Getting the message through

We can help achieve reliable communications by improving the signal to noise ratio. For tonight's purpose we will define "noise" as something that would hinder transmission or reception of information. What form can this "noise" take? Here are some of the more common ones:

Static and background noise on the air
Equipment or voice sounds around you
Inappropriate amount of light
Improper transmission speed
Improperly formatted messages

What can we do to help the message get through; here are some common ways to handle things that hinder communications.

Slow Down!
Hams, in general, tend to handle communications as quickly as they can. This does NOT produce the maximum thru put during a net. While this may seem like it is against the urgency of a message, it has been proven again and again that a three or four second break between transmissions will actually result in information being passed more quickly.

EmCom - Basics
- Static and background noise on the air

1. Ensure you have the proper antenna for the job. Know what works with your equipment before you have to set it up after being deployed. A vertical usually works quite well for VHF/UHF and some variation of a dipole for HF.
2. Choose the best band for the job

VHF/UHF are very good for short distances (less than 50 miles) but are useless for distances over one hundred miles. The antennas are quite small.

HF propagation differs by band and antennas are quite large. So consider what distance you wish to cover.
3. Make sure your equipment is grounded.

•Equipment or voice sounds around you
1. Use a headset to minimize noise you will hear from the area you are in.
2. Use a noise canceling microphone to minimize transmitted noise.
3. When ever possible, locate your station away from the source of noise.

•Inappropriate amount of light
Many people do not think of light as a potential problem. Think what happens when you have too much light when you try to read a computer screen or too little light when you try to read printed information.
1. Stay out of direct sunlight if at all possible.
2. Try not to be in shade while having to look directly into the sunshine.
3. Ensure there will be sufficient light for you to work at night.

•Improper transmission speed
1. Practice sending at the appropriate rate where the other party can copy. That means you shouldn't ramble off the message text at high speed, but pace yourself to the same speed that the other party is copying (about 15 WPM). That translates to about one word every four seconds. As you speak, imagine that you're writing the word in your mind. After a while, you'll get the hang of talking 15 WPM. If you do this right, you'll eliminate most requests to repeat a section.

•Improperly formatted messages

1. We need to check and make sure when formatting a formal message that it is correct before it is sent and encourage others to do the same.
2. Practice, Practice, Practice.