Safety

Safety in amateur radio cannot be overly stressed. Every year amateurs are injured and even killed as a result of not observing proper safety around their equipment. Safety can also prevent damage to equipment and your shack or vehicle. We are going to divide our discussion into two parts. One is electrical safety and the other is outside safety. These overlap and precautions in one may also apply to the other.

I. Electrical

1. While in many instances RF may offer no substational risk of damage to you, your family or neighbors, but in certain instances it can cause burns, loss of eye sight or affect the body in other ways. Additionally, the FCC requires that you have posted an exposure calculation if your equipment is capable of radiating more than 50 watts. Just to be safe it would be wise to perform the calculations on any transmitter/antenna. There are several websites on the internet that with the entry of simple data will provide an instant analysis for you. My favorite is http://n5xu.ae.utexas.edu/rfsafety/. Or just do a Google search for "rf safety calculator." The analysis results can be easily printed for display in your shack. Read it, analyze it and take action if there is danger of excess exposure.

2. Do you have a fire extinguisher handy in your station? A good carbon dioxide extinguisher will aide in fighting all types of fires. They can be purchased from your local home improvement store. Assure it is readily accessable and have it serviced at the manufacturers recommended interval.

3. Have a well stocked first aid kit handy. Assure you and others in your family are first aid and CPR trained.

4. Assure someone in your family is aware of how to turn off the power in your station and knows how to summon emergency assistance. Assure they are aware not to touch a person who is in contact with live electrical circuits. Don't create a second accident while trying to help the victim of an accident.

5. Always turn off power before working on or opening any electronic equipment. Do not defeat or by pass safety switches. If working directly on primary AC power assure switches that you have turned off are locked, tagged or otherwise blocked.

6. If you feel you must work on live equipment keep one hand behind you or in a pocket. This includes working on capacitors and power

supplies. Turn off their electrical power and discharge them with a screwdriver or grounding stick before touching. Don't assume bleeder resistors or other circuit components will discharge them. Even after initially discharging due to their construction materials they may still have a charge. Recheck them after a few seconds and minutes.

7. Avoid bodily contact with grounded objects while doing maintenance on live or potentialy live equipment. Use insulated tools for moving or adjusting equipment. Never work alone. Have someone else present.

8. Under no circumstance defeat or modify equipment grounds. Do not use ground cheater plugs.

9. Do not lift heavy objects with your back. Assume a squating position and lift with your legs. Wear shoes with covered toes and preferabily steel toed when lifting or moving heavy objects.

10. Exercise care with soldering irons and guns. It is best to wear glasses or safety goggles when soldering. Think your way thru how you will handle hot soldering irons and guns before you start. Don't put yourself in a position to grab the hot end of either.

11. Carefully plan every operation before beginning. Determine needed equipment. Will additional help be needed? Are electrical circuits rated for the load you intend to place on them. Are grounds available, are they adequate and of the right type.

II. Outside Safety

1. As mentioned earlier parts of electrical safety are applicable to outside safety.

2. Assure ladders are the right size for their intended purpose. This includes weight limit and height.

3. Do not exceed the climbing height listed on your ladder. Do not lean beyond the base of your ladder. For tall step ladders be especially careful to assure the top of the ladder does not lean outside the base of the ladder. Assure ladders built for leaning against buildings are leaned are a one to three ration.....that is one foot from the base of the wall for three feet high.

4. When climbing use a first class safety belt, safety glasses, hard hat, gloves, long sleeves and pants without cuffs.....Steel shank shoes with no-slip soles and well defined heels.

5. If not well qualified in tower climbing always climb with a buddy who is well experienced. Take frequent breaks and think every task thru before beginning.

6. Towers, push up poles, mast, antennas and especially vertical antennas should never be located closer to power lines than their height or length plus 10 feet or 10 percent of the length which ever is greater. This is when these items are down or erected.

7. Never stand near or in line with cables of any kind that are under tension until they are permanently secured.

8. Always have an appointed supervisor and enough crew members to do the job. Let the supervisor do just that.....too many chiefs and not enough indians is not a good idea.

9. Do not attempt any work during inclement weather including lightning, rain, snow, ice or wind. Remember this is a hobby.

10. Anticlimb shields are a good idea. They keep untrained people off your tower and can protect you from liability.

11. Become familiar with the grounding and lightning protection requirements of the National Electrical Code and all pertinent information on the Polyphaser website. Do a Google search on the internet to find them. Follow their instructions to the absolute degree.

The above information is not intended for formal training but is simply a reminder of safety information that we are probably already familiar with. It is not intended to be all inclusive. Safety can guard life, limb and your equipment. Practice it wisely and with fore thought.