

**Obtaining replacement batteries for Trimble GPS equipment**

**Lithium-ion batteries –**

**Summary:** The Trimble 5700, 5800, and R8 GPS receivers, as well as the Trimble TSC1 data collector, use the Trimble 52030 7.4-volt 2.0-Ah lithium-ion battery. The Trimble 52030 battery was introduced in February 2004 and superseded the 46607 1800-mAh battery which superseded the Trimble 38403 1600-mAh battery, which in turn superseded the Trimble 29518 1350-mAh battery that shipped in the very first Trimble TSC1 data collectors.

The Trimble 52030 has a list price of \$120.00 each, and Inland GPS keeps them in stock.

Some of our customers have been trying some of the aftermarket batteries that sell for much less than the Trimble 52030. We cannot say if these aftermarket batteries represent a better value than the Trimble product.

Work-alike replacement batteries are available from at several suppliers. The rest-of-world designation for this battery is the Pentax EI-D-LI1 7.4-volt 1850-mAh battery. This is the same battery that was used in the now-discontinued Pentax EI-2000 SLR digital camera, which was the same product as the Hewlett-Packard PhotoSmart C912 digital camera.

**Suppliers and contact information:**

The supplier situation for these aftermarket batteries changes from day to day. In past renditions of this document we attempted to provide some guidance regarding the various suppliers but it quickly became evident that things were moving too fast for us to provide any meaningful help.

Search on the keywords “Pentax” “EI-D-LI1”, and “5700” using your favorite search engine and see what you get.

If you order from one of the suppliers you find this way make certain their batteries have the full-length groove on the bottom side or the batteries will not go into the Trimble 5700 and 5800 GPS receivers. Also, it would be a good idea to verify the supplier’s warranty terms.

If you try these aftermarket batteries we would appreciate your feedback regarding the how the service is from the supplier you chose, how well the batteries work, how long they last, how warranty issues are handled, etc.

**Sealed lead-acid batteries -**

**Summary:** The various gel-cell lead-acid batteries used with Trimble GPS equipment have finite lifespans and eventually need to be replaced. This Technical Tip provides ordering information to help users get quality replacements at very reasonable costs. The no-name batteries sometimes obtained locally often do not perform as well as the Panasonic and Power-Sonic products originally supplied by Trimble.

**Recommended suppliers and contact information:**

Company	Web site	Telephone	Notes
Allied Electronics, Inc.	<a href="http://www.alliedelec.com">www.alliedelec.com</a>	800-433-5700	\$50 minimum credit-card order
Mouser Electronics	<a href="http://www.mouser.com">www.mouser.com</a>	800-346-6873	No minimum order

Both of these suppliers will accept credit cards for internet and phone orders. Prices shown below were obtained from suppliers’ Web sites on the dates indicated and are only intended as guide because prices will change. Prices shown do not include shipping to your location.

### Camcorder batteries –

It has been our experience that name-brand batteries perform much better than the camcorder batteries you can buy at discount stores. The sun is setting pretty fast on lead-acid camcorder batteries and fewer distributors carry them in stock.

The Trimble P/N 17466 camcorder battery was a Panasonic LC-SA122R3U 12-volt 2.3-Ah battery for several years. The designation varied slightly with time, and because Panasonic provided this battery for many OEM accounts the Panasonic name no longer actually appears on the battery. We did a Google search for “LC-SA122R” on 20 September 2004 and received only one match - a company named The NiCd Lady Company in Riverside, California that advertises this battery for \$24.95 each and indicates they carry them in stock. Their Web site is at <http://nicdlady.com> and their toll-free number is 800-906-6423. If you use this supplier please let us know how the transaction works out for you; we do not want to be giving out bad advice.

In October 2004 the distributor from whom we purchased the Panasonic-brand batteries told us that Panasonic has discontinued this product and that they were now stocking the Power-Sonic PS-1223 batteries as drop-in replacements. We purchased a carton of 12 and they seem OK.

We did notice that some of these Power-Sonic batteries did not charge properly in the Trimble Office Support Module (OSM). It was observed that the OSM was indicating some of these batteries as still charging long after we expected them to be fully charged. On investigation it was determined that the still-charging batteries were hot, probably around 120 to 130 degrees Fahrenheit. We removed the batteries from the OSM, unpowered the OSM, and let everything sit overnight. The next day these batteries all seemed to charge as expected and nothing unusual happened. If you purchase these batteries, please closely monitor them during the first charge cycle and shut down everything if you notice them getting hot.

Allied Electronics Stock Number 621-1223 \$25.44 each – 02 Dec 04  
For other sources, do a web search for “Power-Sonic PS-1223”

### 6-Ah batteries – Trimble P/N 13543-00 and Trimble P/N 32364-00

These assemblies use the Power-Sonic PS-1270 or Yuasa NP7-12FR 12-volt 7-Ah gel-cell battery with 3/16-inch wide push-on terminals.

Allied Electronics	Power-Sonic PS-1270	Stock Number 621-0365	\$22.51 each - 22 Mar 04
	Yuasa NP7-12	Stock Number 610-0032	\$16.76 each - 22 Mar 04
Mouser Electronics	Power-Sonic PS-1270	Stock No. 547-PS1270	\$17.85 each - 22 Mar 04

### 10-Ah battery used in 4400 base-receiver case

This assembly uses the Power-Sonic PS-12120 12-volt 12-Ah gel-cell battery with 1/4-inch wide push-on terminals. (The Allied Electronics catalog seems to have a mistake regarding terminals on this model; we confirmed via the Power-Sonic Web site ([www.power-sonic.com](http://www.power-sonic.com)) that both terminals are 1/4-inch wide). This may be the battery used in some recent 10-Ah battery assemblies offered by Trimble, but we have not been able to verify this fact. Check terminal width and see the next item below.

Allied Electronics Stock Number 621-1212 \$37.32 each – 22 Mar 04  
Mouser Electronics Stock No. 547-PS12120 \$39.50 each – 22 Mar 04

### 10-Ah battery used in Trimble P/N 13542-00 and Trimble P/N 32365-00

This information is based on inspection of a limited number of older battery assemblies, confirm terminal width and compare with the item above. The older battery assemblies we have seen use a battery with 3/16-inch wide push-on terminals. The Power-Sonic PS-12100 F1 12-volt 10-Ah gel-cell battery has 3/16-inch wide push-on terminals and measures 5.95 inches long, 4.00 inches wide, and 3.70 inches high. This may be slightly different than the original battery, see for yourself if the bag or other enclosure will fit before ordering, advise Inland GPS if it does not and we will modify this sheet. The data sheets we have seen for these batteries make it look like they consist of two six-volt batteries stuck together and with an external jumper at the electrical midpoint.

Allied Electronics Stock Number 621-0390 \$44.74 each – 22 Mar 04  
Mouser Electronics Only listing is for Power-Sonic PS-12100 F2 at \$34.90 – 22 Mar 04. This battery has 1/4-inch wide terminals. Would be easy to replace wire terminals if necessary.