

Central Ohio Amateur Radio Emergency Service Operations Manual

July, 2003 – Version 2.0

Presented for information to ARES members in the Franklin County, Ohio area.



Acknowledgments

It is with great pleasure that we release The Central Ohio Amateur Radio Emergency Service Operations Manual. Many thanks go out to the COARES Executive Board for the many hours of hard work in reviewing and updating the information in this manual.

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July 2003

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1.0 PURPOSE

1.1 DESCRIPTION

The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization, is eligible for membership in the ARES.

The **Central Ohio Amateur Radio Emergency Service (COARES)** is an organization of Amateur Radio Operators licensed by the Federal Communication Commission (FCC). The major purpose of the organization is to provide emergency communications within Franklin County, Ohio as required. A secondary purpose of the organization is to provide public service communications support for qualified organizations at the discretion of the COARES leadership.

COARES will also provide these services for other counties in ARES District 7 (Central Ohio) without an active ARES organization.

COARES is an affiliated Special Service Club of the American Radio Relay League (ARRL).

1.2 ELIGIBILITY

The only qualification for membership in COARES is a valid Amateur Radio license, issued by the Federal Communications Commission, of any license class, and a desire to help the community.

Activity records for each member will be reviewed each year. Those with little or no activity in the organization will be asked if they wish to remain in the organization.

Any member found to be in violation of any Federal Communications Commission rules (any radio service) may be dropped from membership in the organization.

(Honorary members, some without radio transmitting privileges, may be named at the discretion of the Emergency Coordinator, EC who have provided meritorious service to COARES.)

1.3 LIMITATIONS

The COARES organization provides a communications service only. Amateur Radio operators are not expected to perform any additional functions.

This manual is designed to serve as a general guide only. COARES leadership and membership are expected to use their own judgement based on conditions at the time. This manual will be updated as needed.

1.4 CODE OF CONDUCT

All Amateur Radio operations will be governed by Part 97 of the Federal Communications Commission rules and regulations.

COARES members should conduct themselves in a professional manner at all times while participating in a COARES activity or when representing this organization.

All COARES members will follow the rules and regulations of any building or property where they are assigned as part of a COARES activity.

No COARES member shall participate in an activity or volunteer their services while under the influence of any drugs or alcohol.

No COARES member will discriminate against any individual, member, or organization in any way. Any or all concerns should be discussed with the EC.

2.0 ORGANIZATIONAL STRUCTURE

2.1 NATIONAL

The American Radio Relay League (ARRL), under the supervision of the ARRL Field Services Manager, provides national coordination of the Amateur Radio Emergency Service (ARES) program. It is here that reference materials are produced and relationship/guidelines with national disaster organizations are maintained.

2.2 SECTION

Each ARRL Section Manager (we are in the Ohio Section) appoints a Section Emergency Coordinator (SEC), who is responsible for ARES activities in that section. This individual is responsible for the appointment of district and local Emergency Coordinators and developing a statewide response plan. In Ohio, this plan is called OSERP (Ohio Section Emergency Response Plan). The Emergency Coordinator (EC) has a copy of this plan for review.

2.3 DISTRICT

Each section is then divided into districts for area coordination, led by a District Emergency Coordinator (DEC). The Ohio Section is divided into 11 districts; we are located in District 7. The counties in our district include Franklin, Madison, Delaware, Union, Pickaway, Licking, Fairfield and Fayette.

2.4 LOCAL

In the Ohio Section, a local Emergency Coordinator (EC) is assigned to each county. The EC is responsible for all local ARES activity. Central Ohio ARES is responsible for Franklin County, Ohio, but may serve other counties at the discretion of the SEC, DEC and EC.

2.5 COARES ADMINISTRATION

The EC may appoint, at their discretion, Assistant EC's (AEC's) to aid in managing the operation of COARES. These appointments may include but are not limited to the following:

Emergency Operations Manager	<ul style="list-style-type: none"> • Secondary liaison with all served agencies • Emergency response planning • Emergency operations management and coordination • Assists with COARES Operations Manual • Secondary liaison with ARRL ARES structure • Performs other duties as requested by the EC
Public Service Events Manager	<ul style="list-style-type: none"> • Maintains public service events • Organizes all event coordinators • Assists with "Go/No-Go" decisions on public service events • Manages COARES calling tree system • Assists event coordinators with resources (including calling tree) • Coordinates use of COARES repeaters for public service events • Maintains current events list on COARES Website • Assists with COARES Operations Manual • Performs other duties as requested by the EC
Net Manager	<ul style="list-style-type: none"> • Primary lead for COARES net procedures • Manage weekly nets • Mentors Net Control Station (NCS) operators • Creates and maintains COARES net standards • Coordinates frequencies for multi-net operations • Assists with COARES Operations Manual • Performs other duties as requested by the EC
Training Manager	<ul style="list-style-type: none"> • Creates and implements all COARES training, including EmCom • Provides training input for bulletins, nets, meetings and Website • Oversees "New Member" orientations • Oversees "training committee" (if needed) • Provides all training information of members to Membership Manager • Assists with COARES Operations Manual • Performs other duties as requested by the EC
Financial Manager	<ul style="list-style-type: none"> • Maintains bank account(s) • Maintains all accounting records • Pays all bills • Obtain and maintain 501c3 status • Performs other duties as requested by the EC
Engineering Manager	<ul style="list-style-type: none"> • Maintains and improves all repeater systems • Maintain excellent relation with all repeater site owners • Maintains all COARES communication stations (i.e. K8DDG) • Recruits help to complete projects • Assists with COARES Operations Manual • Performs other duties as requested by the EC
Publication Manager	<ul style="list-style-type: none"> • Edits and publishes COARES monthly bulletin on timely manner (Hardcopy and Web) • Searches for cost-effective means of publishing Bulletin • Maintains relations with other Amateur Radio club publications • Performs other duties as requested by the EC

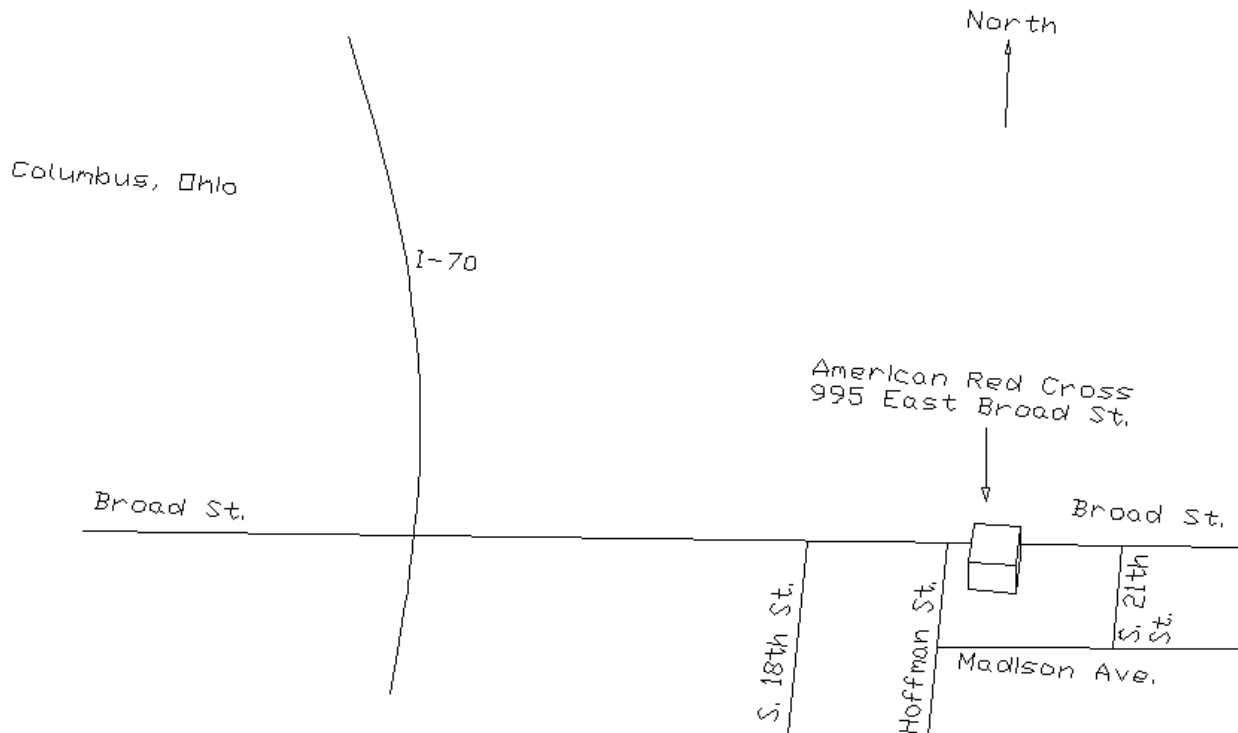
Public Information Officer	<ul style="list-style-type: none"> • Fulfills duties of the PIO field organization, as outlined by the ARRL • Performs other duties as requested by the EC
EC Emeritus	<ul style="list-style-type: none"> • Assists Exec Committee with past experience and performs other duties as requested by the EC
Administrative Assistant(s)	<ul style="list-style-type: none"> • Assists with special projects and other duties as requested by the EC

3.0 PARTICIPATION

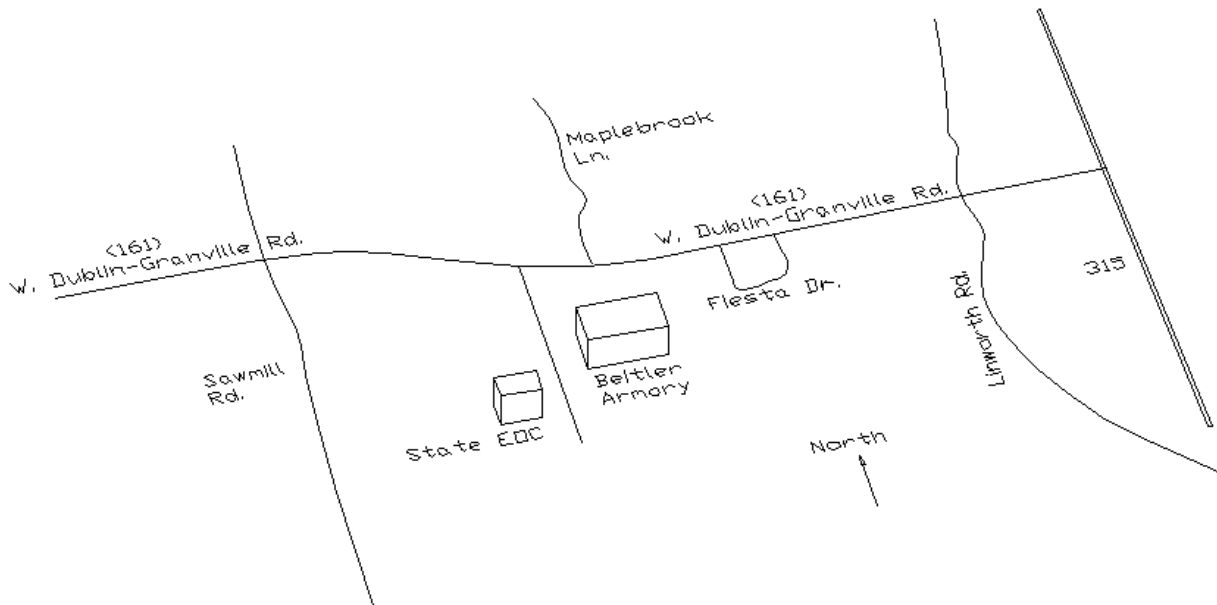
3.1 MEETINGS

An in-person meeting will be held each month, normally on the third Wednesday evening, at 7:30pm local time. The date, time, or meeting location may be occasionally altered to accommodate upcoming events or special activities. These changes will be listed in the COARES Bulletin, COARES Website, and on the COARES repeater systems.

The meetings on **ODD** number months will normally be held at the Columbus Area Chapter of the American Red Cross, near downtown at 995 East Broad Street. Parking is located behind the building. Enter through the side door on Hoffman Street. Please do not park on Hoffman Street; these spaces are reserved for the residents. The guard inside the building will direct you to the appropriate meeting room location. A map of the area is shown below:



The meeting on **EVEN** numbered months will be held in the conference or cafeteria room of the State of Ohio Emergency Operations Center (EOC) at 2827 West Dublin-Granville Rd. in Linworth, Ohio. Park on the South side of the building and enter the building at the South doors. Ask the guard for directions to the meeting room.



3.2 NETS

The COARES net will be held each Wednesday evening when there is no in-person meeting, starting at 8:00pm on the K8DDG primary repeater (147.06+). The AA8EY secondary repeater (147.09+) will be used if the primary repeater is not available for any reason. Both repeaters require a PL tone of 94.8 Hz to access all receive sites.

The net will be used for general announcements/discussions; coordination of upcoming events, and training exercises. This net is open to both members and non-members.

COARES members may be assigned to assume the duties of Net Control. Procedures for running a COARES net are found in Section 13.6 - COARES Net Control Procedures.

The COARES net will also be activated as needed for disaster operation, drills and public service events.

3.3 COARES BULLETIN

The Bulletin Editor and/or Co-Editors publish the COARES Bulletin monthly. The Bulletin contains upcoming events, summaries of completed events and other articles of interest related to Amateur Radio and disaster/public service communications.

Articles or information for publication may be submitted directly to the Bulletin Editor, Co-Editors, or to the EC. Articles can be submitted in written text or preferably in electronic format. (Any version MS Word, Word Perfect, Text file, etc.)

3.4 CALLING TREE

Each active COARES member will be assigned to a calling group. Each group has two leaders, one for each half of the year. The leaders will be responsible for calling their group as required to inform and enlist members for upcoming events, special information, or disaster alert notification. Administration of the calling groups is the responsibility of the Event Coordinator.

Each member is encouraged to return calls **promptly** to their calling leader or to call their calling tree leader to volunteer.

Under special circumstances a member who wishes to remain as a member of COARES, but not called by a calling group leader, may request to be placed on the “RESERVE” list. These members are encouraged to call the Event Coordinator directly to participate in events and drills. This will be arranged through the Emergency Coordinator.

3.5 REMAINING ACTIVE

Central Ohio ARES participates in a large number of events and drills each year. We can provide this level of support only by active participation by all members. All members are given an opportunity to assist in many or all of these events. Members are also encouraged to check into the net, and attend the in-person meetings.

Members with little or no activity in the organization will be asked if they wish to remain active. It is understood that family, work or other commitments can effect volunteer time.

3.6 ANNUAL SURVEY

Once a year the EC will send out a survey form to the membership. This is used to insure that our membership database is correct, determine what equipment each member has available, what training the member has received in the past year, members availability in case of emergency, and ask for comments, donations and suggestions on improving the organization.

Each member is encouraged to return the form as it is used to generate year-end reports to the ARRL and plan the future of COARES. It is vital that the annual survey be returned to the EC as soon as possible.

Each member is responsible for notifying the EC and/or Membership AEC of any changes to personal data, such as address, phone or email changes, changes to license class, or updates to equipment.

4.0 DUES/FINANCIAL

There are **NO** dues to be a member of COARES. We rely on donations from the membership, and other organizations for financial support. Typical expenses for the organization include:

- Bulletin (Printing, Mailing)
- Repeater Maintenance and upgrades
- Insurance (Equipment, Liability)
- Mailing (Membership, Agency contact)
- Marketing (Identification, New Members, etc.)

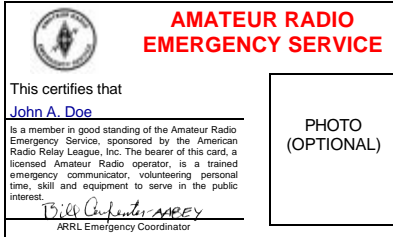
We hold a financial drive as part of the Annual Survey, but members are encouraged to donate at any time, directly to the Treasurer, or to the EC. Equipment donations are also accepted; please contact the EC directly for additional information. Checks should always be made out to “**Central Ohio ARES**”.

COARES is **NOT** registered with the IRS as a non-profit organization, and donations are **NOT** tax deductible at this time.

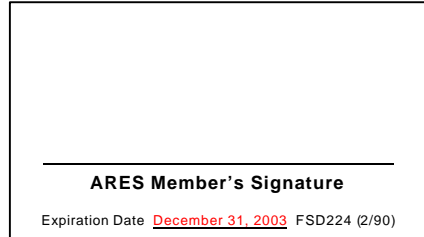
5.0 IDENTIFICATION

5.1 ARES ID CARD (ARRL FSD-224)

Each COARES member is issued a national ARES ID card, ARRL FSD-224, shown below. The card is part of the national ARES program, and is recognized by all law enforcement agencies. Members are encouraged to come to any COARES in-person meeting to have a picture taken and laminated to the card, to form a permanent ID. There is no charge for this card or its lamination. All ID's are set to expire at the same time.



(Front of ID)



(Back of ID)

5.2 OTHER AGENCY ID'S

Other agencies served by COARES may offer an additional ID card to allow access into their facilities, or to allow access into secured areas. The two agencies that currently offer specific ID's are the Red Cross of Greater Columbus, and the Franklin County EMA. See Section 10.0, "Training", for more details.

5.3 CLOTHING/UNIFORM

There is no formal uniform code for COARES members. Members are encouraged to dress professionally, and according to the situation and weather.

Some disaster operations and drills may require heavy clothing or a jump suit, and sturdy hard shoes. A hard hat will usually be provided, if required.

5.4 OTHER IDENTIFICATION

All COARES members should carry a copy of their Amateur Radio license at all times.

Magnetic car signs stating your call and Amateur Radio Emergency Service is helpful. See Section 13.10 for source information.

6.0 SAFETY

6.1 INSURANCE

COARES members are responsible for their own personal medical, liability, vehicle, and equipment insurance at all times.

As an organization, COARES carries insurance for repeater equipment and liability coverage for the organization and members while operating during official COARES activities.

6.2 PERSONAL SAFETY

All COARES members are responsible for their own safety at all times. Any member may decline an assignment at any time for any reason if you are not comfortable with the situation. Members should be especially careful around vehicle traffic during our public service events, and at all times during a disaster situation. Always remain aware of what is occurring in and around your location.

Before accepting an assignment during an actual emergency, please be sure that your own Family and personal property are safe and secure. Your own well being is priority one!

7.0 COARES EQUIPMENT

7.1 REPEATER SYSTEMS

7.1.1 SYSTEM DESCRIPTION

Primary Repeater:

The primary COARES repeater is the K8DDG system. The frequencies used with this system include:

<i>Input</i>	<i>Output</i>	<i>CTCSS (PL)</i>
147.660 MHz	147.060 MHz	94.8 Hz Encode/Decode
449.800 MHz	444.800 MHz	94.8 Hz Encode/Decode

Please note that these frequencies are stand alone, but can be cross-linked during times of emergency, or special session nets.

Secondary Repeater:

The secondary COARES repeater is the AA8EY system. The frequencies used with this system include:

<i>Input</i>	<i>Output</i>	<i>CTCSS (PL)</i>
147.690 MHz	147.090 MHz	94.8 Hz Encode/Decode

UHF Repeater:

The UHF repeater is the WB8INY system. The frequencies used with this system include:

<i>Input</i>	<i>Output</i>	<i>CTCSS (PL)</i>
449.275 MHz	444.275 MHz	94.8 Hz Encode/Decode

Simplex Frequencies:

COARES has over the years adopted a couple of simplex frequencies for use as backups and chat areas between event locations from ham to ham. This is useful when you want to talk to the next station that is above or below you without disturbing the net. **ONLY** do this when you have a second radio. **DO NOT** leave the net without net control knowing that you are moving off and check back in to the net to ensure your radio is back on the correct frequency.

<i>Name</i>	<i>Frequency</i>	<i>CTCSS (PL)</i>
2-Meters:	146.460 MHz simplex	n/a
70CM:	446.800 MHz simplex	n/a

7.1.2 REPEATER OPERATIONS

When not being used for net operations or other COARES functions, the repeater systems are available for use by licensed Amateurs, member or non-member.

As with any repeater, users are asked to leave a pause between transmissions, listening for the courtesy beep. Please keep your transmissions short at all times, allowing emergency traffic to break into a conversation. Please pay attention to the courtesy beep! A low tone CW "N" (dah dit) indicates a net in progress.

As always, when monitoring, always be friendly and courteous answering questions, and always answer distress calls.

7.1.3 USE OF NON-COARES REPEATERS

It is necessary to use non-COARES repeaters at times. When possible contact the repeater association or owner as far in advance as possible to obtain permission to use their system(s). In an emergency, make every effort to obtain the permission of the organization, owner, or control operator. When the operation is complete, remember to thank the other organization for the use of the repeater and include it in the event write-up.

7.2 PACKET RADIO

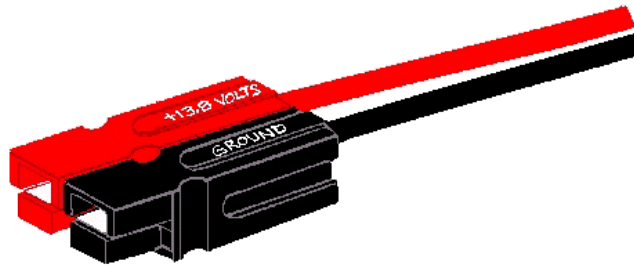
Digital packet radio is used during some of our larger events, and during disaster operations and drills. Members are encouraged to develop portable packet systems, and be familiar with the operation, for field use.

7.3 RECOMMENDED PERSONAL EQUIPMENT

The first piece of Amateur Radio equipment for most members is a two-meter handi-talkie. Members should also have extra batteries and an external magnetic mount antenna with adapter.

Next consider a higher power mobile radio, or an external power amplifier. After that, additional equipment for other bands, and packet radio will become useful.

7.4 COARES STANDARD POWER CONNECTOR



The 30 amp Anderson Powerpole® is quickly becoming the standard power connector of preference within emergency communications organizations around the country. First becoming popular in the Pacific Northwest, the Powerpole® allows for quick field installation and interchange of power supplies and radio equipment without having to resort to adapter cables, clip leads and other jury rigged arrangements.

Powerpoles® are both polarized and genderless, so you never have to worry about male vs. female or positive vs. negative. Connections can be quickly made and remade in the dark without any hassles and the 30-amp connector can easily handle 100-watt radios.

Housings should be mated according to the diagram above, viewing from the contact side (opposite the wire side), tongue down, hood up, RED on the LEFT, BLACK on the RIGHT. Use a 3/32-inch-diameter roll pin, 1/4 inch long, to keep the housings from sliding apart.

Highly conductive silver-plated copper contacts allow minimal contact resistance at high currents. Self-wiping action on make and break keeps conducting surfaces clean. Contact dents keep connectors mated in high-vibration applications and provide quick-break, snap action upon disconnect.

Non-corrosive stainless-steel leaf springs maintain constant contact pressure—ideal for frequent connections/disconnections and intermittent overloading. Durable, high impact-resistant, polycarbonate housing with UL94V-2 flammability ratings comes in many colors for circuit trace ability and coding.

Identical connector halves are genderless—making assembly quick and easy and reducing the number of parts stocked. Molded-in dovetails allow for customized harness in a variety of configurations.

The 15-ampere contacts are designed for 16-20 AWG wire and the 30-ampere contacts are designed for 12-16 AWG wire. The contacts can be soldered or crimped to wires. A very inexpensive crimping tool is available from Gardner-Bender (crimp tool #GS-88). After a contact has been attached to a wire, it should be installed into the housing so that the housing spring mates with the underside of the contact.

To remove a contact from the housing, you may use a very small blade (jewelers screwdriver or “X-acto” knife) to depress the spring, allowing the contact to be removed.

NOTE: Version 1.0 of the COARES Operations Manual recommended the 2-prong “Cinch-Jones” connector for power connections. These connectors may still be used. However, it is **STRONGLY** recommended that jumpers be made to interface with the Anderson connectors, shown above.

To obtain these connectors, visit Universal Radio, or West Mountain Radio (www.westmountainradio.com). West Mountain Radio’s website provides an excellent step-by-step installation guide.

8.0 EMERGENCY RESPONSE PLAN

8.1 TYPES OF DISASTERS

The Central Ohio area may expect to encounter a number of different types of disaster situations. Examples of these include, but are not limited to:

- Tornado
- Fires
- Flooding
- Hazardous Material situation (chemical, nuclear)
- Search and Rescue (missing person)
- Civil disturbance
- Earthquake
- Terrorist Attack
- Aircraft/mass casualty

8.2 COARES ACTIVATION

Any member of COARES who for any reason suspects a communication emergency exists should monitor the K8DDG 147.060 for activity.

If local phone service is available, the EC and/or AEC's should be notified by telephone.

In an emergency in which Amateur Radio might serve the community, Amateur Radio operators may be alerted by any city, Red Cross, Civil Preparedness, or similar official notifying the emergency Coordinator.

8.2.1 COARES MOBILIZATION PROCEDURE

If telephone service is available, the COARES calling tree system will be activated.

Upon the awareness or notification that a communications emergency exists, members of the COARES will call into the COARES Emergency Net on the K8DDG 147.060 repeater, with the AA8EY 147.090 repeater as backup. Alternate simplex frequency in the event of repeater failures will be 146.460.

The EC or Net Manager AEC will assume net control or delegate another station as the Net Control Station (NCS).

This station will be designated as the "Key Station", and will be extensively utilized during a communications emergency.

8.2.2 DUTIES OF THE NCS

The COARES Emergency Net will be called to order by the NCS, at the time determined by the EC and/or AEC's.

Members of the COARES are checked into the net from their mobile or home stations to await further instructions.

Liaison stations to the following National Traffic System (NTS) nets will be assigned:

- Central Ohio Traffic Net, K8DRE 147.240 Repeater, 7:15 PM local time
- Ohio Single Sideband Net, 3.9275 MHz, 6:45pm local time

If needed, liaison stations will be assigned for the following stations and nets:

- State of Ohio Emergency Operations Center Amateur Radio Station W8SGT
- City of Columbus Emergency Operations Center, KC8ETO
- Greater Columbus Red Cross Station K8DDG
- Central Ohio Severe Weather Network, W8RXX 146.760 Repeater

Mobile/portable stations are dispatched as needed to any agencies, which require communication assistance.

Operators of home stations, not on emergency power are coordinated at effectively operate the “Key Station” as required.

8.2.3 OPERATIONS UNDER ACTIVATION

All written messages will be in the standard ARRL radiogram format.

The official, who originates them, with his/her title, taking responsibility for their contents, must sign all messages.

Message precedence of EMERGENCY, Priority, Welfare, and Routine, as defined on ARRL form FSD-3, shall be used on all messages.

Stations do not transmit unless invited to do so by the NCS. The only exception to this is for a station having EMERGENCY TRAFFIC.

8.3 AGENCIES SERVED

Any government or private agency can request ARES service during a disaster, and we will make every effort to honor those requests. COARES has already set up disaster agreements with a number of agencies. These include:

- American Red Cross
- Franklin County EMA
- Federal Emergency Management Agency
- State of Ohio EMA
- City of Columbus
- Port Columbus International Airport Authority
- City of Columbus / Franklin County Departments of Health
- Northwest Area Strike Team (NAS-T)
- All local hospitals
- Central Ohio Trauma System

8.4 COARES STATION LOCATIONS

8.4.1. GREATER COLUMBUS CHAPTER OF THE AMERICAN RED CROSS

COARES operates and maintains an Amateur Radio station K8DDG, located at the Greater Columbus Chapter of the American Red Cross, in the basement across from the Emergency Services office. It is part of the Emergency Services EOC and contains VHF through UHF transceivers, HF, Packet, and other equipment. It also contains commercial equipment required to support Red Cross activities. The building complex is equipped with an emergency generator. All assistant EC's have the access to the room.

8.4.2 STATE EMERGENCY OPERATIONS CENTER AND JOINT DISPATCH FACILITY

COARES provides operators for Amateur Radio station W8SGT, located in the EOC in Linworth. We are responsible to assist in the operation of all Amateur Radio equipment, which includes HF, 6M, and 2M equipment. The building complex is equipped with an emergency generator and living facilities.

8.4.3 CITY OF COLUMBUS

COARES operates and maintains station KC8ETO at the City of Columbus EOC located in the Police Division complex. It includes a dual band transceiver/antenna combination for 2-meters and 70cm.

8.4.4 FRANKLIN COUNTY EMERGENCY MANAGEMENT AGENCY

COARES provides operators for Amateur Radio station W8THV, located at the Franklin County EMA in Columbus. We are responsible to assist in the operation of all Amateur Radio equipment, which includes HF, 2M and 440 equipment. The building complex is equipped with an emergency generator.

8.4.5 PORT COLUMBUS INTERNATIONAL AIRPORT

COARES provides operators for the Port Columbus EOC during times of Amateur Radio communication need.

8.5 JUMP TEAMS

COARES will send response teams with equipment into other affected counties or areas at the request of the DEC, SEC with the approval of the EC. These teams should be prepared to stay in the affected area for a longer period of time, self-contained if possible. The calling tree will be used to request volunteers for this type of assignment.

8.6 FORMAL TRAFFIC Procedures

8.6.1 PURPOSE

When required, COARES will use the formal NTS traffic procedures to pass traffic which requires extreme accuracy. Forms and sample procedures are included in the Appendix of this document. It is recommended that all COARES members be familiar with formal traffic handling procedures as part of their training.

8.6.2 CENTRAL OHIO TRAFFIC NET - "COTN"

The Central Ohio Traffic Net is a local net of the ARRL National Traffic System. The ARRL National System offers a systematic relay of radiogram messages along established routes and includes the delivery and sending of the messages.

During normal times, The Central Ohio Traffic Net operates daily (365 days a year), at 7:15pm local time, on the Capital City Repeater Association 147.24+ K8DRE Amateur Radio repeater system. The net may occasionally move to other repeaters, including the COARES repeater system. The net has been in service since 1985 and covers the following counties: Delaware, Fairfield, Fayette, Franklin, Licking, Madison, Pickaway, Ross, and Union.

A Memorandum Of Understanding (MOU) exists between COARES and COTN. Both the EC and the COTN Traffic Manager each have signed copies of this document.

8.7 DISASTER CHECKLIST

Emergencies strike with little or no notice. Our goal is to be able to respond as quickly as possible when our services are requested. It is difficult to quickly determine what items may be required. We have prepared a phased approach to emergency preparedness, allowing you to customize a checklist based on the situation, and your abilities and resources. Please consider this list when preparing for a disaster situation, prior to actually needing it.

Items carried with you at all times, or easily available will enable you to respond quickly to a disaster situation. Possible contents of this kit are listed below:

- Blank ARRL NTS Radiograms
- Copy of FCC License
- Scratch paper
- Pens, Pencils
- Columbus Map
- Map of Franklin/other Counties
- Flashlight w/extra batteries
- Small First Aid kit
- Knife
- Plastic rain ponchos
- Tape (electrical and duct)
- Spare fuses (rig/car)
- Small tool kit
- Credit/ATM cards
- ARES ID card & any other ID (Red Cross, EMA, etc.)
- COARES Vehicle ID (Magnetic Signs)
- Extra magnetic mount antenna
- 12VDC power cord w/lighter plug and ARES Connector
- 3+ Amp 12VDC power supply
- Jumper cables
- Other_____

The second category of emergency equipment included items that might be needed in a major emergency but that could be gathered later with a "second wave" of volunteers. These are items that you would not normally carry in the car, but they should be available to obtain quickly if needed. Use the checklist to ensure that nothing is missed in the rush.. Items suggested for this list include:

- Additional rigs (HF, 144, 220, 440, packet)
- Accessories (microphones, headphones, earphones, external speaker)
- Extra batteries, charger
- Power supplies, extra power cords
- Coax, Small sections and 50+ foot rolls
- Heavy extension cord, multiple outlet strip
- Portable antennas, mast sections, guy material
- Coax adaptors (BNC, UHF, barrel, etc)
- Extra tools, including VOM

If you operate HF, bring pre-measured dipoles, tuner, SWR Bridge, and spare tubes (if needed). We should be able to let you know in advance what HF equipment is required and if portable generators are required.

A third category would be equipment required if the operation would extend over a longer period of time. This list would include:

- Extra clothing
- 110VAC/12VDC desk light
- Soap, towels
- Toilet tissue
- Alarm clock
- Aspirin, required medication
- Portable broadcast radio/TV receiver
- Sleeping bag/blanket/ground cloth & spares
- Mirror/shaving gear
- Tooth brush/paste
- can/bottle opener
- Camera/film
- Food (not requiring cooking or refrigeration)
- Gasoline siphon

In Addition to the above items, extra equipment may be required during the winter months, such as:

- Compact shovel
- Salt pellets
- Tow rope
- Plastic sheet
- Thermos(warm drink)
- Boots or overshoes
- Blanket
- Warm hat, clothing
- Emergency food
- Gloves

Also remember to keep a half tank of gas in your vehicle in all times during the winter, if possible.

8.8 DRILLS AND EXERCISES

At times, COARES will hold disaster drill and exercises. Remember that other Amateur Radio operators, and the public, including news agencies monitor our frequencies. Announce all drills and exercises frequently, and explaining what is happening as you identify the net every ten minutes.

Any exercise relating to formal traffic, which uses PRIORITY or EMERGENCY precedence, should become TEST PRIORITY or TEST EMERGENCY and always include the phrase TEST MESSAGE X as the first three words of the message.

An annual test will be conducted in October in conjunction with the nationwide ALL Simulated Emergency Test (SET).

At the discretion of the EC, COARES will be activated unannounced via the Calling Tree system at least once per year.

9.0 PUBLIC SERVICE EVENTS

9.1 TYPES OF EVENTS

COARES participates in many types of public service events. These include, but are not limited to:

- Runs (various distances, some specialized)
- Biathlons (run, bike, run)
- Triathlons (swim, bike, run)
- Bike tours and races
- Marathons (26.2 miles)

- Community celebrations/events
- Races and road rallies
- Parades

COARES also assists the First Aid Service Corps (FASC) of the Greater Columbus Chapter of the American Red Cross, during such events as OSU Football games and other special events.

COARES uses and encourages participation in Public Service events to allow members the opportunity to participate in large scale net operations, allow the chance to work with their equipment outside of the shack, and to provide the community the chance to learn about the Amateur Radio Service.

9.2 PARTICIPATION

9.2.1 TYPES OF PARTICIPATION

The types of assignments available depend on what it is and its size. Sample assignments include:

- Mile mark/check point (stationary)
- Shadow an event official
- Medical (Red Cross or other EMS)
- Security communications
- Liaison (CPD, CFD, Sheriff or other agencies)
- Net Control
- Packet Station

Some assignments may require you to install in another vehicle, such as a police car or ambulance. You should be prepared with an external antenna and power cords if required.

9.2.2 VOLUNTEERING TO WORK

Scheduled events will be listed in the COARES Bulletin and listed during the weekly net. Most events will be offered to the membership through the calling group leader. The calling group leaders will call only enough members to get enough needed volunteers for those assignments required, so if you have a specific event you would like to work with please let the assigned coordinator know, or contact the Event Coordinator, or EC.

9.2.3 CONFIRMATION OF ASSIGNMENT

You should receive confirmation by mail or phone shortly before the event, with your assignment including the location, and time to meet. Allow plenty of time to travel to the meeting location, reviewing the location with maps if needed. Let the coordinator know if you will be late, or need further directions.

If you are not able to participate, please let the coordinator know as quickly as possible so that a replacement can be found.

If you do not receive your assignment or cannot get in touch with the coordinator, contact the Event Manager or EC immediately.

9.2.4 EQUIPMENT

Equipment to bring to an event depends on the type of event, and your assignment. Suggestions include:

- Extra batteries
- Clipboard with pens and paper
- Maps of the area
- COARES Jacket and/or shirt
- Food/drink
- Mobile magnetic mount antenna
- Weather gear (you and your radio)
- COARES/Red Cross ID Badges and Magnetic Signs

9.2.5 MEDICAL PROCEDURES

One of our primary responsibilities at any public service event is for the safety of the participants and public. It is important to recognize problems, and summon the correct response. The event coordinator should know what medical and law enforcement responses are available, and announce these arrangements to the net. Examples of medical response include the Red Cross First Aid Service Corps, local private ambulance services, or calling the EMS response for the area.

If you see a potential medical problem, don't panic. Use the key phrase **MEDICAL** with your call and location to net control, and describe the situation. If another person is relaying the information get as much of a description of the problem, victim, and location. Give net control a description of the runner and a description of your location if needed. Your information on the victim(s) and events will help form the appropriate response; chest pains are quite different from a pulled muscle. Net Control will contact the appropriate agency for response. *(If you hear the word "MEDICAL" when in the net. Hold your current traffic until the "medical" situation is cleared, even if you were recognized by net control prior to the situation!)*

Net Control for the event will contact the operator assigned to the medical service, if one is assigned to the event.

9.2.6 OTHER KEYWORDS

Other keywords, which are used during COARES nets, are "PRIORITY" and "INFORMATION" (or "INFO"). The uses of these keywords are as follows:

PRIORITY – Used to give the Net Control Operator a way to prioritize your traffic over all other traffic (except MEDICAL, see above). Examples of "Priority" traffic could be a car being driven erratically on a 5K run course, or any situation where your traffic needs to be taken by the NCS over routine traffic.

INFORMATION – Used when you have information that can help with a discussion which is taking place during a net. Braking the discussion with your callsign (or tactical call) and "Information" will allow the NCS to break the current conversation and allow you to give your information traffic.

9.2.7 TACTICAL CALLSIGNS

The uses of Tactical Callsigns are encouraged during public service and emergency nets. Tactical Callsigns allow the NCS to know where the station is calling from and/or assignment during the operation. Tactical callsigns allow the flexibility of having different operators assigned to the same location / assignment, and do not add load onto the NCS, who has to try to keep a list of who is assigned where. The most important point of using a Tactical Call (i.e. "Mile Mark 1", Ambulance 2", etc.) is to know the rules and regulations of properly identifying your station with the proper FCC Amateur Radio callsign. Remember to identify every 10 minutes during a QSO, and end each QSO with NCS with your FCC callsign, and you will be in compliance.

10.0 TRAINING

10.1 RED CROSS OF GREATER COLUMBUS VOLUNTEER PROGRAM – TRAINING REQUIREMENTS

The American Red Cross of Greater Columbus provides a chance for COARES members to officially register themselves with the Red Cross as an amateur Radio Volunteer. The Volunteer Application Process is as follows:

- Persons interested in serving as a volunteer with ARCGC contact Volunteer Resources at 253-2740, ext. 2355
- Volunteer Resources secures contact information, sends Info/Application packet, and schedules an interview with applicant
- Applicant brings to interview all necessary paperwork required (completed Volunteer Application, completed references—one personal, and one from the COARES Emergency Coordinator.
- At the interview, applicant signs Code of Conduct (required for all paid and volunteer staff), has digital photo taken for ID Badge, receives Volunteer Handbook
- Volunteer Resources registers applicant for “Intro to Disaster Services” and “Intro to First Aid Service Corps” training classes.
- Upon completion of these classes, new Radio Support volunteers receive Welcome Packet from Volunteer Resources, with new ID badge.

Please note: Any volunteer who wishes to expand their volunteer service to another position should contact Volunteer Resources.

10.2 FRANKLIN COUNTY EMA VOLUNTEER PROGRAM

COARES is affiliated with the Franklin County EMA’s Volunteer Program.. Even though COARES is affiliated with the volunteer program, it does not mean that COARES’ members are automatically certified EMA volunteers. The following is the procedure that must be followed to complete the process.

- Contact the COARES EC and indicate your interest in becoming an EMA volunteer. You will then receive volunteer forms with instructions.
- You must then attend an introductory class, “Introduction to Franklin County EMA”. Dates and times of this introductory class will be announced periodically. At that time a temporary ID badge will be made.
- Once the introductory class is completed, you will have ninety (90) days to complete two FEMA independent Study courses, “IS-2: Disaster Preparedness USA”, and “IS-195: Basic Incident Command System”. Both of these courses are available from the Franklin County EMA, or can be downloaded from www.fema.gov.
- Upon completing each of the self-study courses, a person can go online (<http://training.fema.gov/EMIWeb/IS>) and register and take the final test.
- Once these classes are completed, you will receive a permanent ID badge.

10.3 NATIONAL WEATHER SERVICE / CENTRAL OHIO SEVERE WEATHER NETWORK

The National Weather Service will generally provide severe weather (SKYWARN) training sessions each spring. COARES members are encouraged to attend these sessions, and support the **Central Ohio Severe Weather Network** (COSWN) as trained spotters. COSWN holds a net on Each Tuesday from March through October at 7:30pm local time, and the last Tuesday of the months outside of the severe weather season. Nets are held on 146.760(-) W8RXX repeater. A PL tone of 123.0 Hz is required.

10.5 CENTRAL OHIO TRAFFIC NET

The Central Ohio Traffic Net (COTN) offers both formal and "hands-on" training for handling Amateur Radio message traffic. COARES members are encouraged to participate in the COTN net and train themselves in handling messages. COTN meets daily on the 147.24 K8DRE repeater at 7:15pm local time.

10.6 ARRL – CCEP EMERGENCY COMMUNICATION COURSES

The ARRL Certification and Continuing Education Program (ARRL-CCEP) hosts three levels of Emergency Communication courses for those who wish to delve further into understanding the basics and advanced techniques of Emergency Communications. COARES recommends all member to at least take the Level 1 – Introduction to Emergency Communications. The class is offered on-line through the University of Connecticut's Distance Learning Consortium. Check with the ARRL Website (www.arrl.org) for a schedule, registration information, and fees of upcoming classes.

COARES periodically offers the CCEP Emergency Communications courses in either a classroom or "Hybrid" (Combination On-Line / In-Person) setting. Classes will be published on the COARES Website and COARES Bulletin.

10.7 COARES TRAINING

The Training Manager will provide specific training sessions dealing with disaster and public service communications during the year. In addition to these sessions, drills will be used to supplement the training schedule.

Check in the COARES Bulletin, COARES Website and on the repeater systems for current training schedules.

If there's a special forum of training that you would like to propose to the organization, please contact the Training Manager.

11.0 GENERAL NOTES AND SUGGESTIONS

Watch your microphones at all times! If you hear no noise from your radio during a busy net; check to see that you are not transmitting inadvertently.

Make sure you are using the lowest power setting on your equipment, which still gives a readable signal.

Most of the newer headset/microphone units for HT's also contain a switch to "lock on" the transmitter. COARES members are encouraged to disable this feature by cutting the wire going to that part of the switch, as it frequently has a tendency to "LOCK ON" when least expected and you will have no indication of this problem.

COARES members are encouraged to use a simplex frequency when coverage will allow it.

You may give direct but controlled use of your radio (third party traffic) to officials if required to avoid explaining and/or interpreting a situation twice. This is allowed as long as you are present to supervise the operation. Explain how to use the radio, and announce that they are finished when the information exchange is complete.

11.1 MOBILE CONSIDERATIONS

At times you may be asked to "install" in a vehicle other than your own. Here are some points to consider when doing so. Also, these are good points to remember when installing your own equipment.

1. **Power Considerations:** To get power for your radio, the best method most experienced operators will tell you is to go directly to the battery. Use 2 fuses at the battery, one on the POSITIVE side and one on the NEGATIVE side. We suggest terminating into an Anderson Powerpole connector. (see 13.4 "12 VDC POWER CONNECTION STANDARD"). This assures a clean power source for your equipment and reduces interaction of "noise" between the vehicle and equipment. If you find yourself "installing" in a mobile other than your own remember: lighter or accessory outlets in today's vehicles are designed to handle only about 4 to 6 amps. Your 50+ watt's mobile or amplifier will have problems here if HIGH power is attempted.

2. **Antenna Considerations:** Remember the following: The bigger the better. Tuned is better than un-tuned. Balanced is better than un-balanced. **BUT: Any antenna is better than no antenna!** So it is with mobile applications also. We must trade off these areas to make them work in mobile applications. A magnetic mounted antenna today seems to be by far the most favored, easy to install, easy to store, removes easily when in low head room spaces such as parking garages. But many of today's cars are using more and more fiberglass and that means two problems; nothing for the magnet to hold to and no ground plane to balance the SWR. If "installing" in someone else's vehicle you may have to mount on a fender, tailgate, bumper, or some place where there is metal. Maybe some kind of suction cup or strap harness may work better here and the use of a half wave antenna, which requires no ground plane.

3. **Vehicle Considerations:** Most of today's vehicles have a variety of "on-board" computers. They control anything from the interior temperature, amount of drive or grab per wheel, brakes, airbag deployment, transmission, ETC...and most of them are NOT friendly to high power RF environments produced by amateur radio. Be aware that your equipment may cause the vehicle that it is "installed" into do odd things and possibly even break down. Most "Owner's Manual" for these vehicles will give a clear warning on the cause and effects. If you are buying a new vehicle you may want to check for this problem. Since almost any manufactured vehicle can be used as part of an "Emergency Vehicle Fleet" there are more RF immune packages available, but don't be surprised if you have to go to corporate level to get satisfaction.

12.0 GLOSSARY OF TERMS

The following is a list of some of the many terms associated with ARES and our communication activities. If you don't see the term you are looking for, just ask!

GLOSSARY

AEC	Assistant Emergency Coordinator
ARC	American Red Cross
ARES	Amateur Radio Emergency Service
ARRL	Amateur Radio Relay League
CCRA	Capitol City Repeater Association
CFD	Columbus Fire Department
COARES	Central Ohio Amateur Radio Emergency Service
COPA	Central Ohio Packet Association
CORC	Central Ohio Radio Club
COSWN	Central Ohio Severe Weather Network
COTN	Central Ohio Traffic Net
CP	Command Post
CPD	Columbus Police Department
CTCSS	Continuous Tone Controlled Sub-audible Squelch. (sub-audible tone used for repeater control or selective calling. Most recent radios are equipped with this feature, or easily installed.)
CW	Continuous Wave. (also known as Morse Code)
DAT	Disaster Action Team (Red Cross)
DEC	District Emergency Coordinator
DF	Direction Finding-use of special techniques to determine the exact location of a radio signal
EC	Emergency Coordinator
EMA	Emergency Management Agency
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FASC	First Aid Service Corps (Red Cross)
FCC	Federal Communications Commission
FCSO	Franklin County Sheriff's Office
FEMA	Federal Emergency Management Agency
NCS	Net Control Station
NTS	National Traffic System
NWS	National Weather Service
OES	Official Emergency Station (ARRL Appointment)

OSERP	Ohio Section Emergency Response Plan
OSSBN	Ohio Single Side Band Net
OTS	Official Traffic Station (ARRL Appointment)
PL	"Private Line" Motorola trade mark for CTCSS
PTT	Push To Talk (Referred to by seasoned ARES members as a RTL, Release To Listen)
RACES	Radio Amateur Civil Emergency Service
SEC	Section Emergency Coordinator
SET	Simulated Emergency Test
SKYWARN	Severe weather spotting service for the NWS (see COSWN)
SM	Section Manager (ARRL Appointment)
TNC	Terminal Node Controller (Packet radio interface)

13.0 APPENDIX

13.1 CURRENT COARES ADMINISTRATION As of: June, 2003

Emergency Coordinator:

Frank J. Piper – KI8GW

Assistant Emergency Coordinators:

Emergency Operations Manager

Rich Jordan – AA8DN

Public Service Events Manager

Skip Howell – KC8HIN

Net Manager

Jeff Gould – N8HFP

Training Manager

Barb Wooldridge – KC8KYP

Financial Manager

Mike Day – K8QX

Engineering Manager

Rich Jordan - AA8DN (Interim)

Publication Manager

Robert Larkin- KC8TYE

Public Information Officer

Brent Schaffer – KC8UMV

EC Emeritus

Bill Carpenter – AA8EY

Administrative Assistant

Mary Carpenter – N8OAM

13.2 TRAFFIC HANDLING PROCEDURES

The following procedures are recommended as NTS standards. Deviations from these procedures are made at the discretion of the net manager in cognizance of either necessity or desirability arising out of extraordinary circumstances, but always as a temporary expedient until standard procedure can be resumed. The following procedures apply to all NTS nets:

1. The net control station (NCS) transmits a net call-up promptly at the pre-established net meeting time.
2. Stations reporting in indicate their function or the destination(s) for which they can take traffic, followed by the list of traffic on their hook (pending), if any.
3. Time-consuming pleasantries and other superfluous matters are not to be a part of the procedure while the net is in session.
4. Explanations of any kind are not transmitted unless they are absolutely essential to the net's conduct.
5. Stations reporting into a net are held for 15 minutes, after which they are excused if there is no further traffic for them at that time. Stations in the net do not leave the net without being excused and do not ask to be excused unless absolutely necessary.
6. All nets follow the general precepts of net operation outlined in "**The ARRL Operating Manual**".

All messages handled by Amateur Radio should contain precedence, that is, an evaluation of each message's importance, made by the originating station. Precedence is an "order of handling." There are four precedences in the ARRL message form: Emergency (E), Priority (P), Welfare (W), and Routine (R).

13.3 ARRL REFERENCE MATERIALS

Below is a listing of reading material that may help prepare you for special events and disasters within your Amateur Radio hobby. This listing is only for reference.

- The ARRL Handbook for Radio Amateurs
- The ARRL Repeater Directory
- The ARRL Public Service Communications Manual
- The ARRL Antenna Book
- The ARRL Operating Manual
- The ARES Field Service Manual

13.6 COARES NET CONTROL PROCEDURES

13.6.1 COARES WEDNESDAY NIGHT NET SCRIPT

“Good Evening, this is the Central Ohio Amateur Radio Emergency Service Wednesday Night Net. Net Control Station this evening is (**your call sign**). My name is (**your name**), and I am located in (**your location**).”

“This net meets each Wednesday evening at 8:00pm local time on this frequency, with a backup repeater frequency of 147.090 Megahertz. The purpose of this net is to conduct Central Ohio ARES business, provide stations with an opportunity to test their equipment, and to discuss Amateur Radio topics related to Public Service and Emergency Communications.”

“One Wednesday evening each month we hold an in-person meeting. The next meeting will be held: (See Note-A)

“Calling the Central Ohio Amateur Radio Emergency Service Wednesday Night Net. All licensed Amateur Radio operators are welcome and encouraged to check in. When checking-in, provide your call sign clearly, as well as your name. A PL tone of 94.8 hertz is required to access this repeater system.”

“At this time I will take check-ins from any stations that have emergency or priority traffic for the net. Please call (**your call-sign**):”

“Now taking check-ins from stations that have Central Ohio ARES business and/or announcements, or ARRL bulletins for this evenings net. Please Call (**your callsign**):”

“Now taking check-ins using quadrants divided by Interstate 70 and Interstate 71. Please call in groups of 3 to 4 at a time.”

“Are there any stations which are North of I-70, and East of I-71? Please call (**your callsign**):”
(Make 3 calls, acknowledge all stations.)

“Are there any stations which are South of I-70, and East of I-71? Please call (**your callsign**):”
(Make 3 calls, acknowledge all stations.)

“Are there any stations which are South of I-70, and West of I-71? Please Call (**your callsign**):”
(Make 3 calls, acknowledge all stations.)

“Are there any stations which are North of I-70 and West of I-71? Please Call (**your callsign**):”
(Make 3 calls, acknowledge all stations.)

Now calling any stations, inside or outside of Franklin County, wishing to check into the Central Ohio Amateur Radio Emergency Service Wednesday Night Net, please call (**your callsign**):
(make only 1 call, acknowledge all stations.)

NOTE-A: Odd numbered months, fill in with:

“(date of meeting) at the Greater Columbus Red Cross Chapter House, 995 East Broad Street, meeting time will be at 7:30 PM.”

For Even numbered months: fill in with:

“(date of meeting) at the State of Ohio Emergency Operations Center, 2827 West Dublin-Granville Road in Linworth. Meeting time will be at 7:30 PM”.

(Follow the above locations and times unless otherwise directed by the Net Manager or Emergency Coordinator.)

"At this time, I will go back to those stations having COARES announcements." "I will begin with (callsign of first station checking in with announcements)". [Continue with the remaining stations having announcements ONLY.]

After all stations have reviewed their announcements, then proceed through another round of checkins, in order to catch any stations which may have been missed during the early rounds.

"At this time, I will take checkins from any stations which may have been missed earlier. Please call (your callsign)."

Request event recaps from anyone on frequency who coordinated any events during the preceding week. If the Event Coordinators are not checked in, then request any volunteers who may have worked any recent events to give a brief report.

"Are there any Event Coordinators on frequency who would like to give a recap of their events from the past week?
"Please Call (your callsign)"

"Are there any volunteers on frequency who worked any recent events, who would like to give a brief report? Please Call (your callsign)"

"Are there any additional stations would like to check into the Central Ohio ARES Wednesday Night Net at this time?
Please Call (your callsign)."

"At this time, I will go back to those stations with ARRL Bulletins." [Call the station(s) which previously checked in with bulletins. If not, proceed to any stations with Training information.

"At this time, I will go back to those stations with training-related information "Please Call (your callsign)."

CLOSING:

Check for any further business and any late check-ins.

"With no further business or check-ins, I am now closing this session on the Central Ohio Amateur Radio Emergency Service Wednesday Night Net. Thanks to those who brought announcements and bulletins. Thanks to those who volunteered for public service events. We had a total of (number) check-ins. This is (*your callsign*) returning the repeater over to normal amateur operation"

(DTMF *****)

"This is (*your callsign*) signing clear. Good evening and 73."

GENERAL NOTES

- The Net Manager will provide Net Control Station with the proper codes to operate repeater Net State.
- After most people have checked in, handle all business, announcements and then bulletins. (This is usually about ten minutes into the net.)
- Ask for further / late check-ins every five minutes for the first 15 minutes, and every ten minutes for the rest of the net.
- Make sure to identify the net (C.O.A.R.E.S. Net) with your call sign every ten minutes.
- If any events were held during the previous week, ask for any comments / reports concerning those events. This could be a report from the Event Coordinator, or anyone who participated in the activity. If there are events coming up, ask for those Event Coordinators to come forward and give details, ask for volunteers, etc.
- The net should "entertain" itself with announcements, business, and bulletins.
- It helps to plan ahead with any "filler" material, if needed. Do not feel you must "entertain" the net! If no stations call in with business or announcements, put a call out to see if there are any late check-ins who do have business.
- As a net control station, your job is to conduct and control the communications between stations. Avoid lengthy "commentary" to other stations comments; others may want to add to the discussion, too.
- The net should not last for longer than one hour, unless something of unusual interest occurs. The net should last for at least 30 minutes, however.
- Submit a net report containing a list of check-ins promptly to the EC (KI8GW) and the Net Manager (N8HFP).
- During Net Control, speak slowly and clearly.
- Keep control of the net at all times! You are in charge! Efficient, disciplined communications are the basis of all emergency communication.

13.8 COARES MESSAGE/TRAFFIC FORM

Central Ohio Amateur Radio Emergency Service – COARES						Traffic Form	
Number	Precedence Emergency Priority Welfare Routine	HX	Station of Origin	Check	Place of Origin	Time filed	Date
TO:							
1		2		3		4	5
6		7		8		9	10
11		12		13		14	15
16		17		18		19	20
21		22		23		24	25
				Signature:			
REC'D	From	Date	Time	SENT	To	Date	Time

Handling Instructions – HX

- **HXA** – Collect landline delivery authorized by addressee with ___ miles.
- **HXB** – Cancel message if not delivered within ___ hours of filing time.
- **HXC** – Report date/time of delivery to originating station.
- **HXD** – Report to originating station the identity of station from which received, plus date/time.
- **HXE** – Delivering station get reply from addressee, originate message back.
- **HXF** – Hold delivery until ___ (date)
- **HXG** – Delivery by mail or landline toll call not required.

ARRL Numbered Radiograms:

1. Everyone safe here. Please don't worry.
2. Coming home as soon as possible.
3. Am in _____ Hospital. Receiving excellent care and recovering fine.
4. Only slight property damage here. Do not be concerned about disaster reports.
5. Am moving to new location. Send no further mail or communications. Will inform you of new address when relocated.
6. Will contact you as soon as possible.
7. Please reply by Amateur Radio through the amateur delivering this message. This is free public service.
8. Need additional ___ mobile or portable equipment for immediate emergency use.
9. Additional ___ radio operators needed to assist with emergency at this location.
10. Please contact ___. Advise to standby and provide further emergency information, instructions or assistance.
11. Establish Amateur Radio emergency communications with ___ on ___ MHz.
12. Anxious to hear from you. No word in some time. Please contact me as soon as possible.
13. Medical emergency situation exists here.
14. Situation here becoming critical. Losses and damage from ___ increasing.
15. Please advise your condition and what help is needed.
16. Property damage very severe in this area.
17. REACT communications services also available. Establish REACT communication with ___ on channel ___.
18. Please contact me as soon as possible.
19. Request health and welfare report on _____. (State name, address, and phone.)
20. Temporarily stranded. Will need some assistance. Please contact me at ____.
21. Search and Rescue assistance is needed by local authorities here. Advise availability.
22. Need accurate information on the extent and type of conditions now existing at your location. Please furnish this information and reply without delay.
23. Report at once the accessibility and best way to reach your locations.
24. Evacuation of residents from this area urgently needed. Advise plans for help.
25. Furnish as soon as possible the weather conditions at your locations.
26. Help and care for evacuation of sick and injured from this locations needed at once.
46. Greetings on your birthday and best wishes for many more to come.
50. Greetings by Amateur Radio.
51. Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at _____. Am having a wonderful time.
52. Really enjoyed being with you. Looking forward to getting together again.
53. Received your _____. It's appreciated; many thanks.
54. Many thanks for your good wishes.
55. Good news is always welcome. Very delighted to hear about yours.
56. Congratulations on your ____, a most worthy and deserved achieved.
57. Wish we could be together.
58. Have a wonderful time. Let us know when you return.
59. Congratulations on the new arrival. Hope mother and child are well.
60. Wishing you the best of everything on ____.
61. Wishing you a very Merry Christmas and a Happy New Year.
62. Greetings and best wishes to you for a pleasant ___ holiday season.
63. Victory or defeat, our best wishes are with you. Hope you win.
64. Arrived safely at ____.
65. Arriving ____ on _____. Please arrange to meet me there.
66. DX QSLs are on hand for you at the ___ QSL Bureau. Send ___ self addressed envelopes.
67. You message number ___ undeliverable because of _____. Please advise.
68. Sorry to hear you are ill. Best wishes for a speedy recovery.
69. Welcome to the _____. We are glad to have you with us and hope you will enjoy the fun and fellowship of the organization.

13.9 COARES IMPORTANT PHONE NUMBERS

• Columbus Police	645-4545
• Columbus Fire	221-2345
• Reynoldsburg Police	866-6375
• Reynoldsburg Fire	866-6323
• Gahanna Police	471-8080
• Gahanna Fire	471-4444
• Westerville Police	882-7444
• Westerville Fire	882-2213
• Whitehall Police	237-6333
• Whitehall Fire	231-3626
• O.S.U. Police & Fire	292-2525
• Upper Arlington Police	459-2800
• Upper Arlington Fire	451-9700
• Franklin County Sheriff	462-3333
• Delaware County Sheriff	548-4357 or 368-1891
• Highway Patrol	466-2660
• AAA Emergency	431-7800
• Poison Control Center	228-1323 or 1-800-682-7625
• American Red Cross	253-7981 or 251-1443
• Children's Hospital	722-4300
• O.S.U. Hospital	293-8333
• St. Ann's Hospital	898-4100
• Riverside Hospital	566-5321
• Doctor's West Hospital	297-5513
• Mount Carmel East Hospital	234-6220
• Mount Carmel Central Hospital	234-5060
• Grant Hospital	566-9270
• Grady Memorial Hospital	369-8711
• Fairfield Medical Center	1-740-687-8000
• First Link	221-6766
• COTA	228-1776
• Poison Control Center	1-800-682-7625 or 228-1323
• United Way of Franklin County	227-2700
• Suicide Prevention Hotline	221-5445

13.10 NEW EVENT COORDINATOR OUTLINE PACKAGE

The event coordinator should meet or speak with the organizer or director of the event, give his/her name and phone number and that he/she will be the ARES communications coordinator for said event. Then discuss and find out the answers to the following questions:

- Confirm the day, time (projected start and finish) and location of the event. *It is often useful to ascertain if this is a "first time" job of being the event organizer or director.*
- Obtain or create a map of the event for all communicators.
 - Route, mile markers, water stops, start/finish lines and meeting site should be shown on the map.
- Description of any problem areas regarding the site or course of the event.
- The number of communicators needed in the following categories:
 - Administrative
 - Medical transport vehicles
 - Route
 - Water stops and timers
 - Police liaison
- What information is needed from the communicators in addition to the usual medical problems and questions regarding the event.
 - Numbers of leaders? (for races)
 - Times of leaders?
 - Flow of the event?
 - Open mike for the start? (try to give start warning)
 - If event occurs over normal lunch or dinner times, will any food be available for the communicators?
 - If the answer is "no", then the communicators should be advised to bring a sack lunch.
- What are the medical arrangements for the event?
 - Who? Red Cross, private. Columbus Fire, other, none?
 - Placement? Permanent, mobile or both?
 - Communicators needed with the medical units?
- Police involvement.
- Traffic control, start/finish sweep vehicles?
- Special situations concerning the event.
- Animal cautions. e.g.. Horse events.
- Other cautions, e.g.. Car races.
- Dress cautions, e.g.. Cooler on river events and night events.

Will there be special items distributed to workers to identify them as event volunteers? (i.e. T-Shirts, etc)

- *Do not solicit these items, as this is not COARES' goal for volunteering for these events.*

The event coordinator needs to choose a net controller(s) keeping in mind the following points:

- How many nets are needed?
 - General event net
 - Administrative net
 - Medical net
- Others as a special event might need.

Which repeater(s) are to be used and a back-up repeater and simplex frequency. Permission should be obtained to use a specific repeater.

- *Check repeater availability with the Events Manager.*

The net controller should have some experience in the type of event (e.g.. race, regatta, parade, etc.) or someone with him to assist who does.

It is probably prudent to have a back-up controller in mind in case of emergency.

Have some one monitoring at their home in case phone calls need to be made, or the availability of an on site cell phone.

Make sure that the net controller has some type of "Plot Board" available for use.

Be sure that the net controller understands all the “ins and outs” of the particular event.

- Net control Location
- A high, quiet, controlled access location with good propagation is ideal.
- Avoid high noise level sites.
- Attention should be paid to the actual physical layout of the event.

Ten to twelve days prior to the event personally check the route or layout of the event, if at all possible, to note the following:

- Possible traffic, terrain, or route confusing problem spots.
- Trial radio checks from various spots on the site and route to determine propagation and “dead spots
- *Contact the EC for any technical repeater needs.*

The communicators working the event should receive the following information from the event coordinator:

- A package should be sent or a personal contact of some type made to each communicator the week of the event confirming the information needed for said event consisting of:
- A note explaining the event, including assembly point and a map, if appropriate.
- A chart showing the other communicators times to be “on station” and/or assembly and projected time of dismissal are often helpful.
- A phone number to call for information, such as rig, battery, dress, etc.
- Back-up communicator(s) is often a good policy and it is better to have too many communicators than too few. Never tell a communicator that he/she is “not needed”.

Try to be on the Wednesday Net prior to the event to answer any questions and give out any last minute information. Also, if convenient, monitor “06” the day preceding the event for queries.

Notify the Events Manager if all Calling Group Leaders have not reported in a timely manner.

As soon as possible after the event provide the EC, the Bulletin Editor, and Event Manager with a short written report including:

- A list of communicators, including those with the Red Cross.
- A description and number of participants in the event.
- Weather conditions, if pertinent.
- Identify any problems and any suggestion if the event will be held the following year.
- Any special requests from the event director.
- Should the event director hold a critique meeting and you are invited to attend, try to do so or send a representative who worked the event. Advise the Event Manager of any communicator that fails to show up without advance notice or reasonable explanation. Be sure to thank your communicators.

PURCHASING ARES CAR SIGNS, JACKETS, HATS, VESTS, ETC.

There are many items COARES members may purchase on their own to properly identify themselves as ARES volunteers during public service events. These items are not mandatory to be a COARES member, and each volunteer will handle their own purchases.

<p style="text-align: center;">AMATEUR RADIO AA8YY EMERGENCY SERVICE</p>	<p>Magnetic car signs – Contact “The Sign Man” of Baton Rouge (www.thesignman.com). This sign measures 8" by 17" has black letters for the ARES lettering and red letters for the call sign.</p>
	<p>ARES Windbreaker -- Quickly locate volunteers with this brightly colored, royal blue jacket. Features an embroidered ARES logo (front) and "AMATEUR RADIO COMMUNICATIONS" imprinted in white on the back side. 100% Nylon, snap front, and polyester lined. Bottom drawstring and side slash pockets. Elastic cuffs. Sizes S-M-L-XL-2X-3X. Jackets can be personalized with your first name and callsign. Contact Barker Specialty at their website, and goto the ARRL section (www.barkerspecialty.com/arrl).</p>
	<p>ARES Vest -- This reflective style vest is similar to the type you'd see police or runners wearing. Place this orange "bib" over your shirt or jacket. Constructed of neon mesh with large front and back reflector panels. Imprinted with the words "AMATEUR RADIO COMMUNICATIONS" on one side. Lightweight. Fold it up, and store this small handful in your immediate-response kit. Adjustable side straps. One size fits most. . Contact Barker Specialty at their website, and goto the ARRL section (www.barkerspecialty.com/arrl).</p>
	<p>Utility Bag -- Fully lined bi-color utility bag with a large main u shaped zipper opening with inside zippered security pocket. Zippered end pocket with mesh trim and the opposite end features a zippered mesh ventilated shoe tunnel pocket. The front zippered pocket with organizer includes fast clip key ring and 3 larger stitched gusseted compartments. Black Matte finish hardware, detachable/adjustable shoulder strap, velcro closure handle, padded bottom with rubber feet. Embroidered on front pocket with ARRL logo. Black/Charcoal. Contact Barker Specialty at their website, and goto the ARRL section (www.barkerspecialty.com/arrl).</p>
	<p>Golf Shirt -- Black Pique Golf Shirt made of 100% hand-picked Peruvian Pima cotton. Known as the world's softest cotton! Three dura-pearl buttons on front placket that will not break, split tail, and additional yarn in collar and cuffs for a neater appearance and durability. Features an embroidered ARES logo. Shirts can be personalized with your first name and callsign. Contact Barker Specialty at their website, and goto the ARRL section (www.barkerspecialty.com/arrl).</p>
	<p>ARES Cap -- This cap features the new "sandwich" visor. Navy Blue, low profile, brushed cotton twill cap. Red contrasting color on visor creates sandwich effect. One size fits most. Caps can be personalized with your first name and callsign. Contact Barker Specialty at their website, and goto the ARRL section (www.barkerspecialty.com/arrl).</p>

14 Personal Notes: