SCARES Qualifications Overview

Presenters: Keith KK6GTJ and Doug W6CDO
February 17, 2022 and February 15, 2024

SCARES Qualifications Overview Agenda

1. What are Quals and why do they matter?   [Doug - 1 min]
2. Prerequisites   [Doug -1 min]
3. Qualifications Progression   [Doug - 2 min]
4. **Deep dive Apprentice**   [Doug - 5 min]
5. **Deep dive 3rd Class**   [Keith - 15 min]
6. **Deep dive 2nd Class**   [Doug - 20 min]
7. 1st Class Communicator   [Keith - 5 min]
8. Chief Communicator   [Keith - 4 min]
9. Master Communicator   [Keith - 5 min]
10. **Poll for March Mentoring**   [Doug - 5 min]
11. Summary   [Doug - 1 min]
12. Resources

Why do Qualifications Matter?

- Verifies your skill level and training to support emergency or non-emergency events

- Verifies that you have sustainable skills to support events showing you can be self-sufficient enough during stressful and demanding scenarios

- Qualifications matter so volunteers are helpful when needed and not a hindrance during emergency/non-emergency events

Prerequisites

For understanding of the operational environment, external agencies have established standards:

- As a minimum, a fully qualified ARES member needs to have completed the FEMA IS-100 level online course.
  Introduction to the Incident Command System
  https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c

- They should also complete IS-700
  An Introduction to the National Incident Management System
  https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b

- A recommended additional course is IS-200.
  Basic Incident Command System for Initial Response
  https://training.fema.gov/is/courseoverview.aspx?code=IS-200.c

Doug 1 min

QUALIFICATIONS Progressions

Start Here
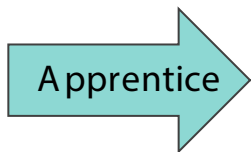
Apprentice →

3rd Class →

2nd Class → Continued…

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.

A 2nd Class Operator should be able to help **set up the hardware necessary for UHF/VHF** systems and be able to **take a leadership role** in the Operation and Reconfiguration of small area Tactical and Traffic nets, including **acting as a Net Control Station.** This should be the minimum qualification for an EC or AEC.
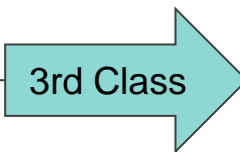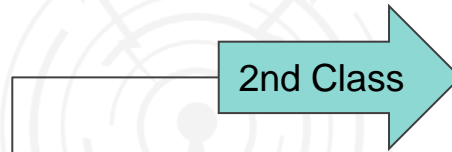
An Apprentice should be able to deploy for **low level duties as a courier or as a shadow operator.** An Apprentice may need help in getting set up for repeater use but should be able to **function as a Tactical Communicator.**

Source: https://k6mpn.org/commqual.html

Doug 30 sec

https://k6mpn.org/ South County Amateur Radio Emergency Service

QUALIFICATIONS Progression - (Cont.)

Master

A Master Operator adds **full multi-mode understanding** and a **high level planning capability.** A Master should be able to make and review plans, test and evaluate plan response, select operating means, modes and frequencies, **manage the life cycle of an emergency response,** interact with **other agencies,** and provide **high level supervision** to all operational and planning functions for EMCOMM using Ham resources.

Chief

A Chief Operator should be able to **plan and configure communications** for a wide range of operating conditions including making appropriate band and mode selections, **assigning volunteers and equipment**, and **coordinating an overall operation.**

..Cont.

1st Class

A 1st Class Operator **extends** the 2nd Class **capability into the HF**, into wider area operation and for longer periods of primitive **operation using emergency power.**

Source: https://k6mpn.org/commqual.html

Doug 30 sec

Where SCARES membership is today 2/22

Number of members in each level

Not Ranked	Apprentice	3rd Class	2nd Class	1st Class	Chief	Master
20	**2**	**13**	**9**	**5**	**3**	**1**
				Rachel Clark Madeline Glen Larry	Gary Robert Richard	David

Doug 1 min

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 [Know your call sign]

_____   A.2. Describe a "Jump Kit" for immediate (< 48 hour), 72 hour, and one week deployment

[http://www.arrl.org/files/file/ARES_FR_Manual.pdf   Pg 10, 11, 12]

_____   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 own radio, read manual]

_____   A.4. Participate in a Directed Net as a Station. [Participate in SCARES Monday Night Nets]

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 3rd Class Op

_____ 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 3rd Class Op

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

3rd Class Op

http://www.arrl.org/files/file/ARES_FR_Manual.pdf

https://k6mpn.org/training/resources/Becoming3rdClassCommunicator.pdf

Keith 5 min

3rd CLASS Communicator

3rd Class Operator

_____ 3.2.a Know the ITU Alphabet and Numbers for both send and receive   3rd Class Op Pg 2

_____ 3.2.b Know Basic Prowords   3rd Class Op Pg 2

_____ 3.2.c Know the format for ARRL Radiograms http://www.arrl.org/files/file/ARES_FR_Manual.pdf   pg 35- 40

_____ 3.2.d Know what ARRL radiogram handling instructions mean   pg 35- 40

_____ 3.2.e Know how to log messages   http://www.arrl.org/files/file/ARES_FR_Manual.pdf   pg 35- 40 / 3rd Class Op Pg 4

_____ 3.2.f Know how to originate a message   http://www.arrl.org/files/file/ARES_FR_Manual.pdf   pg 35- 40 / 3rd Class Op Pg 4

_____ 3.2.g Know how to "pass" or relay a message 3rd Class Op Pg 4

_____ 3.2.h Copy a Correctly Formatted Message passed by Voice 3rd Class Op Pg 4

_____ 3.2.i Explain the importance and proper use of Tactical Call signs in EMCOMM 3rd Class Op Pg 4 Keith 5 min

3rd CLASS Communicator

3rd Class Operator

_____ 3.3.a Explain the difference between Simplex and Duplex operations 3rd Class Op Pg 3

_____ 3.3.b Explain why "channels" might be used to designate frequencies 3rd Class Op Pg 3

_____ 3.3.c Explain how "tones" are used for CTCSS and PL 3rd Class Op Pg 3

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

          3rd Class Op Pg 4

_____ 3.4.a Explain the Operation of both Informal (Open) and Directed Nets 3rd Class Op Pg 4

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

Keith 5 min

2nd CLASS Communicator

A 2nd Class Operator should be able to help set up the hardware necessary for UHF/VHF systems and be able to take a leadership role in the Operation and Reconfiguration of small area Tactical and Traffic nets, including acting as a Net Control Station. This should be the minimum qualification for an EC or AEC.

_____ 2.1.a Explain why a fully qualified individual volunteering for service outside their own community

might be rejected while a less qualified person from within the community is accepted for

emergency services [Less qualified people are vetted by the agency and have a trusted relationship]

_____ 2.1.b Explain why Ham EMCOMM is not secure, what kinds of messages should be routed another

way if possible, and how to make Ham more secure from casual listeners if other (non-Ham)

means are not available. [Ham Radio is unencrypted and anyone can hear with right equipment - Protect PII]

_____ 2.1.c Describe how to mitigate your risks from Hazardous Materials (HAZMET) in a response

Environment PPE, Stay away https://k6mpn.org/ South County Amateur Radio Emergency Service

Doug 5 min

2nd CLASS Communicator

_____ 2.2.a Describe the "ARES/RACES" "Served Agency" relationship

How do ARES/RACES service the Served Agencies

_____ 2.2.b Know where Communications fits into the ICS structure Logistics, Personnel: [see notes]

_____ 2.2.c Describe the relationships between an ARCT, NIMS, and ICS [see notes][Need input]

_____ 2.2.d Describe an ARCT and what Levels I – IV ARCTs mean [see notes]

_____ 2.2.e Describe the Difference between a "Communicator" and a "Radio Operator" [Need input]

Doug 5 min

2nd CLASS Communicator

_____ 2.3.a Act as Net Control for a Directed Net

_____ 2.3.b Describe the Difference Between Tactical and Record or Traffic Communications and when it is

appropriate to use each [need input]

_____ 2.3.c Know how to Encode and Decode ARRL Numbered Radiograms

https://k6mpn.org/training/ARES-Field-ResourceManual.pdf   Pages 30-35

_____ 2.3.d Describe the Importance of Brevity and Clarity in EMCOMM [see notes]

_____ 2.3.e Describe VOX and why it must be used carefully in EMCOMM centers [see notes]

Doug 5 min

2nd CLASS Communicator

_____ 2.4.a Describe a "gain" antenna [see notes]

_____ 2.4.b Demonstrate how to attach a "gain" antenna to an HT

_____ 2.4.c Explain the Advantages and Disadvantages of a Directional (Beam) Antenna [see notes]

_____ 2.4.d Identify standard antenna couplers and describe the use of adapters and gender changers [see notes]

_____ 2.5.a Explain why low power operation is important in EMCOMM [see notes]

_____ 2.5.b Describe the advantages and disadvantages of various battery types including Lead Acid,

Gel Cell, NiCad, NiMh, LiIon, and Alkaline for EMCOMM [see notes]

Doug 5 min

1st CLASS Communicator

A 1st Class Operator extends the 2nd Class capability into the HF, into wider area operation and for longer periods of primitive operation using emergency power.

_____ 1.1 FCC General Class License or Higher

_____ 1.2 Staff an EMCOMM drill

_____ 1.3 Show the ability to set up a radio for SSB communications in at least two bands

_____ 1.4.a Describe how maintaining reliable point to point communications is different from DXing

_____ 1.4.b Explain When and How you would choose between NVIS and low incident antennas for HF

Keith 2.5 min

1st CLASS Communicator

for EMCOMM

_____ 1.4.c Explain how to select NVIS frequencies

_____ 1.5   Describe Linked and Layered Nets and when they are used

_____ 1.6.a Describe the Advantages and Disadvantages of: Generators, Solar Power, and Batteries

as back up emergency power systems

_____ 1.6.b Describe the precautions necessary in portable generator operation including

exhaust issues, GFI, extension cabling, fuel storage and handling

CHIEF Communicator

A Chief Operator should be able to plan and configure communications for a wide range of operating conditions including making appropriate band and mode selections, assigning volunteers and equipment, and coordinating an overall operation.

_____ C.1.a Explain how you would set up an "intake function" to screen and assign EMCOMM

   volunteers in a major emergency

_____ C.1.b Describe how to set up an effective "Activation" system

_____ C.2   Describe the roles of Complexity, Single vs. Multiple Recipient, Precision, Accuracy,

   Timeliness, Priority, and Authentication of Originator in message handling and in designing

   message handling systems

Keith 1 min

CHIEF Communicator

_____ C.3.a Describe the Advantages and Disadvantages of HF, VHF, UHF for EMCOMM

_____ C.3.b List five operating modes useful for EMCOMM and the Advantages and Disadvantages of

each (List must include Voice and CW)

_____ C.3.c Describe the Advantages and Disadvantages of non Ham systems such as the Internet,

Telephone, Cell Phone, Trunked Radio, and Shared Repeater v
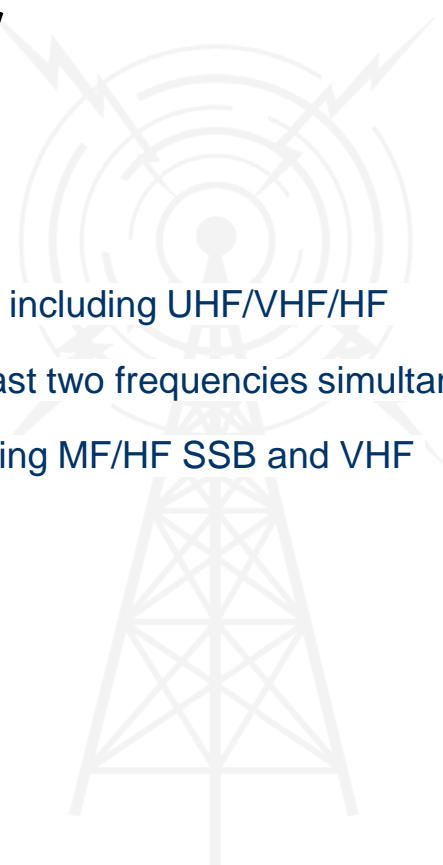
CHIEF Communicator

EMCOMM

_____ C.3.d Describe the Advantages and Disadvantages of Packet and Store and Forward systems

  for EMCOMM

_____ C.4.a Describe the Advantages of standardizing on 13.8 volts DC and 120 volts AC for

  EMCOMM equipment

_____ C.4.b Describe a possible choice and the Advantages of standardizing on some type of

  13.8 volt DC Connectors

_____ C.4.c Describe a possible choice and the Advantages of standardizing on some type of

  Antenna Connector

Keith 1 min

CHIEF Communicator

EMCOMM

_____ C.5.a Set up, and operate from, a portable Comm Center including UHF/VHF/HF

Comms capability and the ability to operate on at least two frequencies simultaneously

_____ C.5.b Describe Maritime Communications Systems including MF/HF SSB and VHF

MASTER Communicator

A Master Operator adds full multi-mode understanding and a high level planning capability. A Master should be able to make and review plans, test and evaluate plan response, select operating means, modes and frequencies, manage the life cycle of an emergency response, interact with other agencies, and provide high level supervision to all operational and planning functions for EMCOMM using Ham resources.

_____ M.1.a Create or review a plan for staffing EMCOMM positions in a time of Emergency

_____ M.1.b Plan an EMCOMM drill

_____ M.2 Describe some uses of the Internet in EMCOMM

Keith 2.5 min

MASTER Communicator

_____ M.3.a Describe the role of CB, FRS, GMRS, MURS, Cell Phones, and Public Safety Radio in EMCOMM including practical and legal issues in using them

_____ M.3.b Describe the life cycle of an emergency deployment including activation, tenancy, deactivation and debrief

_____ M.4.a Design or Set up a base station which allows at least two operator positions and has the capability to move messages freely between modes, bands, and land line based systems. The station must support HF/VHF/UHF operations with appropriate transceivers and antennas and must be equipped with emergency power.

_____ M.4.b Describe the advantages and disadvantages of the selections made for transceivers, antennas, power systems, and links between modes.

Keith 2.5 min

SUMMARY

- Qualifications are necessary to fully participate in EMCOMM scenarios to place people in the appropriate positions based upon their skill levels that reduces risk and increase team efficiency

- Qualifications help EMCOMM leadership know that the team that is working with them are competent in their skills and capabilities and are vetted volunteers

- This presentation can be used as a reference for your own future advancement through the Qualification Levels.

Doug 1 min

RESOURCES

http://www.arrl.org/files/file/Public%20Service/ARES/ARRL-ARES-FILLABLE-TRAINING-TASK-BOOK-V2_1_1.pdf

SCARES Website
https://www.k6mpn.org/commqual.html
https://www.k6mpn.org/grab-n-go.html

https://www.k6mpn.org/articles/ARC/arc_first_40.pdf

https://www.k6mpn.org/training/ARESFieldResourcesManual.pdf

ARES Website
http://www.arrl.org/files/file/Public%20Service/ARES/ARESmanual2015.pdf

https://www.google.com/search?q=ares+jump+kit+48+hours&client=firefox-b-1-d&sxsrf=APq-WBsuMwyqV8_Gws1Zs_veAsyJrFhSKg%3A1644774734607&ei=TkUJYrLYJPvOkPIPvoiH8Ac&ved=0ahUKEwiyt6qun_31AhV7J0QIHT7EAX4Q4dUDCA0&uact=5&oq=ares+jump+kit+48+hours&gs_lcp=Cgdnd3Mtd2l6EAMyBQghEKsCOgcIABBHELADOgUIIRCgAToICCEQFhAdEB5KBAhBGABKBAhGGABQ0g1Y_S5gkjFoAXABeACAAd0BiAHfDZIBBTAuNS40mAEAoAEByAEDwAEB&sclient=gws-wiz

ARES Standardized Training Plan

ARRL Website
http://www.arrl.org/files/file/ARES_FR_Manual.pdf