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FFI: <a href="http://www.neighborhoodlink.com/GECO">www.neighborhoodlink.com/GECO</a> Send an email to request the combined newsletter.	
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## Balanced Charging for Better Battery Life

Harry KB7ULN has sprung another battery bonanza for the GERC amateur operators. Jim KG6TQT facilitated the transporting, testing, charging, and wiring sets of four CSB GP 12120 12 V 12 Ah leakproof and maintenance-free batteries. Harry and Jim discussed using a balanced charge approach in an attempt to prolong the service life of these free batteries. The only condition for GERC members to get these free batteries is to promise to properly dispose of them when they expire.

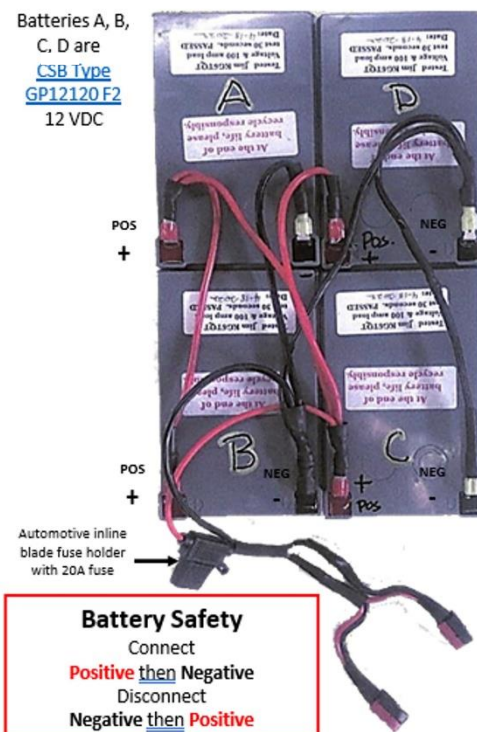
Jim got the information for this wiring configuration from this video on YouTube <https://www.youtube.com/watch?v=oOEgnCrXPyg>. The person who made the video reports he got the information from [www.impactbattery.com](http://www.impactbattery.com)

GERC EmComm operators use battery power for their radios. Every disaster is unique, but a loss of power and the various forms of telecommunications (e.g., phones, TV, Internet, etc.) are common. Amateur radio has played a key role in major disasters as being the first means of letting the world know a disaster is in progress.

Radio amateurs must be aware of their operating duty cycle, the status of battery charge available, the temperatures during operation, their transmission power consumption, and available battery recharging options. Unexpected disruptions are the most common causes of EmComm operations failures. Some numbers are widely talked about, but the devil is in the details of the field conditions, the physical and mental conditions of the operator, etc. For example, many emergency preparedness resources mention having supplies for 72-hours, planning to have a gallon of water per person daily, etc. Every operator needs to know themselves and their situation. For example, the amount of water needed daily depends on the ambient temperature, the amount of physical activity done, and your overall health. As an EmComm operator, how much battery power is needed to operate for 72 hours in the field without recharging your batteries? [Note: It depends on your equipment, duty cycle, the temperature of the operating environment, etc. Have you tried to estimate the weight of the batteries you need to operate for 72-hours?] As the batteries run low, you must reduce your operation to conserve power. Do you have a pre-arranged plan for others to know

### Four Battery Balanced Charge Parallel Wiring Configuration

FFI: <https://www.youtube.com/watch?v=oOEgnCrXPyg>



Based on the information in the video link at the top of the page, Jim KG6TQT is suggesting all GERC members use this method for their backup battery systems.

2 sets of Anderson PowerPole connectors. Either can be used for charge input or to connect to 12 VDC load.

when and where to listen for you? Now do you see why learning QRP (low-power operating) is very practical?



GECO keeps all 12 V field and station batteries on float charge. This assures the batteries are fully charged and ready for EmComm use. GECO guidelines call for monitoring field batteries and station battery banks during use. When the batteries show 80% charge remaining, it's time to start recharging them. Normally, GECO field radios are used for a day and usually return to the station by night. Emergency deployments call for different strategies depending on the nature, location, and duration of the deployment. Under single-handed YO-YO protocol (you're on your own), operators would remain at their station. They tend to leave the station 1) for short, local recon scouts, or 2) if they must evacuate the station. It is not easy for a single operator to

backpack a transceiver, spare antennas, battery, water, food, and shelter for 72-hours of field operating. If evacuating, the challenge is even greater.

In many cases, it will be easier to plan to use what limited battery power you have as efficiently as possible. The optimal approach would be to tune your transceiver/antenna system for a near-perfect match, have a compact vertical and a directional antenna, necessary lines, and gear to mount these portable antennas, and have known LOS (line of sight) hilltops available to operate simplex to nearby stations. Given the limited battery power available, make an operating plan to allocate the power to last 72-hours. [**Note:** The 72-hour number is a commonly cited one. GECO has no idea how it came to be but uses it based on the fact that it is a starting point for operator survival based on the biological need for water. However, ambient temperature, general operator's physical condition, health, type, and amount of physical activity, etc. can increase or decrease a body's need for water.]

So, what can you do when you completely run out of battery power? Scavenging 12 V batteries from vehicles is an option (if you have the tools). Given the weight of the batteries, it's a good idea to have a VOM to check the battery voltage before salvaging and lugging it to your operating position.

GECO recommends all EmComm operators build up an inventory of [non-radio EmComm tools and techniques](#). Most of these rely on LOS, so you can use them from your alternate RF operating positions. Visual and/or audible range are limiting factors, but these systems were used effectively in the past. Some were even considered state-of-the-art in their day. 🌐

### ***Visit the Glendora Emergency Response Communications Net***

Have you ever wondered why the GERC Net begins with a call for "Any emergency traffic, please call now?" It's a long-standing practice in amateur radio nets from yesteryear. To learn why click [here](#). 🌐



***Visit the GERC Net***  
Thu, 08:30 PM (Pacific  
UTC-7/-8)  
Grid DM14cd