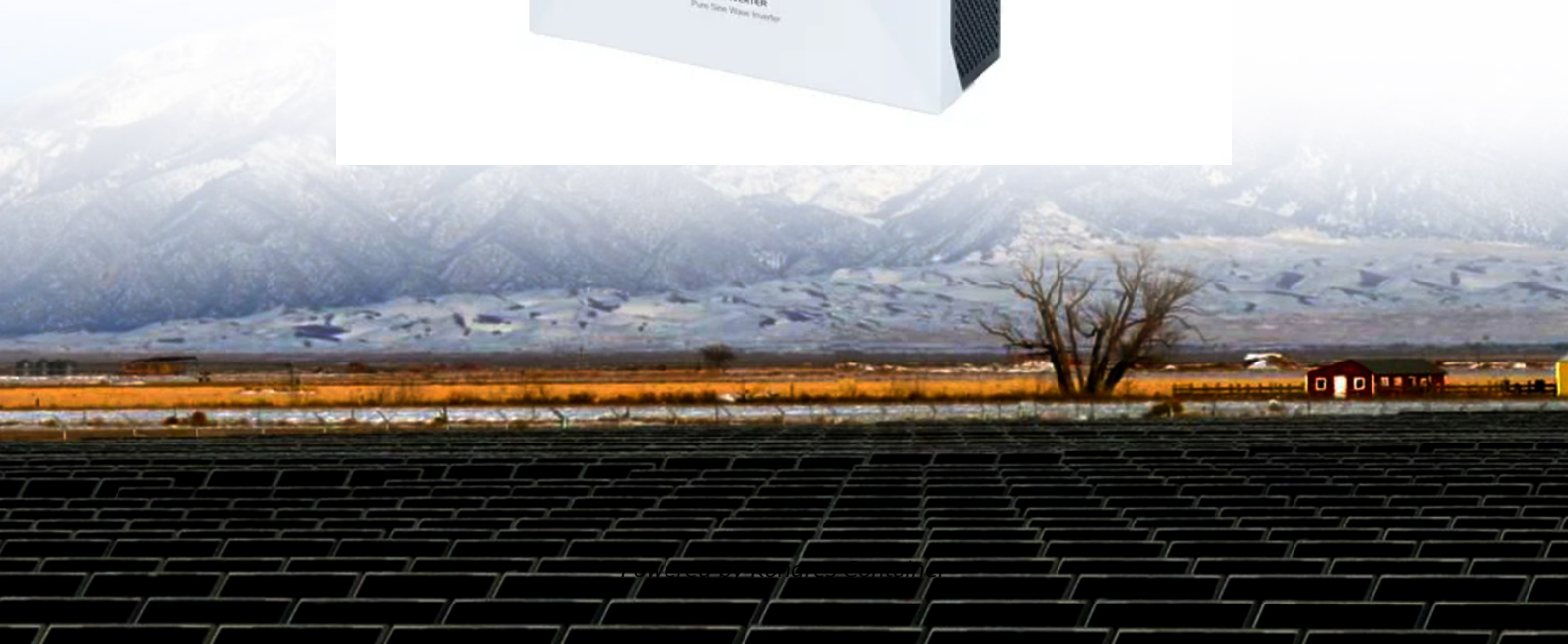


## Kongres Container

# How many volts is a good external power supply for a base station



## Overview

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This calculator estimates the minimum and recommended power supply size for your ham radio station based on voltage, current draw, and headroom. It uses the formula:  $P = V \times I$  and  $P_{rec} = P \times (1 + \text{headroom } 100)$  Where: The recommended power supply should be rated for the result in.

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Unlike gear from past decades, today's Ham radios operate on 13.8-volt power. Why 13.8V?

It's the average voltage that an automobile electrical system produces, allowing your radio to be powered in your vehicle or at home. With a few exceptions—like amplifiers—you won't plug your gear directly into.

It starts off around 12.6 volts and drops fairly steadily as the battery discharges. Mobile radios are typically designed to operate on a 13.8 volt electrical system, which is what you have when the car's alternator is charging the battery. The range is usually plus or minus 15 percent of that 13.8.

13.8v and 30a is fairly standard for a shack. That radio should run from 11.73v to 15.87v but at 12v and 5 amps, you'll probably put too much demand on that little power supply. I use a switching power supply similar to this one. There are many options out there at various price points.

Easy way to do it is to buy a 12 volt power supply with a battery revert function. Then add a 12 volt battery with enough ampere/hours to run your radios. Might be as simple as a 30a/h gel cell. Or, you may need something larger or different chemistry. What you need to be careful of is that some.

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uses the formula:  $P = V \times I$  and  $P_{rec} = P \times (1 + \text{headroom } 100)$  Where: The recommended power supply should be rated for the result in either watts or.

The switch-mode power supply supplies power by converting AC to DC, and hence the desired voltage is produced. On the other hand, the linear power supply converts the high voltage of AC into low voltage VC. The switch-mode supply of power is smaller and lighter as compared to the linear power. How many amps should a power supply have?

If connecting multiple radios, add up the total amps of all the radios during peak load combined. For example, let's say you have a 50 watt radio and the maximum draw is listed at 10 amps. Buying a power supply advertised with a peak load of 10 amps might still be a bad move. First, power supplies have two amp ratings: continuous and maximum.

How do I choose the right size power supply for my Radio?

To the average layperson, all this sounds overly complicated. So to simplify the process, here are some general guidelines for choosing the right size power supply for your radio. Use the manufacturer's amp rating of the radio as the rule. Use the maximum, or peak load rating of the radio, not the standby or typical draw.

Do mobile radios need a power supply?

Mobile radios have different power requirements, and power supplies have different power ratings. Choose the correct power supply for your radio, and you may have years of clean power with no noisy interference and uninterrupted service. Choose the wrong one, and your radio may not be able to transmit or even stay on from the start.

How much power does a power supply provide?

How Much Power?

Power supplies are often rated by their continuous and intermittent/peak (ICS) current capacities. The figure you want to look at is the continuous rating—the amount of current the power supply can provide. For example, the Samlex SEC-1235P-M switching power supply is rated 30A continuous output, 36A peak.

What are the different types of power supplies?

Power supplies come in a variety of configurations, from simple to full-featured. Basic models just change 125VAC to 13VDC. Typical add-on features include volt/amp meters, multiple power outputs, noise offset controls to minimize RFI, variable voltage output controls, and over-temperature protection.

Does a ham radio need a power supply?

Smaller Ham radios can be connected to cars, trucks, and even RVs. There will obviously be a difference in the power supplied. Instead of 120V AC power, 12V of DC power will be used. Do all Ham radios require a power supply?

No, not all Ham radios require a power supply.

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