Becoming a 3rd Class Communicator

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After a two year training cycle it is time for members to demonstrate that they have the skills necessary to be deployed as full fledged communicators. 3rd Class Communicator represents the minimum skill level to function as an independent operator or as a small team leader doing UHF/VHF communications in a post disaster call out. Note that new members will be expected to develop this skill level within two years of joining SCARES.

This article was prepared to help you brush up on your skills before being evaluated. The answers below are the ones that I would give if I were going through the evaluation.

Apprentice Communicator - An Apprentice should be able to deploy for low level duties as a courier or as a shadow operator. An Apprentice may need help in getting set up for repeater use but should be able to function as a Tactical Communicator.

_____ A.1. FCC Technician Class License or Higher
Just give your Call Sign.
_____ A.2. Describe a "Jump Kit" for immediate (< 48 hour), 72 hour, and one week deployment
For <48 hours I have clothes suitable to the weather, quick food snacks, one gallon of water, a flashlight, pen and pencil, note book, maps, GPS, toilet paper, vest and hard hat, and at least one radio (HT) with enough battery packs to receive for 3 days and transmit for 2 hours. I also make sure I have whatever prescription and non-prescription medications I need. For 72 hours I add a sleep kit (tarp, sleeping bag and pad), toiletries (tooth brush, deodorant, soap, etc.), towel, a change of clothes or two, the ability to cook food and food to cook, and expand my radio collection to include power for four days of receive and six hours of transmit. For a one week deployment I add a third change of clothing, the ability to wash clothes in a bucket, a bucket, a water filtration system, and the ability to recharge my battery packs. Note all my radios (HT) can run on AA batteries and can be recharged from 12 volt DC and 120 volt AC power. Your selections may be different but the key is to make sure you have the right stuff to operate effectively, to stay hydrated, to satisfy hunger, to stay clean, and to stay rested.
_____ A.3. Demonstrate setting up a UHF/VHF radio for Simplex including making frequency changes, setting the volume, and powering up and down
Know your radio well enough to do this. Practice doing this. Bring a manual...
_____ A.4. Participate in a Directed Net as a Station

3rd Class Communicator - A 3rd Class Operator should serve as a general purpose communicator for voice where HF is not required. They should understand the proper role of a communicator, have a basic understanding of UHF/VHF radio operations, be able to handle record traffic, and to operate successfully in a net structure.

_____ 3.1.a Describe the proper role and attitude of a Communicator in an Emergency Situation
Your attitude should be that you will do whatever it takes to aid the Agency by facilitating their effective communications. This may involve helping them format or clarify messages. It will certainly involve doing your best to clearly transmit and receive messages. It is not your role to try to dictate policy or procedure in any way. This does not mean that you should not gently remind folks what the procedures are if they seem not to be following AGENCY established procedures.
_____ 3.1.b Explain why you might be assigned to do tasks totally unrelated to the ones you

volunteered for and how to deal with this situation

The Incident Commander is trying to solve a complex problem. He may not have the right mix of resources available to get the job done. He will try to improvise with the resources he has. That means he may attempt to get you to do tasks that have nothing to do with communications. They may even be tasks for which you are unsuited by training, temperament, or ability. It is a good idea to remind the IC function that your primary task is to be a communicator and that you are willing to (if it is indeed true) do other tasks so long as they do not interfere with your primary task. If you are tasked with something which you doubt that you can do, inform the IC of your doubts. If you are tasked with something you can not or will not do, turn down the task with the reason you are turning it down. Good communication is very important here.

_____ 3.1.c Describe the proper relationship between an Emergency Communicator and the Press and other Media

In general your only response to a question from the media should be to refer them to the Public Information Officer, or if there is none, to the IC. It is OK to share that you are a trained volunteer radio operator affiliated with SCARES and your home city and even why you are there. It is NOT OK to comment about ANYTHING related to the incident.

_____ 3.2.a Know the ITU Alphabet and Numbers for both send and receive

There is no magic way to do this. Just learn them: Alpha, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliet, Kilo, Lima, Mike, November, Oscar, Papa, Quebec (alt. Kaybek), Romeo, Sierra, Tango, Uniform, Victor, Whiskey, Xray, Yankee, Zulu, One, Too, Thuree (alt. Tree), For, Five (alt. Fife), Six, Seven, Ate, Niner (alt. Nine), Zero (NEVER Oh).

_____ 3.2.b Know Basic Prowords

There are 27+ of them. You especially need to know how to interpret and use: Roger, Charlie, Break, Over, Out, Wait, Negative, Affirmative, Say Again, All (or word or letter) After, All (or word or letter) Before, Figures, Letters, I Spell, Copy

_____ 3.2.c Know the format for ARRL Radiograms

Carry a copy in your notebook and know what the blocks mean.

_____ 3.2.d Know what ARRL radiogram handling instructions mean

What is really important here is to understand Precedence. These are:

***Emergency**--Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. On cw, RTTY and other digital modes this designation will always be spelled out. When in doubt, do not use it.*

***PRIORITY**--IMPORTANT MESSAGES HAVING A SPECIFIC TIME LIMIT. OFFICIAL MESSAGES NOT COVERED IN THE*

EMERGENCY CATEGORY. PRESS DISPATCHES AND OTHER EMERGENCY-RELATED TRAFFIC NOT OF THE UTMOST URGENCY.

Notifications of death or injury in a disaster area, personal or official. Use the abbreviation P on cw.

***WELFARE**--A MESSAGE THAT IS EITHER A) AN INQUIRY AS TO THE HEALTH AND WELFARE OF AN INDIVIDUAL IN THE DISASTER AREA B) AN ADVISORY OR REPLY FROM THE DISASTER AREA THAT INDICATES ALL IS WELL SHOULD CARRY THIS PRECEDENCE, WHICH IS ABBREVIATED W ON CW. THESE MESSAGES ARE HANDLED AFTER EMERGENCY AND PRIORITY TRAFFIC BUT BEFORE ROUTINE.*

***Routine**--Most traffic normal times will bear this designation. In disaster situations, traffic labeled Routine (R on cw) should be handled last, or not at all when circuits are busy with Emergency, Priority or Welfare traffic.*

It is also useful to know how to interpret the H group of handling instructions.

_____ 3.2.e Know how to log messages

Messages are logged by Originator, Number, Time, who you received it from, when you received it, who you sent (gave) it to, when you passed it on. Sometimes there is also a summary of content or title. Log messages in the format you are given, unless you are not given a format. Then, log messages using the information above.

_____ 3.2.f Know how to originate a message

Make sure the message is understandable and legible. Encourage the originator to make it brief and concise. Encourage the originator to avoid abbreviations and acronyms (use plain language). Make sure the message has an originator, a number, a precedence, and an addressee and that it is signed off by the originator or their agent. Then transmit and log the message.

_____ 3.2.g Know how to "pass" or relay a message

Make sure it is transmitted UNCHANGED to the next station in the chain. If in doubt, repeat the message and have the receiving station read it back. Log the message and save a copy.

_____ 3.2.h Copy a Correctly Formatted Message passed by Voice

_____ 3.2.i Explain the importance and proper use of Tactical Call Signs in EMCOMM

Ham operators always carry their call signs with them and must use them to identify themselves. At shift change the new operator has a different call sign. This often leads to confusion. Tactical Call Signs stay with the function/location. If they are descriptive they make it clear who is being heard or talked to. Tactical Calls are always a good idea when operators are going to change with time and when operators are not well known to each other. When Tactical Call Signs are in use the Ham typically only gives his call every ten minutes or when he believes that it will be more than ten minutes before he transmits again. The rest of the time Tactical Call Signs are used to identify stations.

_____ 3.3.a Explain the difference between Simplex and Duplex operations

Simplex operations mean communications can go only one way at a time. If only one frequency is in use and it is not multiplexed, the communication is Simplex. Only one person can talk at a time. Duplex communications allow two communications to be handled simultaneously. In radio this is ordinarily done by using two frequencies. This could mean that you could transmit and receive at the same time. In ordinary Ham use it means that a repeater can receive your signal on one frequency and simultaneously transmit it on another (offset) frequency. For 3rd Class purposes, Simplex means direct station to station by single frequency. Duplex means using a repeater.

_____ 3.3.b Explain why "channels" might be used to designate frequencies

It is easier to remember and easier to communicate "Channel Two" than 146.415 Mhz. This is even more true if the description includes tones and offsets. On many radios it is much easier to change to preset channels than to set frequencies. This makes it easier to train and coach operators. This becomes very important if using radios when you are cold, wet, and tired and your brain function starts to shut down.

_____ 3.3.c Explain how "tones" are used for CTCSS and PL

Most modern radios have a circuit which constantly listens for low frequency audio tones. When it hears a designated tone the radio takes some action. In Simplex operation this action is to turn on the audio amplifier. If tones are set, no tone received, no sound out. This screens out unwanted transmissions. Unfortunately it also makes it impossible to listen for an open channel before you transmit. (Though some radios flash an LED when they are hearing a signal even if they do not pass that signal through to you). This use of tones is generally referred to as "Privacy".

In Duplex operations the tones are frequently used to tell the repeater to actually repeat the message. No designated tone, no repeater transmission. This helps prevent false keying of the repeater. There are some very sophisticated uses of tones that are way beyond what you need to know

for 3rd Class. Just know if Privacy tones are being used and you do not turn your tones on, no one will hear you. If you are not listening for tones, you will hear everyone, including people you may not need/want to hear. For Repeaters, if you do not have the right tones on, you WILL NOT key the repeater.

_____ 3.3.d From a standard Repeater Description, set up a UHF/VHF radio to operate on a repeater

A Repeater Description includes a receive frequency, a transmit frequency (usually given as an offset), and PL tone(s) necessary to key the repeater transmitter(s). You need to know how to properly set each of these parameters into YOUR radio. Typically you set the receive frequency. Then, if it does not happen automatically, you set the offset. Then you need to set the right tone. Finally you need to turn the tone on. Practice doing this. Bring a manual...

_____ 3.4.a Explain the Operation of both Informal (Open) and Directed Nets

In a Full Formal Directed Net ALL communications are conducted under the direction of, and with the permission of, Net Control. No one speaks on the net without the explicit permission of Net Control. The only exception is to call "Break" to interrupt for higher priority traffic. Formal Directed Nets are used when the amount of traffic is high relative to the bandwidth. A Full Open Net is a loosely controlled free for all. The Net is a shared space on a frequency. Any member may initiate traffic with any other member provided that the frequency is not already in use. If the frequency is in use, "Break" is called for higher priority traffic and the station calling break calls the desired station directly and passes traffic. When that traffic is done, the other stations resume their lower priority traffic. Informal or Open Nets are used when the volume of traffic is low compared to bandwidth and the skill of operators is high. Unskilled operators have trouble determining which traffic should be handled first and how to resume traffic handling if they have been usurped.

Most Nets operate between the two extremes substituting Net Control skill for the lack of operator skill and making the nets more formal as the volume of traffic increases. It is also easier for Net Control to decide to implement sub nets when traffic exceeds the available bandwidth.

_____ 3.4.b Participate in a Directed Net as Net Control