AMATEUR RADIO & ELECTRICAL SAFETY

As part of our licensing process electrical safety is covered in the training material, however electrical injuries and incidents continue to occur. A motto of a very experienced-major world wide company is that "All incidents can be avoided". At first you may think this is an impossible statement. But over the year of analyzing many incidents in all areas of life, I have found this statement to be true. With this motto in mind, think back about incident you have encountered and I am sure you will see just one thing that could have been changed to prevent the incident from going to a serious outcome.

Example 1: An operator was using a deep cycle battery to demonstrate the use of Amateur radio during a Technician class. This operator had done what they thought was a very nice job of setting up the battery for easy and quick use. Cables with Anderson Power Poles and fuses in both leads were bolted to the battery terminal. The trickle charger cord with a fuse in the positive lead and Bullet/SAE connector was also bolted to the terminals. Keep in mind the Bullet/SAE connector has an exposed negative terminal.

In the process of setting up the radio, the trickle charger cable negative pole touched the positive terminal on the battery. With no fuse the cable conducted electrical current and started to heat up, generate a tremendous about of smoke, and luckily burned in two before a fire started. Many of the new trickle chargers have an insulated cap that can be placed over the exposed negative terminal when the charger is not connected. There are several ways this incident could have been avoided: take the few seconds necessary to put the cover (if present or make your own cover) over the negative terminal, put a fuse in the negative lead, use Anderson Power poles instead of Bullet/SAE connectors on the charger, keep a cover over the battery (always a good idea) and only let the power leads extend out of the cover.

I have seen an entire battery terminal blown off when a cable of sufficient current carrying capacity came into contact with both the positive and negative terminal of a battery with 500amp of starting power. The lead that was blown off was equivalent to a 9mm bullet. No one was injured but the potential was great.

Example 2: During the 2011 Field Day, two experienced amateur operators were shocked and received electrical burn injured while taking down an inverted V antenna. The two operators "'were injured while lowering the center pole of the inverted V dipole antenna to the ground. They were knocked to the ground when a guy wire, or the antenna lead-in, was hit with very high wind gust that blew it into a high [power] line wire.' According to reports from witnesses, winds were gusting up to 40 miles per hour." (The ARRL Letter, June 30, 2011)

This antenna had been used in this exact spot in previous years. The team repeated the same practice of locating the antenna at what they believe was a safe distance from the power lines. They used caution tape on the guy wires and antenna end locations. This could have been a fatal incident. How could this incident have been avoided: consider

the potential for wind and the possibility of guy lines or antenna coming in contact with power lines and located further away, use a none conductive center pole for the antenna.

“All Incidents can be avoided” if one takes the time to think the situation, job, task, etc. through and consider all of the things that could go wrong. This takes practice and works best when consulting with someone else and doing a “What IF” exercise. Take the time to be safe, you only have one life and it only takes a second for things to go bad rapidly. Adopt the mind set that “All Incidents can be avoided” and you will begin to see ways to protect yourself and others.