

Bernalillo County ARES/RACES Emergency Communication Plan

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This plan is to provide a written guide containing the minimum information that would be needed in an emergency to provide ARES/RACES support to a served agency

1.0 Bernalillo County ARES/RACES MISSION

To provide Amateur Radio based, noncommercial, communications service in Bernalillo County, New Mexico area during times of disaster, commercial communication failure or other emergency situations.

2.0 Introduction to ARES/RACES

2.1 ARES

Bernalillo County ARES is an element of the American Radio Relay League's (ARRL) Public Service Field Organization

The Amateur Radio Emergency Service is composed of radio operators who are licensed by the Federal Communications Commission after passing a written examination on their knowledge of telecommunications and technical skills in the operation of radio equipment.

The Bernalillo County Amateur Radio Emergency Service (ARES) is composed of FCC licensed Amateur Radio operators who have voluntarily registered their capabilities and equipment for public service communications duty.

Bernalillo County ARES functions under this Emergency Communications Plan and the direction of the Bernalillo County ARES District Emergency Coordinator (DEC). The DEC shall be appointed by the ARRL's New Mexico Section Emergency Coordinator (SEC).

The Bernalillo County ARES functions under this emergency plan under the direction of the Bernalillo County District Emergency Coordinator (DEC) in consultation with the New Mexico Section Emergency Coordinator (SEC).

The SEC may appoint EC's as needed for the ARES to function efficiently.

2.2 RACES

Bernalillo County RACES exists under Subpart E of part 97.401 of the FCC rules and regulations. RACES functions under this FCC regulation, this Emergency Communications Plan, and the direction of the Union County RACES Officer. The Bernalillo County RACES Officer shall be nominated by the New Mexico State RACES officer, but officially appointed by the director of the Bernalillo County Office of Emergency Management.

Under Federal regulations, Amateur Radio public service communications are furnished without compensation of any kind.

3.0 Purpose of this Plan

The purpose of this plan is to provide a written guide containing the minimum information that would be needed in an emergency. Each emergency is different and flexibility to provide an adequate response to each is a necessity.

The interface with each agency which could request ARES/RACES services is have different requirements. To meet these varied requirements, each agency will be requested to assist in developing their Memorandum of Understanding (MOU) with ARES/RACES. The MOU will specifically address the interface between the two organizations as well as the available capabilities and resources offered by ARES/RACES.

The primary responsibility of the Bernalillo County ARES is to furnish communications in the event of a natural or man-made disaster, when regular communications are inadequate or fail.

All drills, training and instructions shall be carried out to insure readiness to respond quickly in providing effective Amateur emergency communications whenever an occasion may arise.

4.0 Bernalillo County ARES/RACES Official Positions

4.1 District Emergency Coordinator

The Bernalillo County DEC (District Emergency Coordinator) is appointed by the New Mexico State SEC (Section Emergency Coordinator) to supervise the efforts of local Emergency Coordinators located in the defined district.

He/she shall be the primary contact for emergency services organizations and city and county officials.

In an emergency or exercise, the DEC will move about the operational area, providing good guidance, direction, and recommending changes as necessary. He/she will evaluate the communications needs of the served agencies and respond quickly to those needs. The DEC will assume overall authority and responsibility for emergency response and performance by ARES personnel under his jurisdiction.

4.1.1 The DEC Responsibilities

- The DEC provides the leadership function in any multi-jurisdictional situation.
- Coordinate the training, organization and participation of Emergency Coordinators in the district of jurisdiction.
- Make local decisions in the absence of the SEC or through coordination with the SEC concerning the allotment of available amateurs and equipment during an emergency.
- Coordinate the interrelationship between local emergency plans and between communications networks within their jurisdiction.
- Establish a viable working relationship with area government officials, including police, fire, ambulance and other emergency services.
- Interface with municipal and provincial emergency Planning Officers and agencies.
- Provide direction in the handling of emergency communications of either formal or tactical nature.
- Recommend EC appointments to the SEC.
- Coordinate the reporting and documenting of ARES activities in the district of jurisdiction.
- Initiate policy and procedural changes, both within the Amateur Radio field organization as well as the served agencies, required to facilitate the activities of ARES in the city and county. This includes solicitation of funding from served agencies, other government agencies, as well as local amateur radio clubs.
- Establish an emergency communications plan for the communities and agencies that will effectively utilize ARES members to cover the needs for tactical communications.
- The DEC will be in charge of any local exercise or emergency situation.
- Coordinate with the DEC's from the surrounding to provide cooperative support.

4.2 Bernalillo County RACES Officer

RACES is operated under the Amateur Radio Service Part 97 subpart 97.407, RACES is a formal governmental controlled service, and can only operate during a declared emergency / disaster event. The RACES program is managed and controlled by the State, or City/County government. Very strict rules apply to RACES operation. The State or City/County government officials can require background checks and other requirements prior to certifying a RACES member. Because of this RACES members can perform communications duties of a sensitive nature.

In Bernalillo County, the positions of county RACES officer and ARES DEC are normally held by the same person. Additionally ARES members are encouraged to also register with RACES.

4.3 Emergency Coordinators

Working closely with the District Emergency Coordinator, the EC prepares for, and engages in the management of communications needs in disasters.

Policy and procedural matters are developed in conjunction with both the DEC and Assistant Emergency Coordinators.

Promote and enhance the activities of the ARES as a voluntary, non-commercial communications service for the benefit of the public.

Manage and coordinate the training, organization, and emergency participation of interested amateurs working in support of the communities, agencies or functions designated by the DEC, SEC, and Section Manager.

In conjunction with the DEC, maintain a viable working relationship with all private agencies, and federal, county, and municipal governments in the jurisdictional area which might need the services of ARES in an emergency.

The EC should be free to move about the operational area, providing good guidance, direction, and making changes as necessary. He/she cannot be tied down to an operating position. The EC will function as second in command to the DEC in a multiple jurisdictional response. In the DEC's absence, an EC will assume control of the response.

4.3.1 Emergency Coordinator for Search and Rescue

The EC for Search and Rescue will coordinate the recruitment, training and assignment of ARES amateur radio operators to provide in-town communication support for Search and Rescue missions in the surrounding area.

4.3.2 Emergency Coordinator for the Red Cross

The EC for the Red Cross will be the primary contact between the Red Cross and ARES. The EC for the Red Cross will be responsible for the configuration and maintenance of the ARES radio station at the Red Cross Headquarters.

4.3.3 Emergency Coordinator for the Albuquerque EOC

The EC for the Albuquerque EOC will be the primary contact between the Albuquerque Emergency Manager and ARES. The EC will be responsible for the configuration and maintenance of the ARES/RACES radio station at the Albuquerque EOC.

4.3.4 Emergency Coordinator for the Bernalillo County EOC

The EC for the Bernalillo County EOC will be the primary contact between the county Emergency Manager and ARES. The EC will be responsible for the configuration and maintenance of the ARES/RACES radio station at the County EOC.

4.3.5 Emergency Coordinator for Special Events

The EC for special events is the primary ARES contact for community groups seeking amateur radio communication support for their events.

5.0 Activation Procedures

Any member of the Bernalillo County ARES who, for any reason, suspects a communications emergency exists should monitor the assigned net frequency for activity.

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

In an situation in which Amateur Radio might serve the community, Amateur Radio operators might be alerted by any City, Red Cross, Emergency Management, or similar official by contacting the EC.

If telephone service is available the DEC and/or EC(s) should be notified of an emergency by a served agency by phone. See Appendix: A "Bernalillo County ARES/RACES Contacts" for phone numbers).

The requesting agency should use the following order of contact precedence when requesting ARES/RACES activation:

1. The requesting agency or service should attempt to first contact the ARES District Emergency Coordinator.
2. If the District Emergency Coordinator is unavailable, proceed by calling the Emergency Coordinator(s) or other ARES/RACES Officers until one is reached.
3. If a member of ARES/RACES can not be contacted using "normal" communications facilities, The Albuquerque City Emergency Manager of the Bernalillo County Emergency Manager should be requested to contact the ARES DEC or an EC.
4. If all attempts have failed, please contact the Section Emergency Coordinator (SEC) to initiate the request.

After making initial contact with an ARES/RACES member, the requesting agency is responsible for communicating the necessary information for ARES/RACES to activate and effectively mobilize for the emergency.

After the initial contact, the requesting agency/services' responsibility is fulfilled and they should continue with their normal duties in the emergency. The first ARES/RACES member contacted is responsible for beginning the ARES/RACES mobilization procedures presented below.

A list of Bernalillo Co. ARES/RACES members shall be kept on file by the ARES leadership. This list will be used to generate the "Alert List" used to activate ARES/RACES members during an emergency situation.

6.0 ARES/RACES MOBILIZATION PROCEDURES:

If telephone service is available, a telephone callout will be initiated.

Upon the awareness or notification that a communications emergency exists, members of the Bernalillo County ARES will check into the Bernalillo County ARES Net on 146.900 (-, 67Hz) FM repeater with 146.520 FM Simplex as an alternate frequency.

Mobile units are activated and dispatched as necessary.

The EC will assume Net Control or delegate another station as Net Control Station (NCS). Net Control may operate from the Bernalillo County Emergency Emergency Operations Center (EOC), the City of Albuquerque Emergency Operations Center or other location as needed.

After assembling the ARES/RACES unit on the primary call up frequency for Bernalillo County, an ARES/RACES official (or station acting on behalf of a ARES/RACES official) may spawn additional tactical nets to meet the needs of the emergency relief and recovery efforts.

7.0 Duties of the Net Control Station (NCS)

The Bernalillo County Emergency Net will be called to order by the NCS.

Members of the Bernalillo County ARES are checked into the net from their mobiles and home stations to await further instructions.

The main duties of the NCS is to insure the ARES/RACES nets are run in an orderly fashion, to help eliminate confusion on communication networks, and to coordinate the flow of traffic as required.

Where possible, traffic leaving a tactical net shall be written in ARRL message format or other specified protocol as deemed fitting by the served agency or department. See Appendix: F “NTS Traffic Tutorial” for a sample of message formats.

All internal or outgoing messages must carry the signature of the person originating the message and their title or office. (Example: John Smith, Emergency Management).

The contents of any message handled by Amateur Radio are not to be divulged to any unauthorized persons.

8.0 Responsibilities of ARES Members

8.1 Membership Applications

The membership applications filled out by ARES members are used primarily to keep the ARES member database up-to-date. The database is used to generate the Call Out Roster. In addition, the database is used to maintain a list of member capabilities. This can be used during a mobilization to best match a particular member to a specific assignment.

It is the responsibility of each ARES member to provide the DEC with an updated membership application whenever some of the data has changed.

This updated information is especially important in the case of contact phone numbers.

8.2 Training

All ARES members are encouraged to complete the three Emergency Communications training courses available online from the ARRL:

- <http://www.remote.arrl.org/cce/courses.html#ec001>
- <http://www.remote.arrl.org/cce/courses.html#ec002>
- <http://www.remote.arrl.org/cce/courses.html#ec003>

Additionally the Emergency Management Institute (EMI) offers more than forty independent study courses. These are self-paced courses designed for people who have emergency management responsibilities and the general public. All are offered free-of-charge to those who qualify for enrollment. Each Independent Study Course includes lessons with practice exercises and a final examination. Students who score 75 percent or better are issued a certificate of achievement from EMI. For more information and a list of course available see:

<http://training.fema.gov/EMIWeb/IS/>

Appendix A Bernalillo County ARES/RACES Contacts

Position	Name	Call Sign	Address	Home Phone	Work Phone	Mobile Phone	Pager
Section Manager	Don Wood	W5FHA	9100 Wimbledon Drive NE Albuquerque, NM 87111				
Section Emergency Coordinator	Rick Sohl	K5RIC	HC 67 Box 157 Nogal, NM 88341-9709	354-7031			540-2689
State RACES Officer	Rick Sohl	K5RIC	HC 67 Box 157 Nogal, NM 88341-9709	354-7031			540-2689
District Emergency Coordinator	Mike Eaton	K5MJE	PO Box 1672 Tijeras, NM 87059	281-2771	844-5340	321-3071	
County RACES Officer	Mike Eaton	K5MJE	PO Box 1672 Tijeras, NM 87059	281-2771	844-5340	321-3071	
Emergency Coordinator (Search & Rescue)	Ed Rico	N5LI	1500 Park Ave. AW Albuquerque, NM 87104	247-4866	768-7314	469-3895	837-5842
Emergency Coordinator (Red Cross)	John English	WB6QKF	11832 Kings Canyon Pl SE Albuquerque, NM 87123	292-9643			
Emergency Coordinator (County EOC)	Peter Naumburg	K5HAB	10901 Holly Ave. NE Albuquerque NM 87122	899-0700		301-6161	
Emergency Coordinator (Special Events)	Ed Rico	N5LI	1500 Park Ave. AW Albuquerque, NM 87104	247-4866	768-7314	469-3895	837-5842

Appendix B Bernalillo County ARES Weekly Net Script

At 6:50 pm hours monitor your favorite URFMS repeater for activity. If no activity or if you can break into the activity before 6:55 pm say:

“This is (your call) linking 146.90, 146.940, and 146.960”.

Link up the 146.900 (Albuquerque Metro), 146.940 (Mt. Taylor), 146.960 (Capilla Peak.), by using the appropriate Upper Rio FM Society linking commands. Listen for activity and during a break say:

“This is (your call) the net control for the Bernalillo Co. Amateur Radio Emergency Service Net. This net will begin at 7 pm, in approximately 5 minutes from now on these frequencies. I have linked up 146.90 to 146.940 and 146.960.”

At 7 PM Begin the net by saying:

“This is (your call), the Bernalillo Co. ARES net control calling all ARES members and any other interested amateurs. This net meets each Thursday at 7 pm for the passing ARES information or instructions. If anyone needs to use these frequencies for priority traffic, please feel free to call now or anytime during the net.”

Pause a little while to see if anyone has any traffic.

"Nothing heard, we will proceed with the call for the ARES officials at this time".

Section Manager	Don	W5FHA
District Emergency Coordinator	Mike	K5MJE
Emergency Coordinator for Search & Rescue	Ed	N5LI
Emergency Coordinator for the County EOC	Chris	K5NRL
Emergency Coordinator for the BCSO Mobile Command Post	John	WB6QKF
Emergency Coordinator for the Red Cross	Ralph	W5EEI
Emergency Coordinator for the Special Events	Ed	N5LI

After the officials, proceed with the general check-ins. Begin the check-in process as described below. Pause after calling, log each check-in, and note those with traffic.

First, call the members that are on the frequent check-in list. When that list is completed, continue with the general call for check-ins. After a group has checked-in, repeat each call and pause for possible corrections or break-ins. Pause occasionally to say your call and that you are the ARES net control.

"We will now proceed with general check-ins. Please state whether you have traffic or comments".

"All those with their suffixes beginning with the letters Alpha through Golf, please call now".

"All those with their suffixes beginning with the letters Hotel through Romeo, please call now".

"All those with their suffixes beginning with the letters Sierra through Zulu, please call now".

"A final call Alpha through Zulu, please call now".

Call back each check-in with indications of having traffic or comments.

"Is there anyone desiring to talk to another station?"

"Is there any further business for the net tonight?"

"Nothing more heard, the Bernalillo Co. ARES wishes to thank the Upper Rio FM Society for the use of their repeaters. Thank you all for checking in tonight. The ARES net is secure as of (time). This is (your call) unlinking now."









Unlink with the QST unlinking command or unlink each repeater individually returning the system to the state in which you found it.

Appendix C Possible Operating Locations

Location	County	Address or Lat/Long	VHF Repeater	UHF Repeater	HF	Packet
Bernalillo County EOC	Bernalillo	Eubank & Holly NE	146.90 K5FIQ	443.0 W5SCA	7.233 LSB	145.01
BCFD Station 6	Bernalillo	Frost Road & North 14	147.06 K5FIQ			
			146.72 K5CQH			
BCFD Station 10	Bernalillo	Zamora Road	147.06 K5FIQ			
			146.72 K5CQH			
BDFD Station 13	Bernalillo	Sedillo Hill	147.06 K5FIQ			
			146.72 K5CQH			
			146.96 K5URR			
BCFD Station 11	Bernalillo	Chilili	146.72 K5CQH			
			146.96 K5URR			
Vista Grande Recreational Center	Bernalillo	35 10.634 N 106 20.468 W	147.06 K5FIQ			
			146.82 W5SF			
			147.30 W5SF			
			147.10 W5SCA			
Red Cross Headquarters	Bernalillo	142 Monroe Street NE Albuquerque, NM 87108	146.90 K5FIQ	443.0 W5SCA	7.233 LSB?	145.01
Veterans Hospital - N5VA	Bernalillo		146.90 K5FIQ	443.0 W5SCA	7.233 LSB	145.01
			145.19 KD5CUC			
La Medera VFD	Sandoval	35 15.037 N 106 21.026 W	146.82 W5SF	443.0 W5SCA	7.233 LSB	145.01
			147.06 K5FIQ			
Sandoval County EOC	Sandoval		145.19 KD5CUC	443.0 W5SCA		145.01
La Cueva VFD	Sandoval		147.10 W5SCA			
			145.19 KD5CUC			
Rio Rancho DPS	Sandoval		147.10 W5SCA		7.233 LSB	145.01
			145.19 KD5CUC			
State EOC	Santa Fe		147.10 W5SCA		7.233 LSB	145.01
			147.30 W5SF			

Possible Operating Locations

Possible Operating Locations

☐ Type by Latitude & Longitude	
	Command Post
	ECP
	EOC
	Fire Station
	Road Block
	UHF Repeater
	VHF Repeater
	Volunteer Coord

Appendix D Served Agency Contacts

Served Agency Contacts

Appendix E Red Cross Shelter Locations

Listed below are the list of locations (by county) that the Middle Rio Grande Chapter of the American Red Cross has established facility agreements.

TABLE 1.**Bernalillo County**

Location	Address	Lat/Long
Albuquerque HS	800 Odelia Road NE Albuquerque, NM 87102	
Del Norte HS	5323 Montgomery Blvd. NE Albuquerque, NM 87110	
La Cueva HS	7801 Wilshire Ave NE Albuquerque, NM 87122	
McKinley MS	4500 Comanche NE Albuquerque, NM 87110	
Polk MS	2220 Raymack Road SW Albuquerque, NM 87105	
Sandia HS	7801 Candelaria NE Albuquerque, NM 87110	
Rio Grande HS	2300 Arenal Rd. SW Albuquerque, NM 87105	
West Mesa HS	6701 Fortuna Rd. NW Albuquerque, NM 87121	
Albuquerque Job Corp	1500 Indian School Rd. NW Albuquerque, NM 87104	
Monterrey Baptist Church	12501 Lomas NE Albuquerque, NM 87112	
Baptist Neighborhood	1020 Edith St. SE Albuquerque, NM 87102	
First Baptist Church of Alameda	8818 Second St. NW Albuquerque, NM 87114	

Red Cross Shelter Locations

TABLE 2.

Sandoval County

Location	Address	Lat/Long
Algodones Elementary School	1395 Calle San Jose Bernalillo, NM 87001	
Bernalillo Middle School	485 Don Thomas Bernalillo, NM 87004	
Bernalillo High School	224 North Camino Del Pueblo Bernalillo, NM 87004	
Carroll Elementary School	301 Calle del Esquela Bernalillo, NM 87004	
Cochiti Elementary School	800 Highway 16 Bernalillo, NM 87004	
Roosevelt Elementary School		
Santo Domingo School	I-25 Exit 259	
Rio Rancho Middle School	1600 40 th Street Rio Rancho, NM 87124	
Eagle Ridge Middle School	800 Fruta Road, NE Rio Rancho, NM 87124	
Lincoln Middle School	2287 Lema Road SE Rio Rancho, NM 87124	
Mountain View Middle School	4101 Montreal Loop Rio Rancho, NM 87124	
Puesta Del Sol Elementary	450 Southern Boulevard Rio Rancho, NM 87124	
Jemez Valley Community Center	8154 Highway 4 Jemez Pueblo, NM 87024	
Jemez Valley Elementary School	8501 Highway 4 Jemez Pueblo, NM 87024	
Jemez Valley Middle School	8501 Highway 4 Jemez Pueblo, NM 87024	
Jemez Valley High School	8501 Highway 4 Jemez Pueblo, NM 87024	

Red Cross Shelter Locations

TABLE 2.

Sandoval County

Location	Address	Lat/Long
Cuba Elementary School	County Road 13, #50 Cuba, NM 87013	
Cuba High School	County Road 13, #50 Cuba, NM 87013	
Placitas Elementary School	#5 Calle De Carbon Placitas, NM 87043	

TABLE 3.

Torrance County

Location	Address	Lat/Long
Moriarty High School	200 Center Street Moriarty, NM 87035	
Moriarty Middle School	200 Center Street Moriarty, NM 87035	
Moriarty Elementary School	200 Center Street Moriarty, NM 87035	
Edgewood Middle School		
Moriarty Community Center	201 Broadway Moriarty, NM 87035	

Red Cross Shelter Locations

TABLE 4.

Socorro County

Location	Address	Lat/Long
Parkview Elementary School	107 Francisco de Avarado Socorro, NM 87801	
Socorro High School	Highway 60 West Socorro, NM 87801	

TABLE 5.

Catron County

Location	Address	Lat/Long
Reserve High School	PO Box 350 Reserve, NM 87830	

Appendix F NTS Traffic Tutorial

This tutorial is not meant to replace more formalized training (such as the ARRL Emergency Communicator Courses). It is intended as an introduction to formal NTS message handling for those who have never been exposed to it before.

The purpose of using a standard or a specified format in any field of endeavor is so that everyone knows what to expect. The amateur radio message form, or radiogram, is a 'standard' used for passing message traffic via the National Traffic System. If amateurs are practiced using a standard on a regular basis, use during emergency situations will be very natural. While the published standard may not be perfect for all applications, it serves as a baseline which can be readily adapted for use with a specific served agency.

7.0 The Amateur Radio Message Form

The amateur message form is broken into 4 parts:

7.1 The Preamble

The preamble; often referred to as “the header”. This consists of administrative data such as the message number, originating station, precedence and date/time of origination. The combination of the message number and the originating station serves as a unique message identifier which can be traced if necessary.

7.2 The Address

The address. This includes name, street address or P.O. box, city state, and zip of the individual to whom the message is intended to be delivered. The address should also include telephone number since the majority of amateur radio messages are ultimately delivered via local phone call in the destination area.

7.3 The Text

The text; the text of the message. The text should be brief and to the point; limited if possible to 25 words or less. Care should be taken to avoid contractions - as the apostrophe is generally not used in CW; the contraction for I WILL could cause undue stress to the receiver!

7.4 The Signature

The signature. This can be a single name, a name and call sign; Mom and dad, a name and a title, -- whatever is needed to ensure the recipient can identify the sender. The amateur originating a message should have enough information so that a reply message can be returned to the originator.

8.0 Radiogram Example

The RADIOGRAM is a specific format that everyone follows. This allows for the administrative handling of messages without having to go into lengthy discussions about where the traffic originated and or how important it might be and where it's going. One could imagine if there were no standardized format, the following exchange might occur:

“Hey Frank, I have a message here from a local ham in Colorado Springs; he took it from a lady who isn't a ham. I took the message yesterday evening and I'd like to see if there's a way we can get it passed to Tulsa, Oklahoma. There's no real urgency, the lady just wants to let her brother know that she received his letter and will be sending one back in a couple of days....”

The preceding unformatted message consists of 76 words. And... we still don't know where the message needs to go.

The same message in NTS format might read as follows:

**Number 58, Routine, NØXXO, 11
Colorado Springs, Colorado
November 18**

**Mark Smith
573 Glenside Lane
Tulsa, Oklahoma 74131
918 635 0227**

BT

**RECEIVED YOUR LETTER XRAY WE
WILL WRITE BACK SOON XRAY
LOVE**

BT

MARY

Even counting the preamble (and the breaks), the message length is 35 words. Much more efficient use of time and spectrum. Also, the message has everything it needs to be delivered -- and to be traced back to its originator.

When passing formal traffic, hams should guard against adding superfluous, unnecessary extra words; since the parts of the message are standard, there is no need to identify each part as you pass the traffic -- a bad habit of many traffic handlers is to add these extra words. For example:

*Number 56, Routine, station of origin NØXXO, check 11, Colorado Springs
Colorado, November 18*

*Going to: Mark Smith,
Address 573 Glenside Lane, Tulsa, OK ZIP FIGURES 74131
Telephone 918 635 0227*

BREAK

Transmitted this way just added 9 words to the length of the original message by adding superfluous words such as “station of origin”, CHECK, “Going TO”, ZIP, Telephone, and so on. If there is something about the message that deviates from the standard format, then additional discussion may be necessary; beyond that, adding extra words is counter-productive.

Keeping in mind that during routine, daily traffic nets we are practicing the handling of formal message traffic so that it becomes second nature -- it is imperative that we also practice being brief, and to the point so that in an emergency, being brief and to the point is also second nature.

9.0 PROWORDS

When sending formal traffic, certain 'PROWORDS' (procedural words) are used to clarify portions of the message. These PROWORDS are:

9.1 BREAK

BREAK - Separates address from text and text from signature.

9.2 CORRECTION

CORRECTION - I'm going to correct an error.

9.3 END

END - END of message.

9.4 MORE

MORE - MORE messages to follow.

9.5 NO MORE

NO MORE - NO MORE messages to follow.

9.6 FIGURES

FIGURES - used for a word group consisting of all NUMERALS.

9.7 INITIAL

INITIAL -used only for a single INITIAL.

9.8 I SAY AGAIN

I SAY AGAIN - used to indicate a 'repeat' of a word.

9.8.1 SAY AGAIN Modifiers for the Receiving Station

When receiving formal traffic, certain 'PROWORDS' are used to ask for clarification or repeats of missing words. These PROWORDS, which should be preceded by the pro-word SAY AGAIN are:

- WORD AFTER
- WORD BEFORE
- BETWEEN
- ALL AFTER
- ALL BEFORE

9.9 I SPELL

I SPELL - to spell [phonetically] a word.

9.10 LETTER GROUP

LETTER GROUP - Example: ARES, SCTN

9.11 MIXED GROUP

MIXED GROUP - Example: 12BA6, NNNØSBK

10.0 NTS Message Preamble

The preamble is the section of the amateur message form where all the administrative details of the message are recorded. There are eight sections or blocks in the preamble (two of them are optional fields).

10.1 Message Number

The first block of the preamble is the **MESSAGE NUMBER**. This is any number assigned by the amateur who first put the message into NTS format. While any alphanumeric combination is acceptable, usually, traffic handlers use a numeric sequence starting with the number 1 at the beginning of each year.

10.2 Precedence

The second block of the preamble is the **PRECEDENCE**. The precedence tells each traffic handler the relative importance or how urgent a message is. Within the NTS format, there are four levels of precedence:

10.2.1 Routine

This precedence is abbreviated with the letter “**R**”. Most amateur traffic is handled using this precedence; it's for all traffic which does not meet the requirements for a higher precedence.

10.2.2 Welfare

This precedence is abbreviated with the letter “**W**”. This precedence is for an inquiry as to the health and welfare of an individual in a disaster area or a message from a disaster that all is well.

10.2.3 Priority

This precedence is abbreviated with the letter “**P**”. This precedence is for important messages with a time limit; official messages not covered by the **EMERGENCY** precedence or notification of death or injury in a disaster area. This precedence is usually associated with official traffic to, from or related to a disaster area.

10.2.4 EMERGENCY

There is no abbreviation for this precedence; the word **EMERGENCY** is always spelled out in full. This precedence is for any message having life and death urgency which is transmitted by amateur radio in the absence of regular communications facilities. This includes official messages of welfare agencies requesting supplies during emergencies; or other official instructions to provide aid or relief in a disaster area. The use of this precedence should be limited to traffic originated by officials. If there is any doubt as to the use of this precedence, it should NOT be used.

10.3 Handling Instructions

The third block of the preamble is the **HANDLING INSTRUCTIONS**. This is an optional field at the discretion of the originating ham. These are a set of specified additional handling instructions - there are 7 of them; they are standard; and they are identified as HXA, HXB, HXC, etc. through HXG.

10.4 Station of Origin

The fourth block of the preamble is the **STATION OF ORIGIN**. This is the first ham that put the message into NTS format. If a non traffic handling ham NØAAA wants to send a message and he gets his traffic handling buddy next door NØBBB to format it and send it, NØBBB's call sign is the station of origin.

10.5 Check

The fifth block of the preamble is the **CHECK**. The check is the number of words in the text. This excludes the preamble, address and signature.

The CHECK is, in essence, a very basic manual error checking figure which can alert traffic handlers to a missed word in the passing of traffic.

After receiving a message, traffic handlers count the WORDS in the message and compare to the CHECK. If the two numbers do not agree, a re-read of the message may be necessary to detect the error.

When passing formal message traffic, the format is to send the preamble, then the address, a BREAK (which is the prosign BT on CW and the word "BREAK" on phone) then the text, followed by another BREAK, then the signature, then END OF MESSAGE - prosign AR on CW or the word "END" on phone.

All of the words between the two BREAKS are counted as part of the text, and this is what the check refers to.

Each WORD is counted as one. In addition to whole words, there are GROUPS which are also each counted as ONE. Some examples are:

A LETTER GROUP such as: LETTER GROUP ARES

A FIGURE GROUP such as: FIGURES 80919 or FIGURES 719-636-1290

A MIXED GROUP such as: MIXED GROUP 27TH or MIXED GROUP NØWPA

Telephone numbers in the TEXT sometimes present confusion.

An example: FIGURES 719 FIGURES 535 FIGURES 1568 would be counted as THREE WORDS and according to the Public Service Communications manual, this is correct way to send a telephone number in the TEXT.

If, however, a telephone number is sent as: FIGURES 719 dash 535 dash 1568; it would be one group and would be counted as one word. The easiest way to remember this is that each SPACE, except for the one between the last word of the text and 'BREAK', begins a new word.

Punctuation marks consist of the period and the question mark - they are really the only punctuation used in the text. The period is written as the single letter X as in X-RAY (and on phone is spoken as "X-RAY") and this counts as one word. The question mark is spoken as the word QUERY I SPELL QUEBEC UNIFORM ECHO ROMEO YANKEE and also counts as one word.

10.6 Origin

The sixth block of the preamble is the **ORIGIN**. This is the city and state, or in Canada, the city and Province, or the city and county if elsewhere than the originator of the message lives. This is NOT the city and state of the ham who originated the message - it is, rather, the location of the individual - whether they are a ham or not. I live in Colorado Springs - but if a ham friend (or non ham friend) who lives in Monument, CO calls and I originate the NTS traffic, NØWPA is the station of origin, but Monument, CO is the PLACE OF ORIGIN.

10.7 Time Field

The seventh block of the preamble is the **TIME FIELD** - and is an optional field unless handling instruction BRAVO is used. Although we haven't covered HANDLING INSTRUCTIONS in detail - HANDLING INSTRUCTION BRAVO means cancel if not delivered within X hours of filing time - and so obviously you would have to have a filing time. Unless the message is time sensitive, this field is normally left blank for routine messages. If it IS used, it is usually the ZULU time the message was first placed into the National Traffic System.

10.8 Date

The eighth block of the preamble is the **DATE**. THIS IS USUALLY the ZULU date the message was first placed into the National Traffic System.

11.0 ARRL NUMBERED RADIOGRAMS

ARRL Numbered RADIOGRAMS are a standardized list of often used phrases in NTS messages. Each phrase on the list is assigned a number. There are two groups: group one for emergency relief consists of 26 phrases numbered consecutively from ONE to TWENTY SIX. As an example, Number six means: will contact you as soon as possible. Group TWO, for routine messages, consists of 21 phrases numbered FORTY SIX and then consecutively from FIFTY through SIXTY NINE. The complete list is available in ARRL publication FSD-3 dated February 94. Earlier versions of this list do not contain the latest additions.

When using numbered radiograms, the letters ARL (ALPHA ROMEO LIMA) are placed in the check block of the preamble, just prior to the number indicating the word count. In the text of the message, the appropriate numbered radiogram is inserted by using the letters ARL (ALHPA ROMEO LIMA) as one word, followed by the number written out in text - not numerals. For example:

ARL FIFTY SIX - This needs to be emphasized when using voice and it is important to spell out the numbers. This allows the receiving station to correctly copy what is being sent and NOT inadvertently write the figures FIVE SIX.

The preceding example- ARL F-I-F-T-Y S-I-X is counted as three words. Some common mistakes are for the receiving station to write ARL dash five six and count it as one word; or ARL space five six and count it as two words.

Another example:

ARL SIXTY TWO: Greetings and best wishes TO YOU for a pleasant BLANK holiday season.

or ARL SIXTY FOUR: ARRIVED SAFELY AT BLANK

As THESE examples show, there are some numbered radiograms which require a “fill in the blank” word or two in order to make sense!

Here's an example of a message to convey a Christmas greeting, indicate safe arrival and send regards from family members: You may wish to copy this for practice.

**NUMBER FIFTY SEVEN, ROUTINE, NOVEMBER ZERO WHISKEY PAPA
ALPHA, ARL 16, PUEBLO, CO DECEMBER 10**

**RICHARD RYAN
FIGURES 3820 INITIAL S SUNNYRIDGE LANE
NEW BERLIN, WISCONSIN FIGURES 53151
FIGURES 414 FIGURES 555 FIGURES 1234**

BREAK

**ARL FIFTY ARL SIXTY TWO
CHRISTMAS ARL SIXTY FOUR HOME
MOM AND DAD SEND THEIR
LOVE**

BREAK

**BOB AND ALICE
END, NO MORE NØWPA.**

No XRAY needs to be added between parts of this message. The numbered radiogram assumes a period at the end of the phrase, so adding X-RAYs would unnecessarily drive up the word count.

12.0 Message Handling Guidelines

- The first ham who creates the message should exercise care to be as brief as possible and avoid the use of contractions. The apostrophe is not really used in CW - and contractions are often misunderstood on phone.
- When copying the text of a message, receiving stations should write five words on each line. The yellow and green ARRL Radiogram form is set up to do this; but if

copying on whatever happens to be handy, grouping the words five at a time allows for a very quick count after the message is received. After receiving the message, the receiving operator compares the word count with the check. If okay, the message is rogered; if not, the message is repeated at reading speed.

- There are variations used when passing traffic via CW; especially when both stations are operating full break-in. The receiving station can “break” the sending station at any point for needed fills, instead of waiting for the entire message to be sent. There are additional special prosigns used and interested amateurs should obtain ARRL publication FSD-218 dated February of 91 - this publication is referred to as the “Pink Card” and contains CW NET procedures as well as a description of the Amateur Message Form, precedence and Handling Instructions.
- While preparing this series, a few things came to mind which didn't fit into a category which was covered during a specific briefing. Here, then, are miscellaneous tidbits for traffic handling after which we can go into an open forum to discuss traffic handling if any station has questions which weren't handled in the briefings.
- While attempting to keep the word count at a minimum, care must be exercised to keep from creating ambiguous messages.
- Letter greetings such as Dear Mom and Dad, are bad form - they are redundant.
- Reading speed versus regular sending speed. Transmitting station should trace over the words as you are speaking them to ensure you are not speaking faster than the receiving station can write.
- NO XRAY needed at end of message.
- RECEIVING station calls sending Station; NET controls should hand off to receiving station.
- The standard way of indicating that you are finished sending is to say “END, NO MORE”, or “END 1 MORE. (call sign, back to net)”.
- Hams are not expected to spend money to deliver NTS traffic - toll calls, calls to directory assistance to obtain telephone numbers and stamps to mail locally all cost money.

13.0 ARRL operating aids

ARRL operating aids for the traffic handler:

- Yellow and green pad of Radiogram forms
- FSD-218 dated 2/91 Title: Amateur Message Form, known as “The Pink Card”
- FSD-3 dated 2/94 Title ARRL Numbered Radiograms - earlier forms do not contain the latest addition which is ARL SIXTY NINE

These items are available from the ARRL or any commercial establishment with an ARRL bookshelf.

