

TAPPING SHIP'S POWER

Most members of today's general aviation fleet were designed and built in the days before 12-volt adapters were popular. When I bought my first aircraft (a 1960 Cessna 182 — see the September 2009 issue of *Aviation Safety*), the cigar lighter actually had been used for lighting cigars. How novel. When I plugged in a 12-volt splitter to power my phone charger and another device, the combined load promptly melted the fuse.

One lesson I learned is that some gadgets have surprisingly large power draws, with iPads being particularly demanding devices. If you are splitting a single cigarette-lighter adapter to handle multiple devices, be sure the system can handle the power draw without overheating, blowing a fuse or popping a circuit breaker.

It's also a good idea to have power adapters that fit snugly and remain charging without requiring constant attention fiddling to keep the charge-indicator light on. Sometimes, the best you can hope for is a set-up merely keeping a power-hungry device running during the flight, much less charges it. Again, iPads and other tablet computers are notorious for their power draw.

Another challenge can be finding the proper adapters for newer, 28-volt aircraft systems. Many 12-volt automobile-style chargers aren't designed for the additional voltage and their failure can be spectacular. You don't want that in-flight.

One trick is to check the offerings at your local truck stop, since over-the-road tractors went to 28-volt systems some years ago. Another is to find an adapter accommodating the range of voltages you can expect, from 12 to 24 volts, from the pilot supply houses. Sporty's lists at least one on their Web site, as do Aircraft Spruce and the other "usual-suspect" vendors.

One thing you definitely don't want to do is jury-rig something directly into the aircraft's electrical bus. For one thing, it's illegal. For another, bypassing a circuit breaker is asking for an in-flight fire. Plus, doing so easily could fry your expensive portable gadget, leaving you without a backup when you need it most (because tapping directly into the system caused an electrical failure).



The appropriate plugs and cabling for your portable devices shouldn't be too hard to find, but ensuring the system can sustain the load might require a visit to your mechanic or avionics shop. Don't forget to pay close attention to locating all the data and power cables—it'll help prevent an in-flight outage. Meanwhile, many panel-mounted power outlets can be in awkward places, potentially interfering with controls, switches and their operation.

