I spent some time this weekend going through my gear and back up gear. Organizing and labeling. I turned my attention to my radio gear, specifically my handi talkies and my go kits. I decided it was time to check battery levels on the different radios. I do this regularly, but I also began to think of my other power supplies and sources. So tonights training is a brief discussion on power sources and reasons to check them regularly.

Radio equipment: Your power sources and why to check them. By KI5UAJ

Ham radios can sometimes feel like magic. They allow you to travel the world right from your chair by connecting you to people thousands of miles away in exotic places. Sadly, without a reliable ham radio power source, your system won't take you very far.

What are Portable Power Source Options for Ham Radio Equipment?

Ham operators broadcasting from home likely have easy access to power by plugging directly into a wall outlet. Most radios need a 12V power supply and can use a converter to plug into household AC power. Those looking for a more portable or backup power setup will need to choose an option for on-the-go power. The most common options are generators, batteries, and solar power.

Gas generators can provide quick, easy power. However, they're heavy, can be noisy, and may not be reliable. None of these are ideal for ham operators who are on the move.

Solar is a great option that's growing in popularity due to the rising interest in off-grid setups. As the name implies, solar power systems rely on the sun to produce power. Therefore, solar power setups also include a battery system so that you can use your ham radio after the sun goes down. The need for solar panels and batteries makes this one of the most costly options available.

Batteries are an excellent option for powering your ham radio system. 12V ham radio batteries are quiet, portable, and can pair with generators, the power grid, or a solar power system. This flexibility provides a renewable off-grid option that allows you to use

your ham radio anywhere, anytime.

Key Reasons to Check Your Batteries

- **Verify Voltage Levels:** A standard handheld transceiver (HT) battery reads about **8.2V to 8.4V** when fully charged and powers down around **6.7V**. Checking the voltage prevents sudden shutdowns during a conversation,
- **Prevent Deep Discharge Damage:** Traditional lead-acid batteries can be permanently damaged if drained below 50% capacity. Regular checks stop over-discharging.
- **Avoid Chemistry Failures:** Lithium-ion and LiFePO4 batteries can overheat, catch fire, or swell if overcharged or damaged. Inspecting them catches physical punctures or voltage irregularities early.
- **Ensure Emergency Readiness:** Sitting unused in a drawer or vehicle for months can cause batteries to self-discharge or drop below a recoverable threshold. Regular monitoring ensures your station works when grid power fails.
- **Identify End-of-Life Cells:** Battery packs degrade over time and drop below 80% of their original capacity. Testing lets you replace failing packs before a field day or emergency deployment.
- **Catch Wiring and Fuse Issues:** Checking connections prevents reversed polarity, which can melt cables or fry internal radio components.

This concludes tonights training, this is KI5UAJ returning to Net Control.