during the air conditioner startup.

A commonly available closed-frame inverter generator like the Champion 4500 or the Predator 5000 Dual Fuel will provide this wattage, but they also weigh 102-130lbs. That's a lot for one or two women to manage!



But installing a soft start device on the air conditioner, like a MicroAir Breeze or a SoftStart RV, allows the air conditioner to slowly ramp up to its running watts rather than drawing a 4500-watt surge that a “hard start” manufacturer supplied air conditioner requires.

Here's a brief explanation of what a soft start device does when installed in the air conditioner:

*“A soft start is an electronic device designed to help single-phase motors, such as those used in air conditioners, start smoothly and quietly. By gradually increasing the voltage and current to the motor, a softstart RV device significantly reduces the initial power surge that typically occurs during motor startup. This not only minimizes wear and tear on the motor and associated equipment but also helps with noise reduction and vibration.” – MicroAir, maker of EasyStart AC Soft Starter*



With a soft start installed, you can easily run your RV air conditioner using a compact option like the Honda 2000e or Champion 2500 Dual Fuel generator, weighing in at 55lbs and 39lbs respectively.



That's a lot more manageable size, and smaller generators usually creates less noise than a larger generator.

But be prepared: the smaller generators have standard 20 amp 3-prong sockets on them, like those in your home, so you will need a 30-to-20 amp plug adapter or dog-bone to plug your RV into the smaller generator.



## Double Up

If you want to ensure that you can get enough power to run the full 30 amps your RV can draw, many of the smaller generators can be linked together with a 30-amp parallel kit. These kits provide a 30-amp socket like those in an RV park pedestal.



## Making Your Quiet Generator Even Quieter

Even with a quiet generator, there are additional steps you can take to further reduce how far its noise travels. Let's take another look at the last two items in the table of factors that affect the noise volume of generators.

Factor	Affects	Quieter Option	Noisier Option
Maintenance	All	Regular oil, spark plug and muffler maintenance	Wait, I was supposed to do something to it?
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## Maintenance

*RTFM – Read The Effing Manual*

Every generator comes with a manual, and if yours is missing you can probably find it online. In the back you'll find a maintenance schedule, and keeping up with the maintenance will result in a machine that runs quietly for many years. Here's an example maintenance schedule.

### Regular Oil Changes



Oil changes are crucial for a quiet generator. Typically, you'll need to change the oil every 50-100 hours of use.

<b>EVERY 8 HOURS OR PRIOR TO EACH USE</b>
<input type="checkbox"/> Check oil level <input type="checkbox"/> Clean around air intake and muffler
<b>FIRST 5 HOURS (BREAK IN)</b>
<input type="checkbox"/> Change oil
<b>EVERY 50 HOURS OR ANNUALLY</b>
<input type="checkbox"/> Clean air filter <input type="checkbox"/> Change oil if operating under heavy load or in hot environments
<b>EVERY 100 HOURS OR ANNUALLY</b>
<input type="checkbox"/> Change oil <input type="checkbox"/> Clean/adjust spark plug <input type="checkbox"/> Clean spark arrestor <input type="checkbox"/> Clean fuel valve filter*
<b>EVERY 250 HOURS</b>
<input type="checkbox"/> Clean combustion chamber* <input type="checkbox"/> Check/adjust valve clearance*
<b>EVERY 3 YEARS</b>
<input type="checkbox"/> Replace fuel line*

\*To be performed by knowledgeable, experienced owners or CPE certified service centers.

Consult your manual for compatible oil types, but synthetic oils are preferred for reducing friction and noise.

- Check oil levels before each use.
- Use a clean funnel to avoid spills.
- Dispose of old oil properly.



### *Spark Plug Replacement*

Replacing spark plugs (or a single plug in many cases), keeps the motor running smoothly. Change the spark plug(s) after the first 5 hours of operation, and then every 25 to 50 hours of use. Check the owner's manual for specifics but here are some general recommendations:

- Inspection: Regularly check the spark plug(s) for wear or damage.
- Cleaning: If the spark plug appears dirty but not worn out, it can be cleaned and re-gapped instead of replaced.
- Replacement: Replace the spark plug if it shows signs of wear or if the generator is hard to start.

### *Check Air Filter and Exhaust*

Inspect the exhaust system for leaks and tighten connections; replace worn gaskets as needed. Check the air filter—clean or replace it if dirty, as this can also cause noise.

For all maintenance topics be sure to use [youtube.com](https://www.youtube.com) for videos on your specific model. Watching someone through these procedures step-by-step is priceless.

### **Enclosure and Extended Muffler**

This is the last topic, I swear! As you might imagine, putting a box around or over the generator make it a lot quieter. The trick is to use an enclosure that is both convenient and effective.

If you use a truck to tow your trailer, you may be able to insulate around the generator within the truck bed.





Or if you have a built-in generator, you may be able to muffle the noise with sound dampening material or appropriate insulation.

For whatever your situation is, someone has probably

developed a cool solution to dampening the generator sound with an enclosure.



The main thing to remember when building or buying a sound dampening enclosure is that the generator needs sufficient ventilation for it to get oxygen. It needs air flow or the engine with shut off.



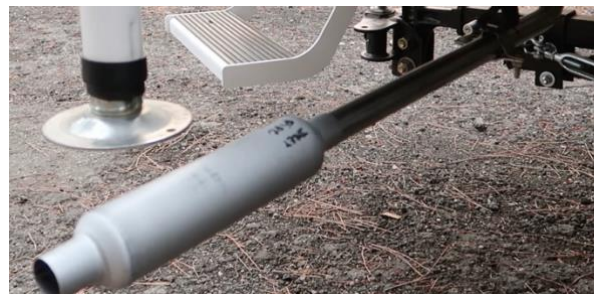
In the Resources section at the end of this article are many pages and videos I found while researching this article. Try out the simple things first and test them out at home. If the generator dies after running a few minutes in your enclosure, it probably needs more air flow.

You can also try adding an extension

to the exhaust pipe or to the opening in your portable generator. Adding a longer pipe allows you to move the noisy, smelly exhaust away further away from yourself and your neighbors.



You may also find a resonator add-on for your generator. These usually attach to the end of exhaust pipe, or to the plastic case around a small generator's exhaust port, and they modify the frequency of the generator's sound to a more pleasing tone. You would be surprised and what a difference the extra smoothness makes to your perception of volume.



## Wrapping Up

Hopefully you learned something about generators in this article that will aid you in choosing or maintaining a quiet generator. Choosing a quiet option when you buy, maintaining it properly and putting some effort into muffling or diverting the sound will make everyone's camping experience a peaceful and pleasant experience. Your camping neighbors (and your dog!) will surely appreciate it.

## Additional Resources

*Why are generators so loud?*

<https://mygeneratorlab.com/why-are-generators-so-loud/>

*What's all noise about generators?*

<https://rvelectricity.substack.com/p/whats-all-this-noise-about-generators-d6f>

*8 Best Quiet Generators for the Money*

<https://www.quietest.org/best-quiet-generator-for-the-money/>

*How to Quiet Your Generator: Solutions for Noise-Free Camping*

<https://www.campgroundviews.com/how-to-quiet-your-generator-solutions-for-noise-free-camping/>

*Champion 2500 Generator Oil Change*

<https://www.youtube.com/watch?v=dKvk7ZHtoBA>

*Spark Plug Change on a Champion 2500 Generator*

<https://www.youtube.com/watch?v=0gylugtMBGk>

*Best Solar Generator for RV 30 Amps – January 2026*

<https://www.top5-usa.com/solar-generator-for-rv-30-amp>

*Find the Best RV Solar Generator*

<https://blog.campingworld.com/gear-and-accessories/best-rv-solar-generator>