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# INTRODUCTION TO EMCOMM & PUBLIC SERVICE BREAKOUT SESSION

Ham Bootcamp  
Fall 2023



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# A Bit About Me

- Stu - W1SHS
- Career Spent in High Tech Industry
- Licensed Since 2019
  - Technician 1/31/19
  - General 2/15/19
  - Extra 3/5/19
- Assistant Section Manager, Eastern MA 11/29/19
- District Emergency Coordinator, Eastern MA 3/30/20
- Assistant Section Emergency Coordinator, Eastern MA 9/15/22
- ARRL Volunteer Examiner
- SKYWARN Coordinator and Net Control for the National Weather Service Boston/Norton Office Coverage Area
- Amateur Radio Operator at Mass State Emergency Operations Center



# Who is This Presentation For?

- Anyone With Interest in Public Service & Emergency Communications
- New and Seasoned Amateur Radio Operators
- Those Wishing to Increase Their Radio Skills
- Learn Aspects of Amateur Radio Not Typically Exposed To
- Desire to Use Their New Skills in the Interest of Public Service





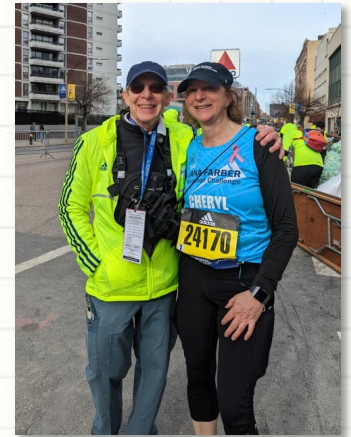
# EmComm Alphabet Soup

- **ARES® - Amateur Radio Emergency Service**
  - **RACES - Radio Amateur Civil Emergency Service**
  - **AUXCOMM, ACS - Auxiliary Communications Service**
  - **NTS - National Traffic System**
  - **SKYWARN - National Weather Service**
- 
- **AREDN - Amateur Radio Emergency Data Network**
  - **CERT - Community Emergency Response Team**
  - **MARS - Military Auxiliary Radio System**
  - **SHARES - *SH*Ared *RE*Sources High Frequency Radio Program**
  - **COML/COMT - Communications Leader/ Technician**



# What Do EmComm and Public Service Communicators Do?

- Message Handling
  - Formal and Informal Messages
  - Health and Welfare Messages
- Situational Reporting
  - Report Local Conditions and Infrastructure Issues
    - Roads, Bridges, Power Outages, Flooding
    - Weather Conditions
- Provide Inter-Organizational Communications
- Assist Partner Agency Leadership with Communications Support
- Communications Links Between a Disaster Area and Outside World
- Public Service Event Communications



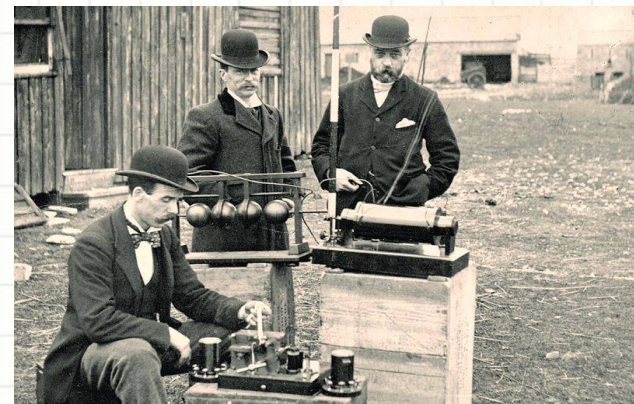
# Skills You Will Learn

- Message Handling
  - Voice
  - Forms & Data
  - Digital Modes
- Situational Reporting
- Being an Effective Net Control Operator
- Public Service Event Communications
- Setting up a Portable Station and Troubleshooting
- Understanding the Best Transmission Modes & Bands to Use
- Ability to be Flexible and Improvise When Things Don't Go According to Plan!



# How Will I Learn These Skills?

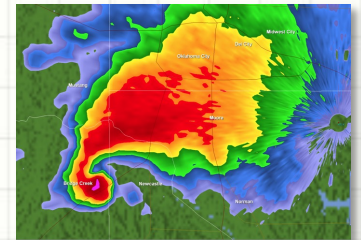
- Learn from Fellow ARES Team Members
- Participate in Local and Regional Nets
- Practice Being a Net Control Operator
- Join SKYWARN and Participate in Call Ups
- Free Online Courses from FEMA and ARRL
- EmComm-Training.org
- ARRL Learning Center
- Getting involved with Local Exercises and Drills
- Practice Skills During Practice Nets
- Field Day





# When Will I Put These Skills to Use?

- Callups and Deployments Can be Anticipated or Unanticipated
- Callups Can Vary Greatly by Region of Country
- Severe Weather Events
- Natural Disasters
  - Earthquakes, Mudslides, Wildfires
- Infrastructure Failures
  - Power, Water, Communications, Roads, Bridges
- Public Service Events
- Search and Rescue Operations
- Rapid Response Teams





# What is ARES®?



- Amateur Radio Emergency Services
  - Organization under the ARRL Field Services Branch
  - Volunteer Licensed Amateur Radio Operators
- ARRL ARES Mission Statement
  - *"The Amateur Radio Emergency Service, a program of the ARRL, offers to its partners at all levels, trained Amateur Radio Service licensees who are skilled in the use of a wide range of emergency and disaster communications techniques and who are committed to supporting our partners' missions in service to the public."*
- Qualifications to join ARES
  - Licensed Amateur Radio Operator
  - Desire to Learn New Radio Skills
  - Willingness to Train In and Practice These New Skills
  - Desire to Put These New Skills to Use as a Public Service

# What are RACES and ACS?



- RACES - Radio Amateur Civil Emergency Service
  - Radio Service Defined in Part 97 of FCC Regulations
  - Provides Radio Communications During Periods of Local, Regional, National Natural Disasters and Other Civil Emergencies
  - Administered by Local, County or State Emergency Management
  - Apply to Emergency Management Agency to Become Registered RACES Operator
- AUXCOMM (ACS) - Auxiliary Communications Service
  - Falls under FEMA Incident Command System Structure
  - Training and Other Requirements to Become Certified AUXCOMM Operator

- [illegible]



# What is SKYWARN?

- A Program of the National Weather Service
- Network of Weather Spotters Provide Ground Truth Reports to Weather Service
- Conditions Often Not Seen on Radar
  - Rainfall Amounts and Intensity
  - Snow and Ice Accumulation
  - Hail Size and Intensity
  - Wind Speed, Direction, Gusts
  - Funnel, Wall and Shelf Clouds
  - Tornado Touchdowns
  - Flooding, Downed Trees, Utility Poles, Bridge and Road Closures, Power Outages and Other Damage
- Local Weather Service Office May Require Training to Obtain a 'Spotter ID'
- Many ARES Members are also SKYWARN Spotters and Net Control Operators



# SKYWARN Traffic Audio Clips



2018 Tornado Damage Investigation, Ashford CT



2021 Major Boston Nor'easter Power Outages



2022 Storm Damage Reports, CT and Rhode Island



2022 Snow Reports North Shore, Massachusetts



# Public Service

- Common Form of Non-Emergency Engagement for ARES Members
- Good For Keeping Your Current Skills Sharp
- Learn New Skills (Situational Reporting, Net Control Operator among others)
- Working as a Team
- Comradery and Friendships
- Using Radio Skills for the Public Good
- 'Give Back' via Public Service
- Road Races, Parades. Festivals. etc.
- Seek out Public Service Events from Local Radio Clubs





# What Gear Do I Need?

- Does NOT Need to be Extensive or Expensive
- Equipment Needs Determined by Your Level of Participation
- Start Small Until Interests and Needs are Determined
  - Modest VHF/UHF Handheld
- Possibly Later, Based on Needs
  - HF Capabilities
  - Computer
  - Backup Power (Generator, Battery, Solar)
  - Personal Radio Service Radios (FRS, GMRS)
  - Public Safety Scanners (Police, Fire, etc.)
- Seek Advice from ARES members, Local Nets and Radio Clubs!





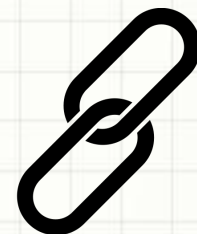
# Why Join ARES or SKYWARN or Engage in Public Service?

As an ARES or SKYWARN member or Public Service volunteer you will have the ability to be an important emergency communications link in times of local, regional, national and even international events.

Your willingness to give your time, energy and expertise in times of need will be truly appreciated by those affected by your generosity.

# Useful Links

Stu W1SHS [w1shs@arrrl.net](mailto:w1shs@arrrl.net)



**ARRL information on ARES and Learning Center:**

<https://arrrl.org/ares>

<https://learn.arrrl.org/>

**EmCommTraining.org:**

<https://emcomm-training.org/index.html>

**Fldigi:**

<https://www.w1hkj.com/>

**Echolink:**

<https://www.echolink.org/>

**National Traffic System:**

<https://arrrl.org/nts>

**AUXCOMM:**

<https://www.cisa.gov/safecom/blog/2016/07/11/auxiliary-emergency-communications>

**Welcome to Eastern Mass ARES - Good Resource for Getting Started:**

<https://ema.arrrl.org/wp-content/uploads/2020/04/Welcome-to-ARES.pdf>

**ARRL Emergency Communicator Individual Task Book:**

[https://www.arrrl.org/files/file/Public%20Service/ARES/ARRL-ARES-FILLABLE-TRAINING-TASK-BOOK-V2\\_1\\_1.pdf](https://www.arrrl.org/files/file/Public%20Service/ARES/ARRL-ARES-FILLABLE-TRAINING-TASK-BOOK-V2_1_1.pdf)

**SKYWARN Boston:**

<https://wx1box.org/>

**Hurricane Watch Net:**

<https://www.hwn.org/>

**Eastern Massachusetts ARES:**

<https://ema.arrrl.org/ares>

**Partner Agencies:**

<https://www.arrrl.org/served-agencies-and-partners>

**Winlink:**

<https://winlink.org/>

**AREDN Mesh Networks:**

<https://arednmesh.org>




# Intro to EmComm & Public Service



## Questions? Comments?



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SKYWARN Coordinator  
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**Please Now Leave this Breakout Room which  
should return you to the Main Room for the Ham  
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***Please Be Sure to Leave Only the Breakout  
Room and NOT the Entire Zoom Meeting***