

The Best Surge Protector for Travel



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The best surge protector for travel in North America is the [Accell Home or Away Power Station](#), which sells for \$20 or less and comes in black or white. This is our pick for the second year in a row, after researching dozens of models, extensively testing the eight best specified and designed, and using the Home or Away for more than a year. With three outlets and two USB power ports, it should be able to keep a couple's devices charged on the go; at the same time, it's smaller and lighter than any other travel model we tested without compromising on surge protection or USB power. It will fit even the bulkiest AC adapters, and unlike a surprising number of other models on the market, it covers only one socket in a duplex wall outlet.

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We've tested and dismissed [Belkin's Travel Rockstar Surge Protector](#). It's significantly more expensive than our top pick, and much heavier and larger, while offering fewer outlets and USB ports. Its one advantage is a built-in battery, but that feature doesn't make the Travel Rockstar worth the tradeoffs for most people.

*At the time of publishing, the price was \$14.

Although its design is used by numerous companies, Accell's travel surge protector offers more powerful USB charging capabilities, a higher surge-suppression rating, and usually a lower price than the competition. It's also highly rated by customers, and Wirecutter staffers have been using it for more than a year and a half without issue.

Also Great



Though CyberPower's model is just as functional, its design blocks a second outlet, which prevents it from being our favorite.

If you can't find the Accell surge protector, or it becomes unavailable for some reason, [CyberPower's CSP300WU](#) is the next-best thing. It's not perfect, though. While it has the same number of outlets and ports as the Accell, its design makes it block both outlets on a two-outlet wall plate.

Also Great



With four international plugs and a 100V to 250V rating, the PowerCube charger is a convenient non-surge-protection option for overseas travel.

The Home or Away isn't designed for international use. If you're going to be traveling outside of North America, we recommend [PowerCube's ReWirable USB + Plug](#). While it doesn't provide surge protection, and it's physically larger than the Accell unit, it provides four AC outlets instead of three, along with the same number (two) of USB ports. (It does include a resettable fuse.) Two features make it ideal for international travel: It's rated for 100V to 250V, and it includes four interchangeable plugs to fit a wide variety of international wall outlets.

Why you should trust me

I was the accessories editor at [iLounge](#) for a little more than three years. During my tenure, I reviewed more than 1,000 products, including numerous charging solutions.

Richard Baguley, who designs tests for us and for [Reviewed.com](#), provided input on our testing procedures and the general topic of surge protection.

Who should buy this?

A portable surge protector is great to have while traveling, even if you don't need its surge-protecting capabilities: Just having additional outlets can be a (battery) lifesaver in airports and hotels, where wall outlets can be few and far between. A surge protector that's easily packed into a carry-on or bag can mean the difference between enjoying fully charged devices on the plane or trying to stretch the last 10 percent of your battery over an hours-long flight.

A mini surge protector can also come in handy at home. For example, many older houses and apartments don't have many wall outlets, so it's helpful to gain a couple of extras, particularly in rooms like the kitchen, bathroom, and bedroom where you may not have the space for a full-size power strip or surge protector.

But we recommend a surge protector over a basic travel power strip—which simply gives you additional unprotected outlets—because the former can help protect connected gadgets from damage due to electrical surges: Too much electricity flowing into a smartphone, tablet, or even a lamp can fry those devices. Our picks are also great if you want to protect a couple of devices at home without the bulk of a traditional surge-protected strip.

Surges can happen not only because of fluctuating power coming into a building, but also because of other power-hungry devices on the same electrical circuit. Surge protectors shunt this extra electricity away, keeping connected items safe. To do this, surge protectors rely mainly on devices called metal-oxide varistors, or [MOVs](#). An MOV works sort of like a runaway truck ramp on a mountain pass: Just like a ramp will route a truck off the highway so it can't do any harm, then slow the truck to a stop, an MOV will route surges and spikes off the main electrical line then dissipate their energy so the surges can't harm whatever's plugged into the surge protector.

MOVs are rated in joules. Whereas a volt is like the force behind a boxer's punch, a joule is like the damage done to his opponent by the punch: the total amount of delivered energy. Just like punches, however, the effects of joules add up, so the rating of an MOV—or, in this case, the rating of a surge protector using MOVs—indicates the total energy it can absorb from electrical spikes and surges before failure.

"The higher the [joule] rating, the more energy it can absorb, so the better it is," explained Richard Baguley, who designs tests for us and [Reviewed.com](#). "Joules is an energy measure, so the number indicates how much energy the device can shunt away from your electrics before [the protector itself] blows, leaving your electrics unprotected."

How we picked and tested

We didn't find many useful professional reviews of travel surge protectors, so we started from scratch with our own criteria and, eventually, our own tests.

When traveling, the most important factors to consider for whatever you'll be packing are size and weight. A surge protector isn't going to do you any good if it's too bulky or heavy to stick in a carry-on, or if it can't be squeezed into an outlet located behind a desk or nightstand in a hotel room. So to keep our picks to a travel-friendly size, we limited our contenders to surge protectors with no more than three AC outlets and two USB ports (our international pick is an exception).

Likewise, outlet placement on the surge protector itself is important. We tried to find surge protectors that placed AC outlets in a way that maximized the number of devices that could be plugged in, regardless of the size or shape of those devices' power cables or power bricks—models with AC outlets that were too close together were eliminated from contention.

Ideally, the surge protector's own AC outlet plug will retract or fold into the body of the device when not in use. This not only makes it easier to fit it into smaller packing spaces, but also helps prevent it from catching on or scratching other items in the bag.

A good surge protector should, of course, ensure that gadgets plugged into it are [adequately protected from power surges](#). A surge may last less than a second, but even a fraction of a second is more than enough time to destroy your devices. The best way¹ to determine how much protection you're getting from a surge suppressor is to look at the joule rating.

So how many joules of protection do you really need? To some extent, this will depend on how many and what types of devices you are trying to protect, but the mini surge protectors we looked at have joules ratings ranging from 612 to 1,050. Full-size power-strip-style surge protectors, on the other hand, can have joules ratings of 3,000 or higher.² All that said, the consensus from the research we've done is that [anything above 600](#) is enough for most people's needs.³

Finally, given the number of devices and accessories that charge via USB, we limited our search for models to surge protectors that also have high-current USB-charging ports. Most recent iPads charge at full speed with only a 2.4-amp current, but few of the surge protectors we found can provide that much current, so we settled for models that can provide 2.1 amps. Unfortunately, most of the units we tested *split* this current over two ports, rather than providing up to 2.1 amps *per* port. This means that if you plug in two iPad Airs, for example, they'll each charge at less than half their maximum speed, because each will be getting roughly 1 amp of charging current.

Using these criteria, we cut our list of candidates from dozens to just a few. We then looked at specs, combed through warranty policies, and read user reviews on Amazon. When all was said and done, we wound up with only a handful of candidates for the original version of this guide (published in late 2013): the [Mediabridge Portable Surge Protector](#), [Belkin Mini Surge Protector](#), [Monoprice 3 Outlet Power Surge Protector](#), [Accell Home or Away Power Station](#), and [360 Electrical Power Curve Mobile Surge Protector](#). For the current update to this guide, in mid-2015, a new search turned up only a few additional competitors: [CyberPower's CSP300WU](#), [Tripp Lite's TRAVELER3USB](#), and several models from

[PowerCube](#).

The new models we tested for the most recent update to this guide (clockwise from top left: CyberPower's CSP300WU, Tripp Lite's TRAVELER3USB, Axcell Home or Away, and PowerCube ReWireable).

We began testing by looking at overall design and analyzing the efficiency of each model's outlet placement. We tried plugging in a variety of chargers with different plug shapes for devices like laptops, tablets, digital camera batteries, and smartphones. We tried different combinations to see which surge protectors could accommodate the greatest number and variety of devices.

We also took into account the design of the surge protector and the placement of its plug, and considered whether it could be used without blocking the adjoining wall outlet in a two-outlet wall plate.

Next, we looked at the USB charging ports and tested the charging capabilities of each. We did this by plugging in a [PortaPow USB Power Monitor](#) along with an iPad Air 2, and then noting the monitor's amperage reading. We then connected a second iPad to measure the total output while charging two devices.

We did not, however, have a way to test surge protection (we're working on this for our guide to [full-size surge protectors](#)), so we have no hands-on data to back up each manufacturer's claims. However, given that we rely on surge suppressors to protect our most valuable devices, these devices should back up any guarantees by offering a warranty that would cover the replacement cost of connected devices should the surge protector fail or malfunction. Almost all of the models we looked at offer such a warranty, promising to reimburse you up to a certain limit (\$75,000 to \$100,000, depending on the model). And no user reviews on Amazon complained about faulty surge protection or damaged electronics.

Android caveats

We did all of our official testing with iOS devices, but for the original version of this guide, we also tested Android compatibility with our top pick as well as with 360 Electrical's Power Curve. Specifically, we tried the USB charging ports with the Moto X, HTC One, Samsung Galaxy S IV, Samsung Galaxy Note 3, and Motorola Droid 2. The USB charging ports on both surge protectors were able to charge all of these devices. Based on this testing, we're fairly confident that our top pick will work fine with most Android handsets.

However, our testing did uncover an issue with Google's Nexus 7 tablets. While the first-generation Nexus 7 did charge from the USB power ports on each unit, it would not charge at full speed. This Nexus 7 model charges at full speed only from its included 2-amp charger, even though the surge protectors can provide *more* current (2.1 amps). The 2012 Nexus 7, which can fast-charge using its own 1.3-amp charger, also didn't charge at full speed from the 2.1-amp USB ports on these two surge protectors.

Jason Inofuentes, reviews editor and technology reporter at Ars Technica, explains the problem specific

to Nexus 7 tablets, “The USB charging spec includes the ability to set different charging rates in a [standard and device-aware fashion](#) ... trouble is, 10W at 5V is the minimum, and that’s a lot. So most devices actually don’t comply, as is the case here. You can set different charging levels independent of the standard, but only your own charger would know they could serve up more current.” Long story short, if you have a Nexus 7, you’re going to want to use its own charger, and plug that charger into one of the AC outlets on the surge protector.

*At the time of publishing, the price was \$14.

[Accell’s Home or Away](#) mobile surge protector (model name D080B-010K for the white version, D080B-011K for the black) edged out its competition in every category: size, design, surge protection, and USB-charging capability. It’s small, its USB ports charge connected devices as fast as any of the competition, and it offers a claimed 612 joules of surge protection, more than our minimum level of 600 joules.

With dimensions of 4.5 by 2.5 by 1.5 inches, about the size of a point-and-shoot camera, the Home or Away is sized for travel use.

The Home or Away’s design is the only one we saw that keeps all three AC outlets easily accessible at all times, because they’re placed on different faces. Because of this, it can accommodate an impressive variety of devices and plug sizes—we tried every size and shape of device charger and plug we could find, and it handled them all easily (even simultaneously). There might be some combination of plugs that doesn’t work, but we haven’t found it yet. In fact, we even managed to get three of the other, larger surge protectors to plug into the Accell.

The Home or Away can accommodate even three bulky plugs—in this case, three other surge protectors. Don’t try this at home.

Other surge protectors couldn’t handle two large plugs next to each other, but this wasn’t a problem for the Accell. While it’s easier to plug very large plugs into the Home or Away’s front outlet, larger plugs can still squeeze into the side outlets.

At 4.5 inches long, 2.5 inches wide, and just under 1.5 inches deep, the Home or Away is the smallest of any surge protector we tested. It easily fits into smaller backpack or carry-on-luggage pockets, and the plug’s prongs fold away neatly when not in use. You’ll also barely notice the 5-ounce weight.

Despite its small size, the Home or Away is very sturdy. It stayed solidly in the wall outlet and didn’t wobble around, even when it had three very large plugs and adapters plugged into it. This was a problem with some of the other models—the Belkin, for example, did not sit flush against the wall when plugged in; there’s a gap between the wall and the body of the surge protector, regardless of whether anything is plugged into it.

That said, the best-designed protector would still be useless if it didn’t work well. Fortunately, in our

testing, the Home or Away outperformed the competition. It functioned exactly as advertised in our USB speed tests: With a single iPad Air 2 connected to one of the unit's USB power ports, we saw 2.1 amps of power draw; plugging a first-generation iPad Air into the second USB port halved that figure, as expected. This means that with two iPads or other high-draw devices plugged into the Home or Away's USB power ports, each device's charging speed will be less than half of what you'll get with that device's own charger, or our [favorite multiport USB chargers](#). This is not optimal performance, but it is par for the course for this type of product, and we couldn't find anything with independent 2.1-amp or 2.4-amp USB ports. As with the Home or Away's standard outlets, the USB power ports are surge protected.

Flaws but not dealbreakers

Because it's rated only for 110-volt outlets, it's not advisable to use the Home or Away internationally. Even if plugged into an international adapter, it's not a safe solution, because most countries have 220-volt electrical grids. If you need an international power strip, we have a recommendation below.

We also find it disappointing that the USB charging speeds don't match those of modern devices. Sure, you can charge a single high-draw device at close to full speed, but connecting two will charge each at rather slow speeds. (Of course, you can always plug a high-speed charger into one of the Home or Away's three AC outlets, but part of the appeal of USB charging ports on your surge protector is being able to leave those chargers at home.)

Runner-up

Its design isn't as strong, but the CSP300WU gets the job done.

Also Great



Though CyberPower's model is just as functional, its design blocks a second outlet, which prevents it from being our favorite.

[CyberPower's CSP300WU](#) is the second best option, but we're not huge fans of it—it's simply the best option out of all the rest. It blocks the second outlet on a wall plate, and folding down the prongs is particularly tough. The outlets are also closer together than we'd like and it's physically larger than our top pick. But despite all that, it has the same number of outlets and USB ports as the Home or Away, and a higher joule rating of 918. USB performance is identical. If this is the only one available, or something about the design appeals to you, go for it. But otherwise we think you should stick with Accell's surge protector.

With four international plugs and a 100V to 250V rating, the PowerCube charger is a convenient non-surge-protection option for overseas travel.

While the surge protectors we tested are convenient for traveling, none are recommended for use outside of North America, because none are rated for use with the 220-volt outlets found in most European and Asian countries. In fact, many of the manuals included with these protectors specifically state that their warranties are void should you use the protectors outside of the US.

One solution that will work abroad—and the only model we found that met our criteria, except surge protection—is [PowerCube's ReWirable USB + Plug](#). It's important to state up front that this is not a surge protector, although it does provide overload protection with a resettable fuse. (Instead of shunting away the power in the case of a surge, it simply stops the flow in the event of high voltage.) But whereas most of the units we tested are rated for only the 110-volt standard, the PowerCube unit works with 100 to 250 volts, so it can be safely plugged in pretty much anywhere in the world.

The PowerCube ReWirable USB + Plug and its international adapters.

The PowerCube ReWirable USB + Plug is a 2.5-inch cube and weighs barely more than 7 ounces. It has one outlet on each of its four outside faces, plus two USB ports on the face opposite its own AC plug. This design ensures full access to each outlet by almost any size plug without any of those plugs blocking the other outlets. The USB ports share 2.1 amps, much like on the Home or Away.

Included with the PowerCube unit are four interchangeable AC plugs to fit Australian, European, North American, and UK outlets. The plugs are easy to swap in and out as needed, and because they push the cube a fraction of an inch away from the wall, the wall plate's second outlet will be accessible for most plugs and power bricks in most situations.

The competition

[Belkin's Travel Rockstar Surge Protector](#) is a cool concept on paper. It combines the benefits of a travel surge protector with those of a portable USB battery pack. Unfortunately, it's about twice as heavy and it takes up more space than the Accell surge protector, yet it has one less outlet and only a single, 2-Amp USB port. A 3000 mAh battery sets the Travel Rockstar apart from the pack, as it's the only such combo we've ever seen. However, the combination of the Accell and a great [portable USB battery](#) costs a lot less than the Belkin, and although the two pieces will take up a bit more space in your bag, it's easier to walk around with just a battery than the large Travel Rockstar. We hope Belkin iterates on this concept, but it's simply not great yet.

Our former runner-up pick, [Mediabridge's \\$20 Portable Surge Protector](#)—which uses the same design as that of the Home or Away—is listed as “currently unavailable” on Amazon. We've reached out to the company to see if the Portable Surge Protector will eventually be available again, but we haven't yet received a reply.

On the surface, [Tripp Lite's TRAVELER3USB](#) (\$16) looks like a strong contender. Instead of plugging directly into the wall, it has an 18-inch cord, ensuring the second outlet on the wall plate won't be blocked. This also means that you can plug your power cables and adapters in somewhere a bit more convenient than directly at the wall outlet. The TRAVELER3USB also provides 1,050 joules of surge suppression and a respectable warranty. In our testing, however, the unit's USB ports provided significantly less current than advertised: Instead of a claimed total of 2.1 amps, we saw a maximum of just under 1.5 amps with only a single device connected, and Amazon reviewers complain that it even has problems charging two smartphones. (Tripp Lite responded to an Amazon.com complaint by explaining that on older versions the total output is only 1 amp, or 500 milliamps per port, if two devices are plugged in, but the company claims the current model should provide 2.1 amps. It's possible we got a faulty unit, but regardless, the USB charging isn't impressive.) If USB charging isn't a major requirement, this is otherwise a strong contender

We also briefly evaluated the [P360-Dock](#) (\$40) from Panamax. Measuring 6 inches tall, 4.8 inches wide, and 1.5 inches thick, with prongs that don't fold, we think it's too large for travel. It might, however, be an acceptable choice if you're just looking for a compact way to get extra outlets and USB charging at home: Though it blocks both AC outlets on a wall plate, it provides six AC outlets and two USB-power ports. As with the Home or Away, those ports offer 2.1 amps of total output.

We dismissed the following products in the original version of this guide:

Out of all of the models we looked at, [Belkin's Mini Surge Protector](#) was the most popular on Amazon and around the Web, which is why it wasn't eliminated at the start for a tight outlet placement that makes it impractical with large power bricks. Its face has three AC outlets, evenly spaced in a line, with two USB ports on the side. On the underside of the surge protector is a small button that allows you to swivel the body of the unit a full 360 degrees relative to the plug, so in many cases you can prevent it from blocking the wall plate's second outlet.

Though this rotation is a useful feature, the button on our test unit was prone to getting stuck, and we found it difficult at times to get the plug to swivel properly. And while the swiveling design is useful, the plug itself doesn't fold flush for storage. (It does come with a plastic cover for the plug that attaches to a slot in the side of the unit and acts as a cord separator, but this feels more gimmicky than useful—and it's too easy to lose.)

While the Belkin did charge USB devices at rates comparable to the Home or Away, we found it too big and bulky to be convenient for traveling. At nearly 10 ounces, it weighs almost twice as much as the 5-ounce Accell, and it's considerably longer and wider than the rest of the competition. The non-folding plug only adds to the bulk and could easily bend if you lose the protector. Finally, the three outlets are so close together that if your plugs are any bigger than, say, a laptop charger, at least one outlet will likely be unusable.

360 Electrical's \$20 [Power Curve Mobile Surge Protector](#) has a particularly innovative design. Its two AC outlets are placed next to each other, but they rotate a full 360 degrees to maximize the amount of space for devices with larger plug shapes.

This design works surprisingly well. With a little maneuvering, we were easily able to plug in two large, transformer-size adapters without obscuring the adjacent USB ports. The unit is also conveniently sized at just 5 inches long and 2 inches wide—only slightly larger than the Accell surge protector—and the plug folds away nicely for easy storage.

Our main complaints with this surge protector are that it provides only 306 joules of surge protection; it charges USB-connected devices slightly slower than the Home or Away; and its two LED indicator lights are extremely bright. All of the surge protectors we tested have these lights, and most are bright enough to be noticeable but not distracting. Unfortunately, the Power Curve's blue and green lights give off a distracting amount of light in an otherwise dark room, which could be a significant problem in many hotel rooms—unless you like the idea of a surge protector that could double as a nightlight.

The [Monoprice 3 Outlet Power Surge Protector](#) is by far the cheapest surge protector with 2.1-amp USB power ports that we came across. It's just barely longer than the Accell and Mediabridge units, but the plug doesn't fold in, which makes it feel bulkier than it is. It has two AC outlets on one side, one on the other, and two USB power ports on the front. This arrangement gives you a bit more flexibility than with the Belkin or Power Curve units, though it's not quite as good as the Accell or Mediabridge.

The biggest drawback of the Monoprice model is that, when plugged into a standard two-outlet wall plate, the surge protector always blocks both outlets. This means you get a net gain of only one AC outlet (a total of three), which isn't ideal. The Monoprice model also provides only 2 amps of current shared across its USB ports

We dismissed the models below, and others, without testing because they didn't meet our minimum criteria:

[Monster Outlets to Go](#) is popular, but it's actually a power strip rather than a surge protector, and it provides only one USB power port (of unspecified amperage).

[Satechi Slim Surge Protector](#) earned a favorable review from PCMag and is generally well-reviewed on Amazon, but its three AC outlets are too close together to be used with anything other than minimal plugs, as many Amazon reviewers note.

[Globe Electric's 46082 2 Outlet Surge Protector with 2 USB Charging Ports Removable Phone Shelf](#) has AC outlets that are too close together, and its USB power ports are underpowered.

The AC outlets on the [RND Power Solutions Wall Power Station](#) are too close together.

Photos by Nick Guy

Footnotes:

[1.](#) A joule rating isn't a perfect measure of the amount of protection a given surge protector provides. Different products may use different protection technologies, and these technologies can respond differently to the same surge. Similarly, two surges of the same "level" can have different electrical characteristics, which can affect how a given surge protector reacts. Still, a surge protector's joule rating is useful as a rough estimate of protection. [Jump back.](#)

[2.](#) A joule rating indicates the cumulative amount of energy a surge protector can handle—every time there's a surge, the circuitry degrades a bit. So a brand-new protector rated at 600 joules can handle 600 joules of energy in one event, or a series of smaller surges that add up to 600 joules.

Besides being smaller—and thus having less room for surge-protection circuitry—a travel surge protector is less likely than a home surge protector to be plugged in all the time, so it won't be subjected to as many of the small surges that are fairly common. So a high joule rating isn't as important for a travel model as it is for a home model. [Jump back.](#)

[3.](#) We've done quite a bit of research to determine exactly where this 600-joule rating came from, but although we've found dozens of articles and guides recommending it, none explain where they got the number. It appears to be one of those "everyone says it, so it must be good" things. If we find empirical data to back it up, we'll update this article. [Jump back.](#)

