

NTS Manual

NATIONAL TRAFFIC SYSTEM TRAINING MANUAL

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PURPOSE OF THIS MANUAL

Whenever the Authors have attended a class on the NTS, the instructor managed to "lose" 90% of his students in the first ten minutes. They simply go into too much detail. The NTS is not a difficult service to understand. There are, unfortunately, a lot of little details concerning the Radiogram forms. Most instructors get side-tracked by these details. They drone on and on about details and their students feel overwhelmed. The students seldom become involved in the NTS. They have been led to feel that there is too much to absorb.

We have addressed the need to keep it simple. A definite attempt has been made to apply the KISS (Keep It Simple, Stupid!) principle to the main text of this manual.. Some of the manual contents were left in Outline format so that different concepts and statement relationships can be very clearly understood. A set of Appendixes furnish the details on various topics . . . not the main text.

The purpose of this manual is to provide a simple teaching tool for you to use in learning about the National Traffic System (NTS)

PREFACE

by John Freeman, KB8ZDX

The National Traffic System (NTS) seems, to a lot of operators, to be this big, huge, complex operation that is very difficult to understand. Some of you may feel that you have to be an Extra with 20 years experience as a Ham to get involved in NTS because its all done on the HF bands and they use a language . . . so different that you need 20 years of just listening to understand it. **WRONG!!**

After going over this material, you will understand that it is *not* complicated or difficult to be involved in the NTS. Its' members are operators just like yourself. You do *not* have to hold an Extra, Advanced, or General License. There is a place for everyone in the NTS. These materials are designed to teach you not only how to get involved, but how to be effective once you do get involved.

This subject will be broken down simply. As you go through the manual, it will become more complex only because we put most of the details at the end. If you start at the beginning and work your way through, you will have absorbed enough simple background information to make sense out of the rest.

The most important part of the NTS and this manual, is the part that the authors cannot include. That part is you. This manual means nothing unless you use it to improve yourself and your operating skills. We welcome the opportunity to help you do that.

NATIONAL TRAFFIC SYSTEM (NTS) TRAINING MANUAL

PART ONE

I. What is NTS?

- The NTS is a relay messaging system developed for *content accuracy*. Whatever message is sent by way of the NTS, is received *exactly* as it was originated. There is no margin for error.
- The National Traffic System consists of ARRL affiliated and independent amateur radio networks ('nets') which pass non-commercial messages on behalf of third parties as a *public service*. That's it in a nutshell.

- NTS has been in operation since 1949. It was established by the ARRL in response to membership demand. It carries on a tradition of message relaying, established by Hiram Percy Maxim when he founded the ARRL for the purpose of handling message traffic in 1914.

II. Traffic - What is it?

- NTS messages are formalized utilizing the "RADIOGRAM" format.
- Once a message has been formalized and entered into the NTS it is called "Traffic".
- Non-formalized messages relayed over Amateur Radio frequencies are *not* "traffic" as defined within the NTS.

NTS messages may be sent to, or by, anyone. You do not have to be a ham to initiate or receive a message. A licensed ham must, of course, handle the *transmission* of the traffic.

III. THE MYSTERIOUS RADIOGRAM

NOTICE!!!

Explanations of this simple form have probably stopped more people from participating in the NTS than anything else. -- It is just a piece of paper! -- This is *not* a confusing IRS tax form! -- It's simple! -- If you can remember your name and callsign, know what you want to say, and who you want to send it to, you are already 3/4 done with this form. -- No Mysticism or Rocket Science is involved.

THE AMERICAN RADIO RELAY LEAGUE RADIOGRAM							
VIA AMATEUR RADIO							
NUMBER	PRECEDENCE	HR	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
1	R	G	K4IWW	12	CARY NC		DEC 20
TO JOHN Q PUBLIC 1234 MAPLE AVE ANYTOWN NC 27000						THIS RADIO MESSAGE WAS RECEIVED AT	
TELEPHONE NUMBER 919 555 1234						AMATEUR STATION _____ PHONE _____	
						NAME _____	
						STREET ADDRESS _____	
						CITY AND STATE _____	
ARRIVE	7PM	DEC	24	X			
LOOKING	FORWARD	TO	SEEING	YOU			
X	LOVE						
BETTY M PUBLIC							
REC'D	FROM	DATE	TIME	SENT	TO	DATE	TIME
<small>THIS MESSAGE WAS RECEIVED BY THE STATION ON THE DATE AND TIME INDICATED. THE STATION WILL BE RESPONSIBLE FOR THE DELIVERY OF THIS MESSAGE TO THE ADDRESSEE. THE STATION WILL BE RESPONSIBLE FOR THE DELIVERY OF THIS MESSAGE TO THE ADDRESSEE. THE STATION WILL BE RESPONSIBLE FOR THE DELIVERY OF THIS MESSAGE TO THE ADDRESSEE.</small>				<small>THE AMERICAN RADIO RELAY LEAGUE, INC. IS THE NATIONAL ORGANIZATION OF AMATEUR RADIO OPERATORS. THE LEAGUE IS A NON-PROFIT ORGANIZATION. THE LEAGUE IS A NON-PROFIT ORGANIZATION. THE LEAGUE IS A NON-PROFIT ORGANIZATION.</small>			

Form: Copyright 1995, American Radio Relay League. Used with permission

THE FOUR PARTS OF A RADIOGRAM and the basics of what to do with each one of them. This is dealing with the very top of the Radiogram form. You should have a copy of the Radiogram in front of you. This won't make much sense without it.

1. Preamble

The top part of the form, with all the little boxes, is called the Preamble. The different parts of the preamble are highlighted below. Look for the heading on the Radiogram form and read the description for that area.

- **Message Number**

This is the number assigned by the first Amateur putting the traffic into NTS. It never changes, no matter how many other operators handle the message.

- *The message has to have a number.* If you are originating the message, you can put any number in this box. What number it is does not matter. What numbering sequence you use doesn't matter.

- If you are *receiving* the message, you *must* use the number given to you by the sender.
- DON'T say the words "my number 001". DO say "*Message Number Zero, Zero, One*". Note: there is no such number as "Ohh".

- **Precedence**

This tells the importance, or how urgent the traffic is.

- 99% of all traffic is listed as "Routine." Put an "R" here.
- Don't worry about this right now. There is a more detailed discussion of this further on in the manual.

- **Handling Instructions**

This is just an Optional set of specific instructions dealing with methods of delivery.

- Most of the time, this area is ignored. Don't worry about it!
- We will do some details later on. See Attachment "A" at the end of this document.

- **Station of Origin**

This is the Call-Sign of the Amateur who first put the traffic into the NTS system

- **Check**

This is a count of the number of words in the text area of the form, (the area with all the little horizontal lines).

- This does *not* include anything in the preamble, address and signature.
- Note: *When you use the word "X-Ray" to indicate punctuation, it counts as a word.* When you use the word "Break" it is a courtesy to the receiving operator and it does not count as a word.
- DON'T say "Check 25, Station of Origin KB8ZDX". It is bad form to say the headings. DO say "25, *KB8ZDX*". Please note that whatever your call is or the proper information received is what will go in these spots, please do not take "25, KB8ZDX" literally (thanks!).

- **Place of Origin**

This is the City and State of the party who *initiated* the traffic, *not* the Station of Origin location.

Explained: If you are *initiating* a message *for someone* in Bozoville, Montana and you live in Ohio, then Bozoville, Montana would be the *Place* of origin.. Your callsign would be the *Station* of origin.

- **Time Filed**

This is the UTC or ZULU time the traffic is placed into NTS system, *not* the time written.

- You could have written the message last week. What is important here is the *time* you actually put it into the NTS
- .Many NTS operators ignore this field on the form for Routine traffic.

- **Date**

This is the date the traffic is first placed into NTS system.

- DON'T say "12/4" for date. DO say "*December 4*". You do not *have* to use the year. If the person taking your message doesn't know what year it is, perhaps you should find someone else?

2. **Address**

This is the address of the individual to whom the traffic is supposed to be delivered. It goes under the word "TO" on the form.

- **Name** Full name (including Jr., Sr., or callsign if there is one)

- **Street address or P.O. Box** (complete as possible)
 - DON'T send numbers as 12345. DO say "*figures* 12345".
- **City, State, Zip**
 - DON'T say "Zip Code 12345". DO say "*Zip figures* 12345".
- Phone number

This is important because most traffic is ultimately delivered via local phone calls

- DON'T say "phone number 290-456-7890". DO say "*phone figures* 290 456 7890".
- DON'T say "Text to follow" after address. DO say "Break" after address before giving the "text".

3. **Text**

- Keep it all brief and to-the-point
- DON'T say "ARL figure 61". DO say "*ARL sixty one*". (More on this "ARL" stuff later.)
- 25 words or less (if possible)
- May contain ARRL Numbered Radiograms (i.e. "ARL One") Attachment "C" lists all of these
- Use "X-Ray" in place of periods, commas. "X-Ray" counts as a word.
 - DON'T send "period" at the end of sentences. DO send "*X-Ray*" in place of punctuation.
- DON'T say "End of message" after text. DO say "*Break*" after giving the text of the traffic.

4. **Signature**

This can be a single name, a name and callsign, or a name and title. Just enough information to enable the receiver to identify the sender. The Originating amateur should provide enough information that a reply can be sent.

- DON'T say "Signature or Signed "John". DO say "*John*".

(NOTE: Amazingly, on the ARRL Form, FSD-244, RADIOGRAM there is no mention of this fourth part of the form! [It's there ... just in invisible ink] Put it anywhere you want.)

5. **OK, You are done . . . NOW WHAT?**

- **Say, "*End . . . No More.*"**

That's all there is to filling out a basic NTS Routine message on a Radiogram form. It really is simple when you don't get bogged down in all the fine little details right away. Go over this a few times and actually fill out a blank form while you are doing it.

To get used to how it feels to actually put your voice to it, go to Appendix "C" where you will find a message all written out. Just read it out loud several times.

Sending Procedures

- The biggest mistake that all newcomers make is *sending too fast*. Those who seem to be aware of this fact go too far in the opposite direction and *send too slow*. Listen to the sending pace of the experienced operators and try to emulate what they do.
- DON'T just keep going from one end of the message to the other. *DO pause between each section to allow the receiver to "Break" if necessary for fills.* (A "fill" means a repeat of a certain section.) DO send it clearly and slowly, but not dragging it out. Practice writing your own message down as you send it. This will give you an idea how fast you can reasonably expect someone else to copy it down.

- **How a "Fill" works.** If a receiving operator misses copying part of a message, he/she can request that you repeat part of it by breaking back to you during one of your pauses and saying, "Break....fill from [last word of a string that he got] to [the next word that he got]". Just back up and give him the part he missed by saying "Fill . . . [give him what he missed] *pause* and go on with your message.

When and Where to send a "Radiogram"

- **Local** Traffic (In-town/county), send it:
 - During a Net on your local repeater
 - Anytime on the repeater or via local telephone
- **Out of town** or county traffic
 - During any Net on your local repeater ask for a station who may take "traffic" for the area it needs to go into.
 - Check with your Local Net Manager or Emergency Coordinator for stations who take relays of traffic for other areas and counties.
- **Long distances within same state**
 - During a Net on your local repeater, see if there are any relay stations to the HF Nets operating within the state that can pass to a "Higher Net"
 - If you have the privileges, check in to one of the state wide nets and pass traffic to a station who is local to the intended receiver
 - Check with your Local Net Manager or Emergency Coordinator to find who is the Local Liaison for HF Nets if you do not have the privileges or the equipment. (A Liaison is an operator who has agreed to help pass NTS traffic for others.)
- **Out of State or Country**
 - Pass it to an NTS Net that you have the privileges for
 - Pass your traffic to the Local Liaison via repeater or telephone
 - If the message is going out of the Country, check to ensure that the US has a third party agreement with the country it is going to. If not sure, check with your Emergency Coordinator or your local Net liaison.

IV. METHODS OF PASSING "TRAFFIC"

RADIOGRAMS may be passed via any means available to an Amateur Radio Operator . . . voice, phone. Repeaters, simplex, VHF, UHF, HF, as long as you have the privileges to operate on a frequency, you can pass messages there. You may use:

- **Phone (Voice)** anywhere it is legal for you to operate.
- CW. NTS messages can be passed using CW on VHF, UHF, HF, any frequency that the operator is authorized to use
- **Packet.** VHF and HF are the most common. Packet can be the ideal means of passing formalized message traffic in certain circumstances. It is especially useful when a "secure" method is necessary to safeguard the privacy of disaster victims. It is also very handy whenever a "hard copy" is needed for record keeping.

Packet BBSs provide a looser structure for getting messages from the sender to the area of destination. This looseness has its advantages and disadvantages. An advantage is that participants can have more flexible schedules - one does not have to set aside a specific time for a regularly scheduled net. A disadvantage is that the sender, does not know if there is a human-receiver on the other end that will deliver the message. For the system to work efficiently, each BBS should have someone (or some group) responsible for delivering NTS messages.

- **RTTY/AMTOR.** HF is the most common. Another digital mode(s) available for passing of traffic

Traffic Nets There are specific times, days of the week and a variety of frequencies available for formal "Traffic Nets". Check with your local Net Manager, Emergency Coordinator or Net Liaison to find out when and where they meet. The ARRL *Net Directory* is a good source of information. We have also included several Appendices at the end of this manual which are lists of various nets at different levels.

During a Club Net, ARES Net, District Net, etc. is the perfect time to pass some traffic, even if just for practice. You can usually locate someone who will receive the traffic and will also work with you on your technique.

Don't worry about getting everything perfect. Practice makes us all better. If you listen to an NTS net for ten minutes, you will hear some of the old-timers make some blunders. It's no big deal! The most important part is to listen to how the traffic is handled and passed, then practice what you know is correct out of what you hear.

People who are involved in the NTS nets welcome newcomers. Just tell them you are new to the system and they will coach you. Of course, there is always the net "Grump". Don't worry about him.

If you never learn any more than this about the Radiogram, you will do just fine passing traffic in the NTS with what you have learned so far. By the time you compose and send 10 or 12 messages, the Radiogram form, these simple procedures, and what to say, will be permanently imprinted on your brain.

We will now go into a little more depth and examine some of the finer points.

IV. SOME MORE ADVANCED STUFF

THE NTS STRUCTURE - How it works

Reminder: The NTS is made up of several associated, yet totally separate Nets held on various levels.

- **Local Nets.** This is the Lowest level NTS Net. These Nets usually meet on local repeaters and are the first level of the NTS system. This is where traffic will be passed between cities, counties and sometimes within Districts or multi county areas. If the traffic needs to go any further or to the next step, it may be passed on to an operator who will take it to the next level Net, the Section Net.
 - **Handling of Local Messages** These are usually within your own county, city or within reach of your local repeater. If you receive the message, follow the delivery instructions to the party intended. If it is out of your area for phone delivery or you are the originating Amateur, try to find a station on the repeater who can deliver the message and send the traffic to that station. You will find repeaters to be excellent resources for passing NTS traffic locally. Try during a Club Net or an ARES/RACES Net on the repeater if there is not an official NTS Traffic Net held on your local repeater, this is usually an excellent time to catch someone in the area where the traffic needs to go.
- **Section Nets.** A Section is an area designated by the ARRL (Amateur Radio Relay League). Each Section will have a, or several, NTS Nets established for the purpose of transferring this traffic or messages. This traffic normally stays within that Section and is received by stations in the area where it is intended to go. If the message is to go to the next level Net, it is usually received by a designated operator to relay to the Region Nets.
 - **Handling of Section Messages** These are to be delivered within the ARRL designated Section. This usually means that the best way of delivering it would be to go to one of the Section/State NTS Traffic Nets that are in place. These are found on HF usually, but a few are found on wide coverage repeaters. If you do not have the ability or privileges to transmit the traffic yourself to the HF Net, ask your Emergency Coordinator who the NTS liaison is within your county and deliver the traffic to that operator for relay to the Section Net.
- **Region Nets.** These Nets cover a much larger area. A representative from each section takes the messages to this Net that are intended for parties outside of the Section but within the Region. Traffic intended for parties outside of the Region will be passed on to operators designated to take them to the next level Net which is the Area Net.
 - **Handling of Region Messages** These are intended for a party within an ARRL designated Region. The traffic will usually start off in a Section Net and be transmitted to the Region Net by the operator with that responsibility. Follow the same procedures as the Section Messages.
- **Area Nets.** This is the top level Net of the NTS. It covers the available world. Representatives from each Region will bring traffic to these Nets to be passed around the designated Area or into other Areas. Each of these Nets has one basic item in common; each will have an appointed Manager to oversee the operation of each level. These will all be covered in greater detail later in this material
 - **Handling of Area Messages** These are intended for a party within one of the designated ARRL Areas. Normally it will be passed from Local to Section to Region to Area Net until it gets delivered to the intended party, regardless of where they are. The procedure on your end is the same, you introduce the traffic by the best means you have available. If you can take it to the Section Net, do so yourself. If you do not have the privileges, utilize the procedures drawn out above for the other Nets.
 - **Handling of Out-of-U.S. (Country) Traffic.** Remember to verify that the U.S. and the receiving country have a Third Party Agreement. A Third Party Agreement means that the U.S. and the other country have a legal agreement allowing U.S. Amateurs to pass traffic into that country.

Another Simplified Summary of the NTS Structure

To make sure that you understand this structure, we are going to explain it another way. The United States and Canada are divided into three Areas: Eastern Area, Central Area, and Western Area. Inside each of those three Areas there are a total of twelve smaller Regions. Inside each of those Regions is an unknown number of Locales.

Picture in your mind, two funnels ... with the big ends put together. These two funnels now represent the NTS System. The flow of traffic is always from one of the small ends to the other small end. The small ends are the Local Nets. Your message may rattle around in the funnel assembly for a while, but with enough movement it will eventually reach the other small end.

HOT TIP: If you are sending a message out-of-state or country, when you list your traffic with a net, list it as: "*One... through ...for [State of destination]*". If someone is on the net who can skip one or more of the normal steps of progression, they will pick up your message and get it through quicker. This just cuts out a number of "middle men".

SPECIAL HANDLING INSTRUCTIONS

This information applies regardless of any mode of message transmission or mix thereof.

This section is to explain what can go in the little box marked "HTX" in the Radiogram Preamble. Again, there is no mystery to this if it is presented simply.

Sometimes there are some special things that need to happen to a message. Have you ever gotten a letter from the Post Office that you had to sign for? Someone wanted to make sure that their message was delivered. Have you ever sent a letter or package "Second-Day Air" so that the Post Office would rush it through? You can do exactly the same type things with an NTS message by plugging in some standard coding in the HTX box of the Radiogram. The codes are pretty self-explanatory and can be found in Attachment "B" at the end of this manual.

PRE-FORMATTED MESSAGES (The "ARL" Stuff we promised to explain.)

If you listen very long to NTS nets, you will soon discover that many messages that you hear are very common and identical. To cover this fact, the NTS uses sixty-nine different pre-formatted messages. The first 26 are emergency related messages. Numbers 46 through 69 are common greetings.

Using the ARL messages saves everyone time. The next time you want to send Grandma a "Merry Christmas" greeting, instead of putting "Wishing you a very Merry Christmas and a Happy New Year" in the text area of a Radiogram, you would simply put "ARL Sixty One". The person who eventually takes the message for delivery to Grandma has to dig out his little chart of ARL numbered messages, call Grandma, and read the words of the message to her over the telephone. Simple. (Except that most Grandmothers will send a return message ARL 12).

Multiples of the ARL messages can be strung together in sequence on a single Radiogram to form a pretty impressive message that would be much longer than the recognized maximum of 25 words.

OK, that's neat. But how do I put it on the Radiogram . . . What do I say?

- First, when you are using ARL messages you always put "ARL" in the "Check" Box of the Preamble. No numbers. Just "ARL".
- In the "Text" area of the Radiogram you would put (and say) "ARL sixty four Detroit ARL fifty seven ARL sixty eight love Dad." to say at the other end, "Arrived safely at Detroit/ wish we could be together/ sorry to hear you are ill. Best wishes for a speedy recovery/ Love Dad. You send 12 words . . . they get 23.
- Everything else in the Radiogram is the same as before.

A list of the standard ARL messages can be found in Attachment "C" at the end of this manual.

PRECEDENCES

Let's again go back to the Radiogram form. This time we will look at the "Precedence" box in the Preamble. We stated that over 90% of NTS messages passed carry a "Routine" precedence. This is true. There are some other designations that can go in this box.

Welfare Messages: These messages are either an inquiry as to the health and welfare of an individual in a disaster area or an advisory from the disaster area that indicates the condition of an individual, family, or group. From a Disaster scene, Outgoing welfare messages usually are handled first, with Incoming welfare inquiries being handled second. Welfare traffic is handled *only* after all emergency and priority traffic is cleared.

- If there has been a disaster somewhere in this country, you will hear Welfare messages being passed. You will also hear them during emergency drills and tests. If the message is for real, you will hear it something

like this: "zero one two, welfare, [call sign], ARL, etc". If it is a test, the first thing you will hear is "Test Message".

- If you are dealing with Welfare messages, you will probably be using another form of the Radiogram, titled "Amateur Radio Disaster Welfare Message". This form is even simpler than the Radiogram. For the parts that are the same as on the Radiogram, it is filled out following exactly the same procedures as the Radiogram *There is one very important exception. The originating station must be working from a form that has actually been signed by the person who is requesting that the message be sent!!* The originating station is usually asked to turn these signed message forms in to someone of authority on a disaster scene.

Emergency Messages: An Emergency Message is any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities.

Emergency messages have top priority and must be handled before any other message is processed. These messages can include official messages of welfare agencies during emergencies requesting supplies, materials, or instructions vital to relief to stricken populace in emergency areas. During normal times, it will be very rare to hear one of these messages, as they are usually used in areas very close to the disaster scene, and on local nets.

Priority Messages: This is a *second level priority* used for important messages having a *specific time limit*, official messages not covered in the emergency category, press dispatches and emergency-related traffic not of the utmost urgency. This is where the "Time Filed" box on the Radiogram form becomes important to use.

Routine: Most traffic during normal times. In disaster situations, traffic should be handled last, or not at all when circuits re busy with higher-precedence traffic.

V. APPENDICES

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ATTACHMENT "A"

HANDLING INSTRUCTIONS

HXA (Followed by number) Collect landline delivery authorized by addressee within ____ miles. (If no number, authorization is unlimited.)

HXB (Followed by number) cancel message if not delivered within ____ hours of filing time; service originating station

HXC Report date and time of delivery (TOD) to originating station

HXD Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery

HXE Delivering station get reply from addressee, originate message back

HXF(Followed by number) Hold delivery until ____ (date).

HXG Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station

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ATTACHMENT "B"

ARRL NUMBERED RADIOGRAMS

Numbered messages have been established for some of the more common texts sent during emergencies and holiday seasons. When this common text can be used, an ARL NUMBER is substituted for the text and sent. The delivering station reads the actual text to the address, not the ARL NUMBER

The letters ARL are inserted in the preamble in the check and in the text before spelled out numbers, which represent texts from this list. Note that some ARL texts include and in the text before spelled out numbers, which represent texts from this list. Note that some ARL texts include insertion of numerals or words.

Group One -- For Possible "Relief Emergency " Use

ONE Everyone safe here. Please don't worry.

TWO Coming home as soon as possible.

THREE Am in _____ hospital. Receiving excellent care and recovering fine.

FOUR Only slight property damage here. Do not be concerned about disaster reports.

FIVE Am moving to new location. Send no further mail or communication. Will inform you of new address when relocated.

SIX Will contact you as soon as possible.

SEVEN Please reply by Amateur Radio through the amateur delivering this message. This is a free public service

EIGHT Need additional _____ mobile or portable equipment for immediate emergency use.

NINE Additional _____ radio operators needed to assist with emergency at this location.

TEN Please contact _____. Advise to standby and provide further emergency information, instructions or assistance

ELEVEN Establish Amateur Radio emergency communications with _____ on _____ MHz.

TWELVE Anxious to hear from you. No word in some time. Please contact me as soon as possible.

THIRTEEN Medical emergency situation exists here.

FOURTEEN Situation here becoming critical. Losses and damage from _____ increasing.

FIFTEEN Please advise your condition and what help is needed.

SIXTEEN Property damage very severe in this area.

SEVENTEEN REACT communications services also available. Establish REACT communication with _____ on channel _____.

EIGHTEEN Please contact me as soon as possible at _____.

NINETEEN Request health and welfare report on _____. (State name, address and telephone number.)

TWENTY Temporarily stranded. Will need some assistance. Please contact me at _____.

TWENTY ONE Search and Rescue assistance is needed by local authorities here. Advise availability.

TWENTY TWO Need accurate information on the extent and type of conditions now existing at your location. Please furnish this information and reply without delay

TWENTY THREE Report at once the accessibility and best way to reach your location.

TWENTY FOUR Evacuation of residents from this area urgently needed. Advise plans for help.

TWENTY FIVE Furnish as soon as possible the weather conditions at your location.

TWENTY SIX Help and care for evacuation of sick and injured from this location needed at once.

Emergency/priority messages originating from official sources must carry the signature of the originating official.

Group Two -- Routine messages

FORTY SIX Greetings on your birthday and best wishes for many more to come.

FIFTY Greetings by Amateur Radio.

FIFTY ONE Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at _____. Am having a wonderful time.

FIFTY TWO Really enjoyed being with you. Looking forward to getting together again.

FIFTY THREE Received your _____. It's appreciated; many thanks.

FIFTY FOUR Many thanks for your good wishes.

FIFTY FIVE Good news is always welcome. Very delighted to hear about yours.

FIFTY SIX Congratulations on your _____, a most worthy and deserved achievement.

FIFTY SEVEN Wish we could be together

FIFTY EIGHT Have a wonderful time. Let us know when you return.

FIFTY NINE Congratulations on the new arrival. Hope mother and child are well.

*SIXTY Wishing you the best of everything on _____.

SIXTY ONE Wishing you a very Merry Christmas and a Happy New Year.

*SIXTY TWO Greetings and best wishes to you for a pleasant _____ holiday season.

SIXTY THREE Victory or defeat, our best wishes are with you. Hope you win.

SIXTY FOUR Arrived safely at _____.

SIXTY FIVE Arriving _____ on _____. Please arrange to meet me there.

SIXTY SIX DX QSLs are on hand for you at the _____ QSL Bureau. Send _____ self addressed envelopes.

SIXTY SEVEN Your message number _____ undeliverable because of _____. Please advise.

SIXTY EIGHT Sorry to hear you are ill. Best wishes for a speedy recovery.

SIXTY NINE Welcome to the _____. We are glad to have you with us and hope you will enjoy the fun and fellowship of the organization.

ARL NUMBERS SHOULD BE SPELLED OUT AT ALL TIMES

*Can be used for all holidays.

From: FORM FSD-3 (Revised 2/94) ARRL updated: 10-06-94

NATIONAL TRAFFIC SYSTEM TRAINING MANUAL

ATTACHMENT "C"

SAMPLE SENDING FORMAT

PREAMBLE: "THIS IS _____(YOUR CALL). FOLLOWS MESSAGE NUMBER ZERO ZERO ONE ROUTINE, HOTEL X-RAY ECHO, KILO CHARLIE EIGHT ZULU VICTOR YANKEE, FIFTEEN, PETTAWAY, MICHIGAN, ONE THREE FOUR FIVE ZULU, MARCH 7 BREAK." (PAUSE) It is bad form to say the Headings (Check 15, Station Of Origin KC8ZVY, etc.) Use the word for the month, not a numerical date.

Remember, the message must have a number, precedence, Station of Origin, Check, Place of Origin and date or it is not a formal message.

Remember to pause and let up off of the mike for 2 - 3 seconds after giving the preamble to give the receiving station a chance to ask for "Fills" if necessary.

ADDRESS: "GERALD BOTTOMS, I SPELL B,O,T,T,O,M,S (PAUSE) FIGURES THREE THREE FOUR THREE DOWNS STREET (PAUSE) TALAHASSEE, FLORIDA, ZIP FIGURES ONE TWO THREE FOUR FIVE (PAUSE) PHONE FIGURES EIGHT ZERO EIGHT SEVEN SEVEN FOUR SIX FIVE EIGHT FOUR BREAK". (PAUSE)

Remember to unkey the mike at the pause , giving the receiving station a chance to request for "Fills"

TEXT: "THANKS FOR LETTING ME STAY LAST WEEK XRAY HOPE TO RETURN THE FAVOR SOON XRAY BREAK"(PAUSE)

Remember to unkey the mike at the pause, giving the receiving station a chance to request for "Fills"

Try to keep the radiogram at 25 words or less. Keep them noncommercial in nature. No elements of the preamble, address or signature, no punctuation, and no big words. Letter-like greetings or closings are bad form. Remember to send a "Break" immediately before and after the text, before sending the signature.

SIGNATURE: "PAT"

"END OF MESSAGE, NO MORE" (If you have no more messages to the same receiving station)

'END OF MESSAGE, () MORE" (If you have more messages for the same receiving station, insert the number of messages remaining at the ()).

Remember to send slowly and pronounce the words carefully, but do not drag it out. Listen to the experienced operators send traffic to find the pace.

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ATTACHMENT "F"

REGION AND AREA NETS

NET NAME CYCLE FREQUENCY MODE DAY & TIME COVERAGE

First Region Net 2.3948 LSB Daily-1:45PM New England States

First Region New 2.3948 LSB Daily-3:30PM

First Region New 3.3602 CW Daily-6:30PM

First Region Net 4.3602 CW Daily-7:45PM

First Region Net 4.3602 CW Daily-9:30PM

Second Region Net 2.3930 LSB Daily-1:45PM NJ,NY,APO/FPO AE

Second Region New 2.3930 LSB Daily-3:30PM

Second Region Net 3.3930\1930 LSB Daily-6:30PM

Second Region Net 4.3690 CW Daily-7:45PM

Second Region Net 4.3690 CW Daily-9:30PM

Third Region Net 2.3913 LSB Daily-4:00PM DC,DE,MD,PA

Third Region Net 4.3590 CW Daily-7:45PM

Third Region Net 4.3590 CW Daily-9:30PM

Fourth Region Net 2.7243 LSB Daily-1:45PM FL,GA,NC,SC,VA,VI,PR

Fourth Region Net 2.7243 LSB Daily-3:30PM APO/FPO AA

Fourth Region Net 4.3567 CW Daily-7:45PM

Fourth Region Net 4.3567 CW Daily-9:30PM

Eighth Region Net 2.3940/7240 LSB Daily-12:30PM MI,OH,WV

Eighth Region Net 2.3940/7240 LSB Daily-4:30PM

Eighth Region Net 4.3530/7040 CW Daily-7:45PM

Eighth Region Net 4.3530/7040 CW Daily-9:30PM

Atlantic Region Net 14303 USB Daily-6:30AM Worldwide

Fifth Region Net 2.7280 LSB M-S-10:30AM AL,AR,LA,MS,OK,TN,TX

Fifth Region Net 2.7280 LSB Sunday-1:45P

Fifth Region Net 2.7280 LSB Daily-3:30PM

Fifth Region Net 4.3650\7052 CW Daily-7:30PM

Fifth Region Net 4.3650/7052 CW Daily-9:30PM

Ninth Region Net 2.7282 LSB Daily-12:30PM IL,IN,KY,WI

Ninth Region Net 2.7282 LSB Daily-4:00PM

Ninth Region Net 4.3640 CW Daily-7:45PM

Ninth Region Net 4.3640 CW Daily-9:30PM
Tenth Region Net 2.7277.5 LSB Daily-1:45PM IA,KS,MB,MN,MO,NE,ND
Tenth Region Net 2.7277.5 LSB Daily-3:45PM SD,SK
Tenth Region Net 4.3590 CW Daily-7:45PM
Tenth Region Net 4.3590 CW Daily-9:30PM
Sixth Region Net 2.7275/3916 LSB Daily-3:30PM CA,GU,HI,NV
Sixth Region Net 4.3655 CW Daily-7:45PM APO/FPO AP
Sixth Region Net 4.3655 CW Daily-9:30PM
Seventh Region Net 2.7238 LSB Daily-9:45AM AB,AK,BC,ID,MT,OR,WA
Seventh Region Net 2.7238 LSB Daily-3:15PM
Seventh Region Net 4.3560/7048 CW Daily-7:30PM
Seventh Region Net 4.3560/7048 CW Daily-9:30PM
Twelfth Region Net 2.3923 LSB Daily-7:00AM AZ,CO,NM,UT,WY
Twelfth Region Net 2.7233 LSB Daily-4:15PM
Twelfth Region Net 4.3570/7063 CW Daily-7:30PM
Twelfth Region Net 4.3570 CW Daily-10:30PM
Eastern Area Net 2.7243 LSB M-F 2:30PM Eastern & Atlantic TZ
Eastern Area Net 2.7050 CW S&S 2:30PM
Eastern Area Net 3.3670/7050 CW Daily-5:30PM Region Nets 1,2,3,4,8
Eastern Area Net 4.3670/1810 CW Daily-8:30PM ECN & ARN
Central Area Net 2.14345 USB Daily-2:30PM Region Nets 5,9,10
Central Area Net 4.3670/7052 CW Daily-8:30PM
Pacific Area Net 1.14345 USB Daily-10:30A Regions 6,7,12
Pacific Area Net 2 14345 USB Daily-2:30PM
Pacific Area Net 4 3651 CW Daily-8:30PM Regions 6,7,12 (Winter)
Pacific Area Net 4.7052 CW Daily-8:30PM Regions 6,7,12 (Summer)
Eastern Canada Net 4.3655 CW Daily-7:45PM Eastern Canada
Eastern Canada Net 4.3655 CW Daily-9:30PM Eastern Canada