



Rick Palm, K1CE, k1ce@arri.org

Practical Operating Tips from the Field

Some words of advice for the public service operator.

This month, we will look to the field for miscellaneous operating tips, protocols, and lessons from those operators who are actually out there performing communications duty for events, disasters, and emergencies. These are, in my opinion, the best tips and reminders to help groups around the country improve and enhance their performance in field deployments.

Except as noted, the credit for these gems goes to the St Louis Metro ARES®/RACES organization, and especially Assistant Emergency Coordinator for Operations Gary Ross Hoffman, KB0H.

Golden Rules

■ Operating protocols and procedures are developed from many hours of examining what went right and wrong during deployments. Know them and familiarize yourself with them by practice in either tabletop or field exercises. Arriving at a public event or disaster scene without prior preparation will only cause problems.

■ During every deployment or exercise, think about the next time. You will always find that something is missing, broken, doesn't work as expected, wasn't planned for, etc. Keep a written record of everything that is wrong. Examine it carefully after the event so you will be better prepared next time.

Net Operations Tips

■ During any emergency/public event net, if you are asked a question, do your best to give a short, simple answer. Try not to add a lot of qualifiers or exceptions. When asked for a simple "yes" or "no," if you can't answer, your response should be, "I don't know."

■ Keep instructions simple and easy to understand. If the NCS gives lengthy instructions that are almost impossible for anyone to grasp quickly and efficiently, no one will follow the instructions.

■ If NCS asks any question, the controller should wait at least 5 seconds before continuing to allow stations to respond. [This is especially important if the net is operating on a linked repeater system. It often takes several seconds for all the links to come up. — Ed.]

■ Some NCSs make the mistake of identifying the net only once, at the beginning. For the benefit of latecomers, the name of the net and the net control station's call sign should be transmitted regularly.

■ One of the most common mistakes on nets is that operators don't pay attention to what the NCS is saying. They miss the instructions and wind up giving inappropriate responses. One way to develop the habit of paying attention is to write down the key elements of what the NCS is saying.

■ Air time is precious, especially when there are numerous operators on the net. Refrain from over-explaining things, engaging in personal greetings and chats, or anything else that might interfere with passing traffic.

■ Consider the following exchange: Station 1: "Does anyone know where the fire chief is?" Station 2: "I think he went to lunch." The operator at Station 2 is just speculating. Avoid guesswork; only transmit information you know to be factual.

■ Avoid words or phrases that carry strong emotions. For example, instead of saying, "horrific damage and people torn to bits," we might say "significant physical damage and serious personal injuries."

Operating Tips

■ Know how to operate your radio. Every transceiver model is different and you

should become intimately familiar with the workings of the one you plan to use during an emergency. — Bob Gale, WA4GDX

■ Q-signals are useful if you are sending Morse code, but often lead to confusion when used verbally. Do not use them on voice. Also, talk slower. The biggest cause of errors during voice communications is

an operator talking too fast. The receiving operator either misunderstands or misses parts of the message.

■ Do not alter a message, even to correct a typographical error. What you think is right may actually be wrong. Moreover, any change you

make might subtly alter the meaning of the message. Send or write the message exactly as you receive it.

■ Don't use VOX (voice activated transmitter). Ambient noise might activate the transmitter and tie up the frequency. Also, you do not want your casual comments to go out over the air.

■ If you have a transceiver capable of handling two frequencies simultaneously and no one is responding on that second channel, check the channel's volume level.

■ Each mode is different. Operating on HF is vastly different than operating on VHF. Even in VHF, working via simplex is different than using a repeater. Practice and gain experience with each band and operating mode you're likely to use during an emergency.

■ What do you do if your station goes down? Remember, *you* (not the radio) are the communicator. Think about alternative ways to get your messages delivered.

■ Be adaptable. An emergency or disaster situation is never going to unfold as you

If NCS asks any question, the controller should wait at least 5 seconds before continuing to allow stations to respond.

expect. Don't let yourself get flustered. Adapt to the situation as best you can.

- Deploy two operators at every station. Experience has shown that stations at checkpoints work best if there are at least two operators on duty at all times. One should stay focused on the radio traffic. The other should assist and "run interference" for the first operator, working to keep the area quiet. The two operators should periodically switch positions.

- If you have to set up your field station outside, you will have to contend with the wind. It will affect your ability to hear and may even get into your microphone and garble your transmissions. It will also scatter any loose papers you have at your station. Think about how you can address these issues before your next deployment.

- Use UHF as well as VHF. We are used to ARES activities taking place on the 2 meter band, but this may not always be the best band for the task at hand. For example, the Missouri ARES Interoperability Plan indicates that on-site operations should take place on the 70 centimeter band.

- Don't "step on the tail." Before you key up, wait for the repeater "tail" to drop. That is, wait for the repeater to stop transmitting completely. Then mentally count to three. That should allow enough time for any operator having a marginal signal to get in.

Organizational Tips

- If you have problems with equipment or other operators, note your complaints in your log and bring them up at the debriefing; they don't belong on the air.

- Always bear in mind that your role is a volunteer communicator and that you are working with professionals. Calling them "sir" or "ma'am" may help you to remember this.

- Be ready to explain what you're doing. An emergency management professional may stop and ask about your operation. Be prepared to coherently explain your function and how you plan to perform it.

Pre-deployment Tips

- Murphy dictates that some part of your

go-kit won't work. Check and test your gear well before a deployment and apply a piece of tape marked with the last inspection date.

- When deploying your station in the field, think safety first. Ask yourself: "Have I created an electrical hazard? Could anyone trip over my feed line or get poked in the eye by my antenna?" Make sure your antenna is a

safe distance away from your operating location and that its emissions are not directed at anyone. Make sure your equipment cannot harm you or anyone else.

- You have a go-kit for your radio equipment, but do you have one for your documents? You should have a copy of your team's emergency operations plan, a list of frequencies you're likely to use, maps, addresses of partner entities, the names of contacts, a copy of your license, etc. Keep your documents in a waterproof container.

- Take a garbage bag with you. It's lightweight, inexpensive, and it makes it easy to keep your area free of plastic bottles and any other detritus that might accumulate. More importantly, you'll make a favorable impression on the agency you're serving with if you clean up after yourself. It also makes a great impromptu raincoat.

- If you need to keep your kit light, consider bringing multifunction tools, such as a Swiss army knife or a Leatherman tool.

- Take a small, battery-operated clock that can be set near your activity or message log sheet so you'll have the correct time at hand.

- Don't rush. There is always a sense of urgency at a disaster site, but even if you are under time constraints, take the time to set up your equipment properly. It is better to be a little behind than to miss something important or have to re-do something done incorrectly by rushing.

Equipment Tips

- Slow charge your batteries. Fast chargers heat them, which considerably shortens their lifespan. It is cheaper and more efficient to have several batteries on hand

and rotate them through a slow charger. Number each battery and keep a paper log at your battery charging station. If you charge batteries on the fly, such as in your car, then put a sticker on the battery and write the charging date/time on the sticker.

- Avoid a short circuit. Always use the terminal cap (if provided) to cover the positive battery terminal or house your battery in a protective plastic case to keep any conductive material from falling across the terminals.

- Antenna connectors are fairly standardized, but what about power connections? ARES groups around the country use Anderson Powerpole connectors as the standard power connector (www.andersonpower.com).

- Anywhere you have connectors, you will likely need weather sealant as well. Putty-like sealant is fine for permanent installations, but for temporary operations use stretchable plastic weather sealant tape instead. It's much easier to remove.

- Even a Citizens Band radio can be useful. Many truck drivers have CB transceivers in their vehicles. Upon arriving at the scene they may try calling for instructions on CB Channel 19. If you have a CB radio with you, you may be the only emergency communications operator able to respond to them.

- Have a set of headphones in a disaster scene deployment. You may be placed in an area where other operators are working on different bands, you may be out in the open, or you may be in a noisy shelter. A headset should be a vital part of your kit. You can't communicate if you can't hear.

- Even a field station needs to be grounded. Lightning is just one potential hazard. At the scene of a disaster there will likely be all manner of hastily assembled electrical and electronic equipment. The possibility of interference or shock is very real.

- Mark your trip hazards. Your field station may have a number of trip hazards, such as your feed line, guy wires, tent pegs, and tripod legs. Be sure to mark them in bright colors, or alternatively, wrap them with brightly colored warning tape.

The biggest cause of errors during voice communications is an operator talking too fast

You have a go-kit for your radio equipment, but do you have one for your documents?