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QST Issue: Dec 2006

Title: High Power DC Load for Power Supply and Battery Evaluation (October 2006 QST, pp 61-62)

Author: Phil Salas, AD5X

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I hope you find this project helpful! I know I enjoyed making it and presenting it to you. — *Hal Schlotfeld Jr, ACØAX, 432 Duke St, Octavia, NE 68632; ac0ax@arrrl.net*

[For longer lengths of ladder line, you might try cutting a slot into the ends of the spreaders, and then gluing the wires into those slots, rather than threading the wire all the way through the spreaders. There are other insulating materials that would make suitable spreaders, such as Plexiglas and even wood, such as dowels. If you use wood, be sure to weatherproof the wood. An old-timer's trick is to boil the spreaders in paraffin. (Be very careful with the hot paraffin, though!) — *Ed.*]

MORE ON SMALL LITHIUM CELL REPLACEMENT

◇ At Dayton this year, I bought a NEC VERSA 4050C laptop computer. The CMOS battery was dead in it and so every time I turned it on I had to reset the memory for the clock and other parameters. I searched the Internet for some information on the battery type and came across www.freelabs.com.

The Web site is mainly about *Linux* usage, but has a lot of information on the 4050C. It seems the CMOS battery is a CR 2430 and has soldered leads coming off the battery, which are terminated in a *very* tiny plug.

I checked various battery suppliers on the Internet, and the cheapest price was in the \$15 range with anywhere from \$5 to \$7 shipping and handling. Since this was about half the price I paid for the Versa, I was resigned to resetting the clock and everything else on start up.

While I was checking out the Hints and Kinks column in the July 2006 issue of *QST*, the picture in the upper right corner of page 57 caught my eye. The brief description of holding some tabs against a button cell made me stop and read the accompanying article. The idea of shrink-wrapping the connectors appealed to me and I checked my junk box for shrink tubing.

I picked up a CR 2430 from my local battery store for \$3.90 plus tax and gave it a whirl. The battery location, according to the Freelab Web site was under the right hand portion of the laptop. What was missing in the information was the fact you have to disassemble almost the entire laptop to get to the battery. It's amazing how these things are shoehorned together!

I finally got to the battery and removed it. The leads coming from the tiny plug were indeed soldered to the battery with very thin flat metal strips on each lead. The battery also had a plastic film over it that looked suspiciously like clear shrink-wrap. Taking off the shrink-wrap, I was able to pry a lot of the metal strip up off the battery. Using a pair of small cutters, I clipped the leads off very close to the surface of the battery.

I slipped a piece of shrink-wrap over the new battery and, observing the polarity of the wires, pushed the leads under the shrink-wrap. Using a hair dryer, I shrank the wrap down to a nice tight fit. After numerous tries, I finally managed to plug the connector back into its socket in the computer.

The hardest part of the whole operation was taking the computer apart and putting it back together again. Thanks for a great money saving hint! — *Bob Cashdollar, NR8U, 1319 Granville Rd, Newark, Ohio 43055-2130; fdc1260@yahoo.com.*

◇ Several years ago I was also looking for an inexpensive way to replace a small lithium cell. I attempted to solder leads to the battery, with ugly results. I went back to the battery store (I can't recall if it was Batteries Plus or Interstate), and explained my situation.

To my pleasant surprise, they offered to "tack" leads onto a second new battery for me. I think they used some sort of small arc-welding setup, just for the purpose of attaching solderable leads to lithium batteries. There was no extra charge for this service. — *Regards, Joe Papworth, K8MP, 200 N Parkway, Delaware, OH 43015; k8mp@aol.com.*

Hints and Kinks items have not been tested by *QST* or the ARRL unless otherwise stated. Although we can't guarantee that a given hint will work for your situation, we make every effort to screen out harmful information. Send technical questions directly to the hint's author.

QST invites you to share your hints with fellow hams. Send them to "Attn: Hints and Kinks" at ARRL Headquarters, 225 Main St, Newington, CT 06111, or via e-mail to h&k@arrrl.org. Please include your name, call sign, complete mailing address, daytime telephone number and e-mail address on all correspondence. Whether praising or criticizing an item, please send the author(s) a copy of your comments. **QST**

Feedback

◇ Some key information required for construction was inadvertently left out of "An Antenna Impedance Meter for the High Frequency Bands" [Nov 2006, pp 28-32]. Please see www.arrrl.org/files/qst-binaries/Clunn1106.zip.

◇ The Nov 2006 cover notation for the Timewave antenna analyzer should read, Timewave TZ-900 AntennaSmith™.

◇ In the sidebar to "Sun, Wind Energize Club Repeater" [Nov 2006, p 46], the text should read, "The power in the wind rises as the cube of the velocity..."

◇ Dave Bernstein, AA6YQ, the developer of *PropView*, provided these comments on the description that appears in "HF Propagation Software — A Look at the Field" [Oct 2006, pp 42-43]:

The review says, "This program is not suitable for global forecasts." Not true: *PropView* can generate short-path or long-path forecasts for any two points on the globe.

The *PropView* screenshot used in the article shows the critical frequencies but not the open bands. This is a view is one might choose when trying to better understand HF propagation, but not when using *PropView* for its primary purpose: to identify the best bands and times to work a sought-after DX station.

The review says, "Enter latitude and longitude of both ends of the circuit, the antenna take-off angle, power, noise level, SFI and desired availability." It fails to mention that *PropView* automatically interoperates with *DXView* (another member of the DXLab Suite), allowing the user to specify the location of the DX end of the circuit by entering a call sign, a DXCC prefix, an IOTA tag, or a grid square — or by simply clicking a location on *DXView*'s world map. *DXView* further augments *PropView* by using the geomagnetic K-index to visually depict interaction between a signal's path and the auroral ovals. Interoperation with complementary applications was discussed in reviews of other applications, but omitted for *PropView*.

The review fails to mention *PropView*'s NCDXF/IARU beacon monitoring capability, which includes the ability to automatically QSY one's transceiver (via Commander, another DXLab application) to monitor a specified set of beacon/band combinations. By comparing the forecast for a relevant beacon with received signal levels, one can calibrate the propagation forecasts for nearby locations.

◇ In Figure 1 of "High Power DC Load for Power Supply and Battery Evaluation" [Oct 2006, p 61], the line connecting the bottom ends of the 2, 8.2 and 10 Ω power resistors should be connected to ground.

◇ In "Learning to Live with a Linear" [Jul 2006, p 38], the reference to "Getting to Know Your Radio," should be to the column on page 48 of the Aug 2006 issue.

◇ In the "Product Review — ICOM IC-R1500 Communications Receiver" [Oct 2006, p 70, Table 1], the frequency range shown as "2853-2669" should be "2853-2869" MHz.

◇ Update: The ARRL Homebrew Challenge (HBC) announced in the Aug 2006 issue [p 20] and expanded in Oct 2006 [p 57] has generated considerable interest and discussion. There have also been a number of requests for clarification of the rules. The HBC Web site (www.arrrl.org/qst/hbc/) has all the clarifications with changes noted in **bold** text. A particularly significant question had to do with operational modes, and yes, the homebrew station must be able to operate in *both* voice and CW modes. Check the Web page frequently for updates and clarifications.

◇ In "Emergency, Emergency, Emergency" [Public Service, Nov 2006 p 85], the regular Monday net control operator of the Alaska Pacific Emergency Preparedness Net is actually Rollo Van Slyke, N7JQ, of Burley, Washington.