

TRAFFIC TRAINING

by

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ACKNOWLEDGEMENTS

Compiled by Jo Ann Keith KA5AZK

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For their training materials

IN THE BEGINNING AND WHAT IS TRAFFIC

Amateur Radio started out as a scientific hobby but quickly it was realized that Hams could provide a great public service. Back at the turn of the century, Marconi was the first to prove that a message could be relayed by wireless from one point to another. Our Military realized the Amateur's usefulness in the years after the first World War and the formation of MARS was established in 1925 as then the Army-Amateur Radio System. During MacMillan's expedition to the Arctic on the schooner Bowdoin in 1923, Amateurs provided communications between the schooner and the adventures homes. Then, as now, Hams have proven their ability to communicate when there are no other ways to do so.

So what is Traffic? No it's not something that you set in for long periods of time on the Interstate, it has become known as the messages that are passed from one point to another. There are several parts to a message or piece of traffic that will be covered later on. A standard form or method of writing up a message has evolved over the years by Amateurs that have participated in passing a great number of pieces of traffic. It was found that a standard form for everyone to use was the most efficient and fastest way to transmit a message. There are many different ways to transmit a piece of traffic such as, on SSB, CW and many different ways on the new technology that is available today with the computer. But with all them you will use the same basic form.

WHY LEARN TRAFFIC HANDLING

In this day of cell phones and digital technology the need for learning traffic handling, nets in general and Ham Radio for that matter might seem obsolete. An emergency of some sort, such as the last two Gulf Coast hurricanes and the shuttle crash, proved that is not the case. We may not handle traffic in the same way or in the amount we did years ago but just like CW, there is still a need.

During the hurricanes it became very obvious that there is a need for Hams to learn how to check into nets and what is meant by a piece of traffic. Cell phone towers can blow over and the back up power to the sites can either not work or be used up if the emergency goes on long enough. Cell phones don't always work in some areas, such was the case during the shuttle crash. During the hurricanes people were checking into nets that had never done so before and didn't know the procedures or the disciplines of the net. What was needed and not needed in a health and welfare message was not known in a lot of cases.

A traffic net during an emergency is a hectic place and is made even worse by stations not knowing the correct way or the net's way of doing things. As a matter of fact, inexperience and lack of knowledge can hinder a net's operation greatly. The people on a net become like a family and the net controls learn to know calls, names and locations and therefore will know who can take what message. This makes it so much easier during an emergency to run the net smoothly.

Just as in the early days of Amateur Radio, emergency response organizations are continuing to find out that Hams can help with communications when there is no other way. We need to be prepared so that Ham Radio will be known as helpful and knowledgeable group.

DURING AN EMERGENCY IS NOT THE TIME TO LEARN HOW TO PASS OR WRITE A PIECE OF TRAFFIC OR LEARN HOW TO CHECK INTO A NET. If you are not familiar with either, then LISTEN and learn for the next time or learn before you need it.

BASIC NET OPERATIONS

A Net is a group of Hams that come together with a common interest. Some of us are interested in traffic or message handling, some rag-chewing, some DXing and on and on. Each net has it's own way of asking for stations to check in. Most will read a preamble that will instruct you on how they want you to check in. Listen carefully to those instructions and how everyone else checks in. During an emergency this will be probably be different and is even more important. Some nets, during emergency situations, will only take check ins when there is a need that the net control will ask for, in other words you listen only. Some are for official use such as the ARES Net that preempts the Daytime Texas Traffic Net on 7285 in emergencies. That Net is then used by officials such as Salvation Army, EOCs, city officials and other organizations of that sort. Other Nets handle health and welfare traffic and general information, such as the 7290 Traffic Net. Still other Nets track hurricanes and the list goes on and on.

It was found that having set schedules for stations to meet (nets) to exchange or relay traffic was more efficient than just random schedules. The National Traffic System was established to speed the relaying of traffic between two or more areas of the county. The main idea of the NTS is that traffic can, under normal conditions, can reach its' destination on the same day it was originated. The NTS is made up, in part, of a Region Net which covers a call area and an Area Net which covers a time zone. Each of these Nets operate several times of the day so that there are several opportunities to pass traffic. There is much more information on the NTS in the ARRL Public Service Communications Manual.

Basic Net Check In Procedure. As stated above, checking into a net will vary with each net. Most will read a preamble that will tell a little about the net, the operating hours and so on. Under normal conditions, some ask for call signs only, some allow call sign and name, and some ask for checkins by state. Almost all will have a standby at the beginning of the net for emergency or priority traffic, anyone that has traffic to list and then general checkins. During the net operation hours, most will pause for additional checkins and stations with traffic. When checking in with traffic and the net control asks you for your traffic, he is asking what city and state your traffic is going to. **Do not just start sending your traffic.** Sometimes a state area net may not have someone from the city where your traffic is to be delivered in. If this happens, it may take a check in or two to pass your traffic. Don't hesitate, however, to ask for someone to pick up your traffic to pass later if you can't return to the net's next session or be on another net. There will

more than likely be someone that goes to several nets that won't mind doing this. However, it is important for the traffic to go through as few as hands as possible.

When moving off frequency to pass a piece of traffic, it is customary for the receiving station to select the frequency and call the station passing the traffic. This is so the receiving station has a frequency he can hear clearly on and it also prevents both stations calling at once and not hearing each other.

The main idea is to know about these nets and get use to them by checking in and letting the people on the net get use to you and know what your capabilities are. During an emergency is not the time to learn how to check into a net or learn about traffic handling. Be prepared, learn before you need it

THE MESSAGE

There are three ways you may handle a message or piece of traffic:

1. Originator – you are the first person to transmit the message. This message will have your number and call in the preamble.
2. Relay – you pick up a message or piece of traffic to retransmit to another station either on another net or relay to another station because of band conditions.
3. Deliver – you pick up a message or piece of traffic to deliver by phone to the addressee.

The official ARRL Radiogram form can be used to record messages you relay but it is not necessary if you want to use something else. I used the form when I first started taking messages until I got used to the outline then I started using spiral notebooks, one for received messages and one for messages I originated. (I strongly recommend using the Radiogram form until you learn the outline.) Any way of writing down the message is ok, there are programs for the computer available also. If for some reason you need to hand deliver or mail a message for delivery, you can use the form for doing that. Notice the box in the upper right corner to be filled in if you hand deliver or mail. The bottom two boxes are for the station you receive the message from and the station you relay the message to. The sent section can also be used for recording when you phone deliver the message. If you use plain paper to record messages, the sent and received box information need to be recorded. There will be times when you will need to know when and where you have relayed a message. See Page 23 for example.

THE FOUR PARTS OF A MESSAGE

NUMBER 1: The heading or preamble which contains the number, the precedence, the handling instructions (HX), the station of origin, the check count, the place of origin, time filed and the date.

NUMBER 2: The address or who the message is going to.

NUMBER 3: The text .

NUMBER 4: The signature.

NUMBER 1

The Heading or Preamble Starting with the Message Number

The message number is simply the number assigned to the message by the originating station and stays with the message until it is delivered. Each message should have its own number which is chosen by the originating station. Some people use the date the message is written, such as June 7 being 607, or consecutive numbers starting with 1 or 100 or whatever number they chose. Putting 0s in front of the numbers is not necessary and frowned upon by CW nets.

The Precedence

The precedence is the type of message it is. There are four different kinds; Emergency, Priority, Welfare and Routine and are written in the precedence block by a P, W or R but are transmitted by the saying the whole word. Emergency is always spelled out. You will see and use Routine most often. Refer to Form FSB-218 page 14..

The Handling Instructions or HX

The handling instructions are just that, they are the way the originating station would like the message handled. There are seven different instructions, HXA, HXB, HXC, HXD, HXE, HXF and HXG. See Form FSB-218, page 14. You will see and use HXC and HXG the most. A message may have more than one handling instruction in the heading if it is needed. Please pay attention to these instructions and if the originator requests a return, originate a message back to him.

The Station of Origin

The station of origin is the person that composes and first transmits the message and his/her call stays with the message until it's delivered. If you write the message it has your number and your call.

The Check

The check is the number of words, word groups, figures or figure groups in the text and is limited to 25 groups. Use this number to verify that you received the message correctly. If you have an ARL Radiogram in the text, there should be an ARL in front of the number in your check count.

The Place of Origin

The place of origin is the town and state the message started in and also stays with the message until it's delivered. If for instance, you deliver a message to someone in Dallas and they wish to send a reply, the reply would have your call but would have Dallas, TX as the place of origin even though you live in Plano. The place of origin should be the city the person signing the message lives in.

The Time Filed

The time filed is the time of day the message is written and is optional. The time can be in UTC or standard.

The Date

The date is the date the message is written and stays with the message until it's delivered. It is usually written by spelling the month and a figure for the day.

NUMBER 2

The Address

The address or "to line" is simply that, who the message is going to and should contain complete name (first, last & call if Ham), address (complete including zip code), phone number and optional email address. If you are sending a message to a foreign country, make sure that we have a third party agreement with the county the message is to be delivered in before you send it (List on Page 25).

NUMBER 3

The Text

The text is what the originating station wants to convey to the addressee. The message should be as short as possible and limited to 25 words, word groups, figures or figure groups. Make the text as short as possible to get the point across but leave out unnecessary words. Leaving out any unnecessary punctuation and words will help your check count.

Pro-words or Identifying words let the receiving station know there is something different coming. Pro-words or identifying words are **NOT** counted as part of the text and include; word group, figure group, initials, break for text or signature, mixed group, direction or I spell.

Initial groups such as AM or PM, QSL, or ARRL are transmitted by first saying the Pro-word or identifying word of initials then the word. The word initial is **NOT** counted as part of the text. The same goes for a group of numbers. You would say figures or figure group before the number and the word figures or figure group would **NOT** be counted as part of the text. A phone number is counted as three, 555 214 1212. A date is usually written by spelling out the month and using figures or figure group for the day.

A mixed group is a group that has both letters and figures. An example would be an Amateur call such as KA5AZK. You would transmit by first saying mixed group and then the call.

The only punctuations used in a message are a question mark, pronounced query and a period, pronounced x-ray. Both **ARE** counted as part of the text. You would transmit by first saying the Pro-word or identifying word of initial and then x-ray. It would be written as an X for a period and the word query for a question. The Pro-word or identifying word is **NOT** counted.

The figure group or figures of 73 can be used as a salutation at the end of the message and **IS** counted as part of the text, but a period or x-ray is **not** used before or after the numbers. Any type of salutation may be used.

The phrase break for text is used after the address, with a pause, for the receiving station to say go with text. The phrase is also used after the salutation, with a pause, (break for signature) for the receiving station to say go with signature. In both cases the phrase is **NOT** counted in the text. At the “break for text” is the time to ask any questions you might have on the Heading or the addressee. At the “break for signature” is the time to ask any questions about the text you have just gotten. The number of words in text should agree with the check count, if they don’t agree ask the sending station to read the text again.

Sometimes a message can be shortened by using the ARRL Numbered Radiograms (Form FSD-3, Page 17). If one of these numbers (which are always spelled out) is used it would be written as ARL fifty and transmitted as initials or initial group ARL fifty and the word count would be two. Some of the ARL Numbered Radiograms have blanks that you fill in with the appropriate words. For instance ARL sixty two could be filled in with Christmas and be written as ARL sixty two Christmas and transmitted as initials ARL sixty two Christmas and the word count would be four. When delivering a message with an ARL number simply read the translations. A non ham would have no idea what ARL sixty two Christmas meant. If an ARL number is used in the text, the initials ARL should be included in the check count in the heading. So the check count in that case would be ARL 4.

Book traffic is several pieces of traffic that have the same heading, text and signature, which are called “common parts”. It will have different numbers and addressees for each piece. The traffic is transmitted by transmitting the common parts first. After the receiving station acknowledges he has received the common parts, transmit the numbers and addresses. It is easier and faster to transmit the heading, text and signature once instead of several times which would be unnecessary.

Web addresses are written as follows: 7290trafficnet dot org for a count of 3. It would be transmitted by saying *mixed group* 7290trafficnet dot *initials* org. The identifying words of mixed group and initial are not counted, so the count would still be 3. Another example: *initials* ARRL dot *initials* org. The identifying words of initials are not counted, so the count would be 3. Since this is a new feature and not yet well documented I consulted with Steve Ewald WV1X in the Public Service section of ARRL who confirmed this is the correct format.

Email address are written as follows: jkeith at etex dot net. It would be transmitted by saying *initials* jkeith at *initials* etex dot net for a count of 5. Again the Pro-word or identifying words of initials is **NOT** counted.

There will be occasions when a message you take for delivery will be undeliverable for one reason or another. In this case the returning message will have your number, a new precedence, new handling instructions, your call, a new check count, new place of origin, new time and date and goes back to the originating station which may not be the station

relaying it to you. If the addressee wants to send a reply, you would originate a complete new message. In other words, you would originate a whole new message in either case.

Some do's and don'ts

- DO:**
1. Spell unusual words only or anything that could be misinterpreted , using standard phonics. This is important in bad band conditions.
 2. Transmit the message at a speed that can be copied easily. It is better to slow down some instead of having to repeat or have errors.
 3. Make sure you have the text correct before accepting the message.

The groups you count in the text should match the check count in the heading.

4. Unkey often, or use vox, while sending the message in case the receiving station is having any difficulties.
5. Keep messages with who you received it from and sent it to for awhile.
6. When delivering a message, read just the text and signature not the heading which is for our use only. **ALWAYS** translate an ARRL Radiogram before delivery.
7. Service an undeliverable message back to the station of origin not the station you received it from.

DON'T:

1. Never change any part of a message you receive.
2. Never deliver any message you have not acknowledged for.
3. It is not necessary to let the station that relayed a message to you know that you have delivered the message. When you accept a message for delivery, it is understood that you will either deliver it or service it back to the originator.

NUMBER FOUR

The Signature

The signature is just that, the signature of who is writing the message. It is **NOT** counted as part of the text so may contain an email address, phone number or title but try not to make the signature longer than the text if you can keep from it. During an emergency or if a reply is wanted it is very helpful to transmit at least a phone number and preferably an address and city and state where the person in the signature can be reached. That should be included with the signature. During an emergency the addressee may not have available the signature's address. If need be the message can be returned to the originating call sign in the heading.

COMPOSING A RETURN MESSAGE

There is only one form used for sending and originating a piece of traffic and that is the ARRL Radiogram. When you deliver a message with a handling instruction of HXC, HXD or HXE (translations are on Form FSD-218), you will need to send a return (new) message to the originator of the message using a ARRL Radiogram form. The new message will have all of your information including your message number.

IF YOU RECEIVE A MESSAGE LIKE THIS ONE WITH AN HXC HANDLING INSTRUCTIONS

THE AMERICAN RADIO RELAY LEAGUE																							
RADIOGRAM																							
VIA AMATEUR RADIO																							
NUMBER 725	PRIORITY R	HF C	STATION OF ORIGIN N1IQI	CHECK 25	PLACE OF ORIGIN Pembroke Mass	TIME RECEIVED	DATE Sept 30																
To First & last name Call Sign Address Marshall TX 75672 TELEPHONE NUMBER 903 555 1212					THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION: _____ PHONE: _____ NAME: _____ STREET: _____ CITY, STATE, ZIP: _____																		
A friendly reminder your Amateur Radio License expires November 21 2011 hope you will renew If not done so already We need your participation on 73 Loren N1IQI																							
SENDS ADDRESS AND CALL NUMBER REFERENCE <table border="1"> <thead> <tr> <th>REC'D</th> <th>FROM</th> <th>DATE</th> <th>TIME</th> <th>SENT</th> <th>TO</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td colspan="8"> <small>THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECTOR OR INDIRECT PAID OR PRO NEEDED, CAN BE ACCEPTED BY A STATION OPERATOR FOR THE SAME REASON, NEITHER EVENTUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED. ANY REPLY MUST BE RECEIVED WITHIN THE STATION, DENYING THIS MESSAGE TO YOU FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CONN. 06111.</small> </td> </tr> </tbody> </table>								REC'D	FROM	DATE	TIME	SENT	TO	DATE	TIME	<small>THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECTOR OR INDIRECT PAID OR PRO NEEDED, CAN BE ACCEPTED BY A STATION OPERATOR FOR THE SAME REASON, NEITHER EVENTUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED. ANY REPLY MUST BE RECEIVED WITHIN THE STATION, DENYING THIS MESSAGE TO YOU FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CONN. 06111.</small>							
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THEN YOUR RETURN MESSAGE WOULD LOOK LIKE THIS

THE AMERICAN RADIO RELAY LEAGUE																							
RADIOGRAM																							
VIA AMATEUR RADIO																							
NUMBER 100	PRIORITY R	HF G	STATION OF ORIGIN KA5AZK	CHECK 11	PLACE OF ORIGIN Gilmer TX	TIME RECEIVED	DATE Oct 1																
To Loren Pimentel N1IQI 5 Ewan Rd Pembroke, MA 02323 TELEPHONE NUMBER 781 293 3861					THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION: _____ PHONE: _____ NAME: _____ STREET: _____ CITY, STATE, ZIP: _____																		
Your number 725 delivered October 1 at 1 PM local 73 Jo Ann KA5AZK																							
SENDS ADDRESS AND CALL NUMBER REFERENCE <table border="1"> <thead> <tr> <th>REC'D</th> <th>FROM</th> <th>DATE</th> <th>TIME</th> <th>SENT</th> <th>TO</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td colspan="8"> <small>THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECTOR OR INDIRECT PAID OR PRO NEEDED, CAN BE ACCEPTED BY A STATION OPERATOR FOR THE SAME REASON, NEITHER EVENTUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED. ANY REPLY MUST BE RECEIVED WITHIN THE STATION, DENYING THIS MESSAGE TO YOU FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CONN. 06111.</small> </td> </tr> </tbody> </table>								REC'D	FROM	DATE	TIME	SENT	TO	DATE	TIME	<small>THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECTOR OR INDIRECT PAID OR PRO NEEDED, CAN BE ACCEPTED BY A STATION OPERATOR FOR THE SAME REASON, NEITHER EVENTUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED. ANY REPLY MUST BE RECEIVED WITHIN THE STATION, DENYING THIS MESSAGE TO YOU FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CONN. 06111.</small>							
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If the Handling Instructions are HXD or HXE the procedure would be the same. Since HXD and HXE have different reply request the text and the check count will be different.

THE ADDRESSEE WANTS TO SEND A REPLY

Sometimes the Handling Instructions will ask for a reply from the addressee or the addressee will want to send a reply. In this case the procedure will be the same just the text and, of course, the check count will be different. Remember that each message you originate should have a different number and keep the text to 25 words or less.

A SERVICE MESSAGE

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Every formal radiogram message originated and handled should contain the following component parts in the order given

I. Preamble

- a. Number (begin with 1 each month or year)
- b. Precedence (R, W, P or EMERGENCY)
- c. Handling Instructions (optional, see text)
- d. Station of Origin (first amateur handler)
- e. Check (number of words/groups in text only)
- f. Place of Origin (not necessarily location of station of origin.)
- g. Time Filed (optional with originating station)
- h. Date (must agree with date of time filed)

II. Address

(as complete as possible, include zip code and telephone number)

III. Text

(limit to 25 words or less, if possible)

IV. Signature

CW: The prosign \overline{AA} separates the parts of the address. \overline{BT} separates the address from the text and the text from the signature. \overline{AR} marks end of message; this is followed by B if there is another message to follow, by N if this is the only or last message. It is customary to copy the preamble, parts of the address, text and signature on separate lines.

RTTY: Same as CW procedure above, except (1) use extra space between parts of address, instead of \overline{AA} ; (2) omit cw procedure sign \overline{BT} to separate text from address and signature, using line spaces instead; (3) add a CFM line under the signature, consisting of all names, numerals and unusual words in the message in the order transmitted.

PACKET/AMTOR BBS: Same format as shown in the cw message example above, except that the \overline{AA} and \overline{AR} prosigns may be omitted. Most amtor and packet BBS software in use today allows formal message traffic to be sent with the "ST" command. Always avoid the use of spectrum-wasting multiple line feeds and indentations.

PHONE: Use *prowords* instead of prosigns, but it is not necessary to name each part of the message as you send it. For example, the above message would be sent on phone as follows: "Number one routine HX Golf W1AW eight Newington Connecticut one eight three zero zulu july one Donald Smith Figures one six four East Sixth Avenue North River City Missouri zero zero seven eight nine Telephone seven three three four nine six eight Break Happy birthday X-ray see you soon X-ray love Break Diana End of Message Over. "End of Message" is followed by "More" if there is another message to follow, "No More" if it is the only or last message. Speak clearly using VOX (or pause frequently on push-to-talk) so that the receiving station can get fills. Spell phonetically all difficult or unusual words--do not spell out common words. Do not use cw abbreviations or Q-signals in phone traffic handling.

Precedences

The precedence will follow the message number. For example, on cw 207R or 207 EMERGENCY. On phone, "Two Zero Seven, Routine (or Emergency)."

EMERGENCY--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. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to

relief of stricken populace in emergency areas. During normal times, it will be *very rare*. On cw, RTTY and other digital modes this designation will always be spelled out. When in doubt, *do not* use it.

PRIORITY--Important messages having a specific time limit. Official messages not covered in the Emergency category. Press dispatches and other emergency-related traffic not of the utmost urgency. Notifications of death or injury in a disaster area, personal or official. Use the abbreviation P on cw.

WELFARE--A message that is either a) an inquiry as to the health and welfare of an individual in the disaster area b) an advisory or reply from the disaster area that indicates all is well should carry this precedence, which is abbreviated W on cw. These messages are handled *after* Emergency and Priority traffic but before Routine.

ROUTINE--Most traffic normal times will bear this designation. In disaster situations, traffic labeled Routine (R on cw) should be handled *last*, or not at all when circuits are busy with Emergency, Priority or Welfare traffic.

Handling Instructions (Optional)

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 addresses, 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.

For further information on traffic handling, consult the Public Service Communications Manual or the ARRL Operating Manual, both published by ARRL.

ARRL QN Signals For CW Net Use

QNA* Answer in prearranged order.

QNB* Act as relay Between _____ and _____

QNC All net stations Copy. I have a message for all net stations.

QND* Net is Directed (controlled by net control station).

QNE* Entire net stand by.

QNF Net is Free (not controlled).

QNG Take over as net control station.

QNH Your net frequency is High.

QNI Net stations report In.*.

I am reporting into the net. (Follow with a list or traffic or QRU).

QNJ Can you copy me?

Can you copy _____?

QNK* Transmit message for _____ to _____

QNL Your net frequency is Low.

QNM* You are QRMing the net. Stand by.

QNN Net control station is _____

What station has net control?

QNO Station is leaving the net.

QNP Unable to copy you. Unable to copy _____

QNQ* Move frequency to _____ and wait for _____ to finish handling traffic. Then send him traffic for

QNR Answer _____ and Receive traffic.

QNS* Following Stations are in the net. *(Follow with list.)

Request list of stations in the net.

QNT I request permission to leave the net for _____ minutes.

- QNU*** The net has traffic for you. Stand by.
QNV* Establish contact with _____ on this frequency. If successful, move to _____ and send him traffic for _____
QNW How do I route messages for _____?
QNX You are excused from the net.* Request to be excused from the net.
QNY* Shift to another frequency (or to _____ kHz) to clear traffic with _____
QNZ Zero beat your signal with mine.

* For use only by the Net Control Station.

Notes on Use of QN Signals

The QN signals listed above are special ARRL signals for use in amateur cw nets only. They are not for use in casual amateur conversation. Other meanings that may be used in other services do not apply. Do not use QN signals on phone nets. Say it with words. QN signals need not be followed by a question mark, even though the meaning may be interrogatory.

International Q Signals

A Q signal followed by a ? asks a question. A Q signal without the ? answers the question affirmatively, unless otherwise indicated.

- QRA** What is the name of your station?
QRG What's my exact frequency?
QRH Does my frequency vary?
QRI How is my tone? (1-3)
QRK What is my signal intelligibility? (1-5)
QRL Are you busy?
QRM Is my transmission being interfered with?
QRN Are you troubled by static?
QRO Shall I increase transmitter power?
QRP Shall I decrease transmitter power?
QRQ Shall I send faster?
QRS Shall I send slower?
QRT Shall I stop sending?
QRU Have you anything for me? (Answer in negative)
QRV Are you ready?
QRW Shall I tell _____ you're calling him?
QRX When will you call again?
QRZ Who is calling me?
QSA What is my signal strength? (1-5)
QSB Are my signals fading?
QSD Is my keying defective?
QSG Shall I send _____ messages at a time?
QSK Can you work breakin?
QSL Can you acknowledge receipt?
QSM Shall I repeat the last message sent?
QSO Can you communicate with _____ direct?
QSP Will you relay to _____?
QSV Shall I send a series of V's?
QSW Will you transmit on _____?
QSX Will you listen for _____ on _____?
QSY Shall I change frequency?
QSZ Shall I send each word/group more than once? (Answer, send twice or _____)
QTA Shall I cancel number _____?
QTB Do you agree with my word count? (Answer negative)
QTC How many messages have you to send?
QTH What is your location?

- QTR** What is your time?
QTV Shall I stand guard for you _____?
QTX Will you keep your station open for further communication with me?
QUA Have you news of _____?

Abbreviations, Prosigns, Prowords

- CW** **PHONE (meaning or purpose)**
- AA** (Separation between parts of address or signature.)
AA All after (used to get fills).
AB An before (used to get fills).
ADEE Addressee (name of person to whom message addressed).
ADR Address (second part of message).
AR End of message (end of record copy).
ARL (Used with "check," indicates use of ARRL numbered message in text).
AS Stand by; wait.
B More (another message to follow).
BK Break; break me; break-in (interrupt transmission on cw. Quick check on phone).
BT Separation (break) between address and text; between text and signature.
C Correct; yes.
CFM Confirm. (Check me on this).
CK Check.
DE From; this is (preceding identification).
HH (Error in sending. Transmission continues with last word correctly sent.)
HX (Handling instructions. Optional part of preamble.) Initial(s). Single letter(s) to follow.
IMI Repeat; I say again. (Difficult or unusual words or groups.)
K Go ahead; over; reply expected. (Invitation to transmit.)
N Negative, incorrect; no more. (No more messages to follow.)
NR Number. (Message follows.)
PBL Preamble (first part of message)
N/A Read back. (Repeat as received.)
R Roger; point. (Received; decimal point.)
SIG Signed; signature (last part of message.)
SK Out; clear (end of communications, no reply expected.)
TU Thank you.
WA Word after (used to get fills.)
WB Word before (used to get fills.)
N/A Speak slower.
N/A Speak faster.

FSD-3

Relief Emergency · Routine Messages Recommended Precedences

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 insertion of numerals and text. Example: NR 1 R W1AW ARL 5 NEWINGTON CONN. DEC 25 DONALD R. SMITH AA 164 EAST SIXTH AVE AA NORTH RIVER CITY MO AA PHONE 73-3968 BT ARL FIFTY ARL SIXTY ONE BT DIANA AR. For additional information about traffic handling, consult *The ARRL Operating Manual*, published by ARRL, or the *NTS Methods and Practices Guidelines*, www.arrl.org/FandES/field/nts-mpg/.

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 exits 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.
- FORTY SEVEN Reference your message number _____ to _____ delivered on _____ at _____ UTC.
- 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.

* Can be used for all holidays.

ARRL Recommended Precedences

Please observe the following ARRL provisions for PRECEDENCES in connection with written message traffic. These provisions are designed to increase the efficiency of our service both in normal times and in emergency.

EMERGENCY--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. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be *very* rare. On CW/RTTY, this designation will *always* be spelled out. When in doubt, do not use it.

PRIORITY--Use abbreviation P on CW/RTTY. This classification is for a) important messages having a specific time limit b) official messages not covered in the emergency category c) press dispatches and emergency-related traffic not of the *utmost* urgency d) notice of death or injury in a disaster area, personal or official.

WELFARE--This classification, abbreviated as W on CW/RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

ROUTINE--Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine (R on CW/RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic.

Note--the precedence always follows the message number. For example, a message number may be 207R on CW and "Two Zero Seven Routine" on phone.

ARRL Communications Procedures

Voice	Code	Situation
Go ahead	K	Used after calling CQ, or at the end of a transmission, to indicate any station is invited to transmit.
Over	AR	Used after a call to a specific station, before the contact has been established
	KN	Used at the end of any transmission when only the specific station contacted is invited to answer.
Stand by or wait	AS	A temporary interruption of the contact.
Roger	R	Indicates a transmission has been received correctly and in full.
Clear	SK	End of contact. SK is sent before the final identification.
Leaving the air or closing the station	CL	Indicates that a station is going off the air, and will not listen or answer any further calls. CL is sent after the final identification.

ITU Phonetic Alphabet

Word list adopted by the International Telecommunications Union

A	Alfa
B	Bravo
C	Charlie
D	Delta
E	Echo
F	Foxtrot
G	Golf
H	Hotel
I	India
J	Juliett
K	Kilo
L	Lima
M	Mike
N	November
O	Oscar
P	Papa
Q	Quebec
R	Romeo
S	Sierra
T	Tango
U	Uniform
V	Victor
W	Wiskey
X	X-ray
Y	Yankee
Z	Zulu

The R-S-T System

Readability

- 1 Unreadable
- 2 Barely readable, occasional words distinguishable.
- 3 Readable with considerable difficulty.
- 4 Readable with practically no difficulty.
- 5 Perfectly readable.

Signal Strength

- 1 Faint signals, barely perceptible.
- 2 Very weak signals.
- 3 Weak signals.
- 4 Fair signals.
- 5 Fairly good signals.
- 6 Good signals.
- 7 Moderately strong signals.
- 8 Strong signals.
- 9 Extremely strong signals.

Tone

- 1 Sixty cycle a.c or less, very rough and broad.
- 2 Very rough a.c., very harsh and broad.
- 3 Rough a.c. tone, rectified but not filtered.
- 4 Rough note, some trace of filtering.
- 5 Filtered rectified a.c. but strongly ripple-modulated.
- 6 Filtered tone, definite trace of ripple modulation.
- 7 Near pure tone, trace of ripple modulation.
- 8 Near perfect tone, slight trace of modulation.
- 9 Perfect tone, no trace of ripple or modulation of any kind.

If the signal has the characteristic steadiness of crystal control, add the letter X to the RST report. If there is a chirp, the letter C may be added to so indicate. Similarly for a click, add K. The above reporting system is used on both cw and voice, leaving out the "tone" report on voice. Turn card over for examples.

Time Conversion Chart

UTC	EDT/AST	CDT/EST	MDT/CST	PDT/MST	PST
0000*	2000	1900	1800	1700	1600
0100	2100	2000	1900	1800	1700
0200	2200	2100	2000	1900	1800
0300	2300	2200	2100	2000	1900
0400	0000*	2300	2200	2100	2000
0500	0100	0000*	2300	2200	2100
0600	0200	0100	0000*	2300	2200
0700	0300	0200	0100	0000*	2300
0800	0400	0300	0200	0100	0000*
0900	0500	0400	0300	0200	0100
1000	0600	0500	0400	0300	0200
1100	0700	0600	0500	0400	0300
1200	0800	0700	0600	0500	0400
1300	0900	0800	0700	0600	0500
1400	1000	0900	0800	0700	0600
1500	1100	1000	0900	0800	0700
1600	1200	1100	1000	0900	0800
1700	1300	1200	1100	1000	0900
1800	1400	1300	1200	1100	1000
1900	1500	1400	1300	1200	1100
2000	1600	1500	1400	1300	1200
2100	1700	1600	1500	1400	1300
2200	1800	1700	1600	1500	1400
2300	1900	1800	1700	1600	1500
2400*	2000	1900	1800	1700	1600

Universal Coordinated Time (UTC) is the time at the zero or reference meridian. Time changes one hour with each change of 15 degrees in longitude. The five time zones in the US proper and Canada roughly follow these lines.

* 0000 and 2400 are interchangeable. (2400 is associated with the date of the day ending, 0000 with the day just starting.)

THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
VIA AMATEUR RADIO

NUMBER 123	PRECEDENCE Routine	BY C	STATION OF ORIGIN KA5AZK	CHECK 18	PLACE OF ORIGIN Gilmer TX	TYPE FIELD Optional	DATE
---------------	-----------------------	---------	-----------------------------	-------------	------------------------------	------------------------	------

To
Name of who message is going to
Address
City, State and Zip Code

TELEPHONE NUMBER
Telephone Number of addressee

THIS RADIO MESSAGE WAS RECEIVED AT

AMATEUR STATION Your personal information. **PHONE** _____
NAME Only necessary if you mail the message so that
STREET addressee may contact you. _____
CITY, STATE, ZIP _____

This is a sample message
 Hope it helps and
will be glad to answer
any questions 73

RECEIVED	SENT
FROM: _____ DATE: _____ TIME: _____ TO: _____ DATE: _____ TIME: _____ THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECTOR INDIRECT PAID OR PROVIDED, CAN BE ACCEPTED BY A STATION OWNER FOR THE SAME REASON, NEITHER CREDITUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED. ANY REPLY MAY BE FIELD WITH THE STATION OWNER. BUS THIS MESSAGE TO YOU! FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CONN. 06111.	THE AMERICAN RADIO RELAY LEAGUE, INC. IS THE NATIONAL MEMBERSHIP SOCIETY OF LICENSED RADIO AMATEURS AND THE PUBLISHER OF QST MAGAZINE. ONE OF ITS FUNCTIONS IS PROMOTION OF PUBLIC SERVICE COMMUNICATIONS AMONG AMATEUR OPERATORS. TO THAT END, THE LEAGUE HAS ORGANIZED AN AMATEUR RADIO PUBLIC SERVICE CORPS (ARPS/C), CONSISTING OF THE AMATEUR RADIO EMERGENCY SERVICE (ARES) FOR WORK DURING EMERGENCIES, AND THE NATIONAL TRAFFIC SYSTEM (NTS) FOR DAILY NATIONAL WIDE MESSAGE HANDLING. THE TWO DIVISIONS SUPPORT/TEACH OTHER IN DAILY OPERATION. WORKING INFORMATION IS AVAILABLE FROM ARRL HEADQUARTERS, LITHO. U.S.A.

Message form pads are available from ARRL on their web site.
 A spiral notebook, loose leaf notebook or a computer are fine for keeping up with messages. Use one notebook for messages you originate and one for messages received to relay or deliver.
 It is recommended that you keep messages received and sent for a month or two. Use the message form pads for mail delivery of message if mailing is necessary.

EXAMPLE OF WHAT CAN HAPPEN TO A MESSAGE

ORIGINAL

91 R HXG KC0M 20 Gilmer TX Jul 28

William Bodine Jr. AB5PM
 5321 Carriage Ln
 Corpus Christi TX 78415
 361-854-3792

Welcome to the 7290 Traffic
 Net X we appreciate you
 Checking in and hope you
 Will join us often 73

KA5AZK Net Manager

RECEIVED

91 R HXG KC7OM 20 Gilmer TX July 28

William Virginia A5PM
 53921 Carry Lane
 Corpus Christi TX 361-854-3792

Welcome to the 7290 Traffic
 Net X we appreciate you
 Checking in and hope you
 Will continue 73

KA5AZK

**THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
VIA AMATEUR RADIO**

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
--------	------------	----	-------------------	-------	-----------------	------------	------

TO:

This Radio Message Was Received At Amateur Station _____ Phone _____ Name _____ Street Address _____ City and State _____

Telephone Number

From	Date	Time	To	Date	Time
REC'D			SENT		
This message was handled free of charge by a licensed Amateur Radio Operator whose address is shown in the box at right above. As such messages are handled solely for the pleasure of operating. No compensation can be accepted by a "Ham" operator. A return message may be filed with the "Ham" delivering this message to you. Further information on Amateur Radio may be obtained from A.R.R.L. Headquarters 225 Main Street, Newington, CT 06111			The American Radio Relay League, Inc., is the national membership society of licensed radio amateurs and the publishers of QST Magazine. One of its functions is promotion of the public service communications among amateur operators to that end. The League has organized the National Traffic System for daily nationwide message handling.		

FSD-244 (1/04)

International Third-Party Traffic -- Proceed With Caution

Occasionally, DX stations may ask you to pass a third-party message to a friend or relative in the States. This is all right as long as the US

has signed an official third-party traffic agreement with that particular country, or the third party is a licensed amateur. The traffic must be noncommercial and of a personal, unimportant nature. During an emergency, the US State Department will often work out a special temporary agreement with the country involved. But in normal times, never handle traffic without first making sure it is legally permitted.

US Amateurs May Handle Third-Party Traffic With:

V2	Antigua/Barbuda
LO-LW	Argentina
VK	Australia
V3	Belize
CP	Bolivia
T9	Bosnia-Herzegovina
PP-PY	Brazil
VE, VO, VY	Canada
CA-CE	Chile
HJ-HK	Colombia
D6	Comoros (Federal Islamic Republic of)
TI, TE	Costa Rica
CM, CO	Cuba
HI	Dominican Republic
J7	Dominica
HC-HD	Ecuador
YS	El Salvador
C5	Gambia, The
9G	Ghana
J3	Grenada
TG	Guatemala
8R	Guyana
HH	Haiti
HQ-HR	Honduras
4X, 4Z	Israel
6Y	Jamaica
JY	Jordan
EL	Liberia
V7	Marshall Islands
XA-XI	Mexico
V6	Micronesia, Federated States of
YN	Nicaragua
HO-HP	Panama
ZP	Paraguay
OA-OC	Peru
DU-DZ	Philippines
VR6	Pitcairn Island*
V4	St. Kitts/Nevis
J6	St. Lucia
J8	St. Vincent and the Grenadines
9L	Sierra Leone
ZR-ZU	South Africa

3DA	Swaziland
9Y-9Z	Trinidad/Tobago
TA-TC	Turkey
GB	United Kingdom
CV-CX	Uruguay
YV-YY	Venezuela
4U1ITU	ITU - Geneva
4U1VIC	VIC - Vienna

Notes:

* Since 1970, there has been an informal agreement between the United Kingdom and the US, permitting Pitcairn and US amateurs to exchange messages concerning medical emergencies, urgent need for equipment or supplies, and private or personal matters of island residents.

US licensed amateurs may operate in the following US territories under their FCC license:

Please note that the Region 2 Division of the [International Amateur Radio Union](#) (IARU) has recommended that international traffic on the 20 and 15-meter bands be conducted on the following frequencies:

14.100-14.150	MHz
14.250-14.350	MHz
21.150-21.200	MHz
21.300-21.450	MHz

The IARU is the alliance of [Amateur Radio societies](#) from around the world; Region 2 comprises member-societies in North, South and Central America, and the Caribbean.

Note: At the end of an exchange of third-party traffic with a station located in a foreign country, an FCC-licensed amateur must transmit the call sign of the foreign station as well as his own call sign.



SAR (Station Activity Report) & PSHR (Public Service Honor Roll)

Below is a sample message with a summary of your activity for the month. Message should be sent to your Section Traffic Manager at the beginning of each month with the previous month's activity.

THE AMERICAN RADIO RELAY LEAGUE							
RADIOGRAM							
VIA AMATEUR RADIO							
NUMBER	PRECEDENCE	HF/	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
1	R	G	Your call		Your town	Optional	Date
To Your Section Traffic Mgr. (below) His address His town, state & zip <small>TELEPHONE NUMBER</small> His phone number					<small>THIS RADIO MESSAGE WAS RECEIVED AT</small> AMATEUR STATION: _____ PHONE: _____ NAME: _____ STREET: _____ CITY, STATE, ZIP: _____		
SAR for July Originated (number) Sent (number) Received (number) Delivered (number) Total (total of all four) PSHR for July Category one (number) Category two (number) Category Three (number) Category four (number) Category five (number) Category six (number) Total (of all PSHR) 73 Your signature and call							
SENDER ADDRESS AND NUMBER FOR RESPONSE							
FROM	DATE	TIME			TO	DATE	TIME
RECD					SENT		
<small>THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION, DIRECT OR INDIRECT, PAID OR PROVIDED, CAN BE ACCEPTED BY A STATION OWNER FOR THE SAME REASON, NEITHER EVENTUAL DELIVERY NOR ACCURACY OF COPY CAN BE GUARANTEED AND REPAIR MAY BE REQUIRED WITHIN THE STATION DELIVERING THIS MESSAGE TO YOU. FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 223 YUMA STREET, NEWINGTON, CONN. 06111.</small>				<small>THE AMERICAN RADIO RELAY LEAGUE, INC. IS THE NATIONAL MEMBERSHIP SOCIETY OF LICENSED RADIO AMATEURS AND THE PUBLISHER OF QST MAGAZINE. ONE OF ITS FUNCTIONS IS PROMOTION OF PUBLIC SERVICE CO-OPERATION AMONG AMATEUR OPERATORS. TO THAT END, THE LEAGUE HAS ORGANIZED AN AMATEUR RADIO PUBLIC SERVICE CORPS (ARRL PSC) CONSISTING OF THE AMATEUR RADIO EMERGENCY SERVICE (ARES) FOR WORK DURING EMERGENCIES, AND THE NATIONAL TRAFFIC SYSTEM (NTS) FOR EMERGENCY MESSAGE HANDLING. THE TWO DIVISIONS SUPPLEMENT EACH OTHER IN EMER OPERATIONS. MORE INFORMATION IS AVAILABLE FROM ARRL HEADQUARTERS, ITFHO, U.S.A.</small>			

**The above message, as written, will exceed the 25 word count limit.
If you do not qualify for all categories of the PSHR
those categories may be left off, which will bring your check
count closer to the 25 limit and you may combine the SAR and PSHR into one
radiogram. If you need all categories, then two radiograms may be necessary.**

SECTION TRAFFIC MANAGERS

- North Texas: Herman May KE5HYW
2822 Pinewood Dr.
Garland, TX 75044-5970
469-759-9661 ke5hyw@kempiweb.net
- South Texas: Rodney Baker W5DY
POB 1237
Goliad, TX 77963
361-645-2472 w5dy@arrl.net
- West Texas: Bill Roberts W5NPR
34 Sunny Glen
Alpine, TX 79830
432-837-2741 w5npr@texas-skies.com

PSHR

Here's how to count your Public Service Honor Roll points.

The six areas for rating are

1. Participating in a public service net (max. 40)
2. Handling formal messages (max. 40)
3. Serving in an ARRL-sponsored volunteer position (max. 30)
4. Participating in a scheduled, short-term public service event, including off-the-air meetings (5 points per hour - no limit)
5. Participating in an unplanned emergency response (5 points per hour - no limit)
6. Providing and maintaining an automated digital system handling ARRL radiogram-formatted messages or a web page e-mail list server oriented toward Amateur Radio public service. (10 points per item)

Here are the details.

1) Participation in a public service net -- 1 point, maximum 40.

A public service net is one that is regularly scheduled and handles Amateur Radio formal messages. Here are examples of public service nets: Local and section nets that are affiliated with the National Traffic System (NTS); NTS region, NTS area, and independent nets that handle traffic; ARES®, RACES, SKYWARN nets that meet on a regular basis; net sessions that are activated during emergencies and threats of potential emergencies; public service and safety nets; nets that are established for training radio amateurs in public service and emergency communications.

2) Handling formal messages (radiograms) via any mode -- 1 point for each message handled; maximum 40.

A "handled" message is defined as a message that is originated or sent or received or delivered. PSHR will follow the same method as Brass Pounders' League to count an individual operator's traffic total (also known as station activity report) to reach the figure for the new PSHR Category 2. *There is one point granted for each message handled; maximum 40 points per calendar month.*

Here is a reference from the *Public Service Communications Manual* on how to count messages. [Section 2, NTS Chapter 10.2] <http://www.arrl.org/FandES/field/pscm/sec2-ch10.html#2>

Originated--One point for each message from a third party for sending via your station. This "extra" credit is given for an off-the-air function because of the value of contact with the general public.

Sent--Every message sent over the air from your station to another amateur receives a point in this category. Thus, a message that is

eligible for an Originated point as above receives another point when it is sent on the air.

Likewise, a message that is received on the air conveys a Sent point when it is relayed to another station. A message that you initiate yourself, while it gets no Originated point, gets a Sent point when cleared. All Sent points require on-the-air sending.

Received--A message received over the air gets a Received point, whether received for relaying (sending) or for delivery to the addressee. Any message received which is not eligible for a Delivery point (such as one addressed to yourself) is nevertheless eligible for a Received point.

Delivered--The act of delivery of a message to a third party receives a point in this category, in addition to a Received point. This is strictly an off-the-air function and must be coupled with receipt of the message at your station. Thus you can't get a Delivered point unless you first get a Received point.

Further example for clarification: If I send a message originated on behalf of myself, I know I get only one point for a message SENT. However, if I originate a message on behalf of a third party, and then send it, I get TWO points, (origination and sending), even though ONE message was handled.

3) *Serving in an ARRL-sponsored volunteer position: ARRL Field Organization appointee or Section Manager, NTS Net Manager, TCC Director, TCC member, NTS official or appointee above the Section level.* -- 10 points for each position; maximum 30.

ARRL Field Organization appointees (in alphabetical order) include the following: Assistant Section Managers, District Emergency Coordinators, Emergency Coordinators, Local Government Liaisons, Net Managers, Official Bulletin Stations, Official Emergency Stations, Official Observers, Official Observer Coordinators, Official Relay Stations, Public Information Coordinators, Public Information Officers, Section Emergency Coordinators, Section Managers, Section Traffic Managers, State Government Liaisons, Technical Specialists.

The Section Manager is the ARRL-member elected League official the section. NTS Net Managers would include the following nets: NTS Region and NTS Area. TCC (Transcontinental Corps) Director is in charge of organizing his/her TCC membership roster of operators that comprise the corps. TCC members are those operators that are assigned to relay traffic from one NTS area to another, conducting liaison with NTS nets to do so. NTS official or appointee above the Section level includes NTS Area Staff Chairs, NTS Area Digital Coordinators and NTS Digital Stations.

More information about the structure of the NTS and the positions and nets that are mentioned in this article may be found in the ARRL's *Public Service Communications Manual*. It is on the [ARRLWeb](#).

4) Participation in scheduled, short-term public service events such as walk-a-thons, bike-a-thons, parades, simulated emergency tests and related practice events. This includes off-the-air meetings and coordination efforts with related emergency groups and served agencies. -- 5 points per hour (or any portion thereof) of time spent in either coordinating and/or operating in the public service event; no limit.

This category recognizes the value of public safety communication events that Amateur Radio is often called to participate in. Simulated emergency tests, exercises, and drills are covered by this category. Points are gained by the amount of time that an Amateur Radio operator spends directly involved in operating the event. This also recognizes the value of off-the-air time it takes to meet with the organization or public service agency to plan and coordinate Amateur Radio involvement.

5) Participation in an unplanned emergency response when the Amateur Radio operator is on the scene. This also includes unplanned incident requests by public or served agencies for Amateur Radio participation. --5 points per hour (or any portion thereof) of time spent directly involved in the emergency operation; no limit.

This category recognizes an Amateur Radio operator who is directly involved in an actual emergency operation. This includes the operator who is on the scene or out in the field, in the shelter, at the emergency operations center, at the hospital, or other served agency's headquarters or their temporary command center.

The second sentence of Category 5 invites the Amateur Radio operator who is an active participant in an unplanned incident -- or in other words, an emergency operation-- to take credit for his/her participation even though he/she is not physically at the emergency scene.

The intent behind Category 5 is to also include the Amateur Radio operators -- like net controllers, net operation and other radio amateurs that support communications in unplanned incidents-- that are not actually on the emergency scene or at the shelter, etc, but are spending time and efforts for supporting the same emergency communication efforts.

As an example, if the National Weather Service activates SKYWARN, Amateur Radio operators serve as weather spotters from their home (or car, or work, or other locations) during the weather event. Then, a

tornado strikes and the Red Cross calls out the ARES® members to serve in shelters and to provide support for damage assessment communications. These operators would be among those to qualify for points under Category 5.

There would likely be several net control operators, net liaison operators, traffic handlers, etc, who are away from the disaster scene, but are spending time to support the Amateur Radio emergency communication effort on behalf of the served agencies (Red Cross and National Weather Service, in this example). They, too, would qualify for points under Category 5.

6.) Providing and maintaining a) an automated digital system that handles ARRL radiogram-formatted messages; b) a Web page e-mail list server oriented toward Amateur Radio public service -- 10 points per item.

The portion, "a," is a carry-over from the previous PSHR criteria as this sub category recognizes the efforts it takes to provide and maintain an automated digital system (like a packet bulletin board or a PACTOR system) that handles ARRL radiogram-formatted messages.

The portion "b," is a new item. Since the last time PSHR criteria were revised, newer technologies like Web pages and e-mail list servers have become popular and effective ways to communicate news and information to the community of radio amateurs that are involved in emergency and public service communication operations and preparedness.

10.2 Individual Traffic Count

As already mentioned, the individual's traffic count does not have any correlation to the net's traffic count; it is a separate count that each traffic handler should report to his/her Section Traffic Manager or Section Manager each month. Traffic totals may be included in the SM's monthly report. Here are the definitions of each message category:

- ⌚ **Originated** -- One point for each message from a third party for sending via your station. This "extra" credit is given for an off-the-air function because of the value of contact with the general public.
- ⌚ **Sent** -- Every message sent over the air from your station to another amateur receives a point in this category. Thus, a message that is eligible for an Originated point as above receives another point when it is sent on the air. Likewise, a message that is received on the air conveys a Sent point when it is relayed to another station. A message that you initiate yourself, while it gets no Originated point, gets a Sent point when cleared. All Sent points require on-the-air sending.
- ⌚ **Received** -- A message received over the air gets a Received point, whether received for relaying (sending) or for delivery to the addressee. Any message received which is not eligible for a Delivery point (such as one addressed to yourself) is nevertheless eligible for a Received point.
- ⌚ **Delivered** -- The act of delivery of a message to a third party receives a point in this category, in addition to a Received point. This is strictly an off-the-air function and must be coupled with receipt of the message at your station. Thus you can't get a Delivered point unless you first get a Received point.

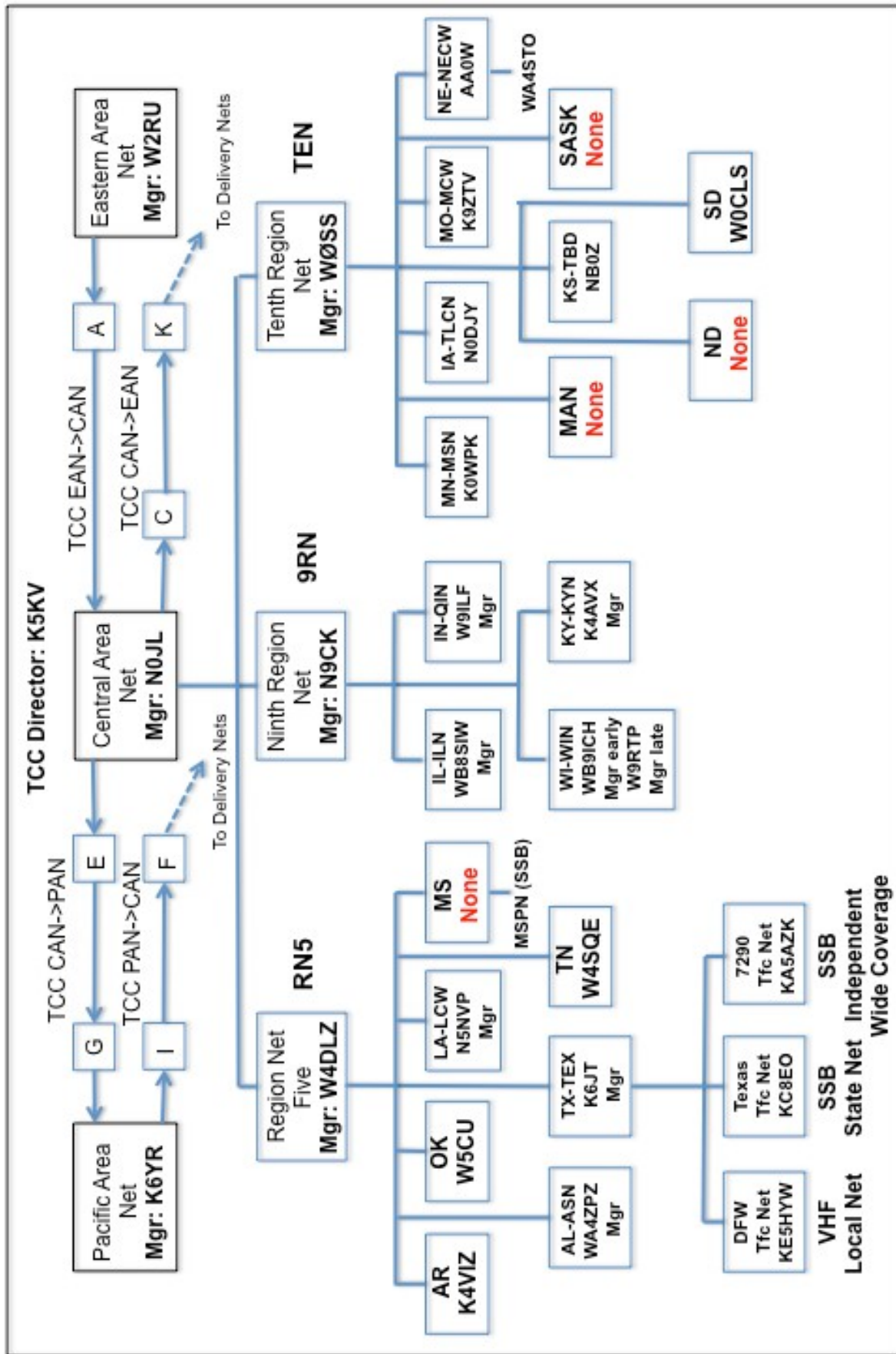
Traffic Net Schedule
Texas and Southwestern US

Updated 02-01-13

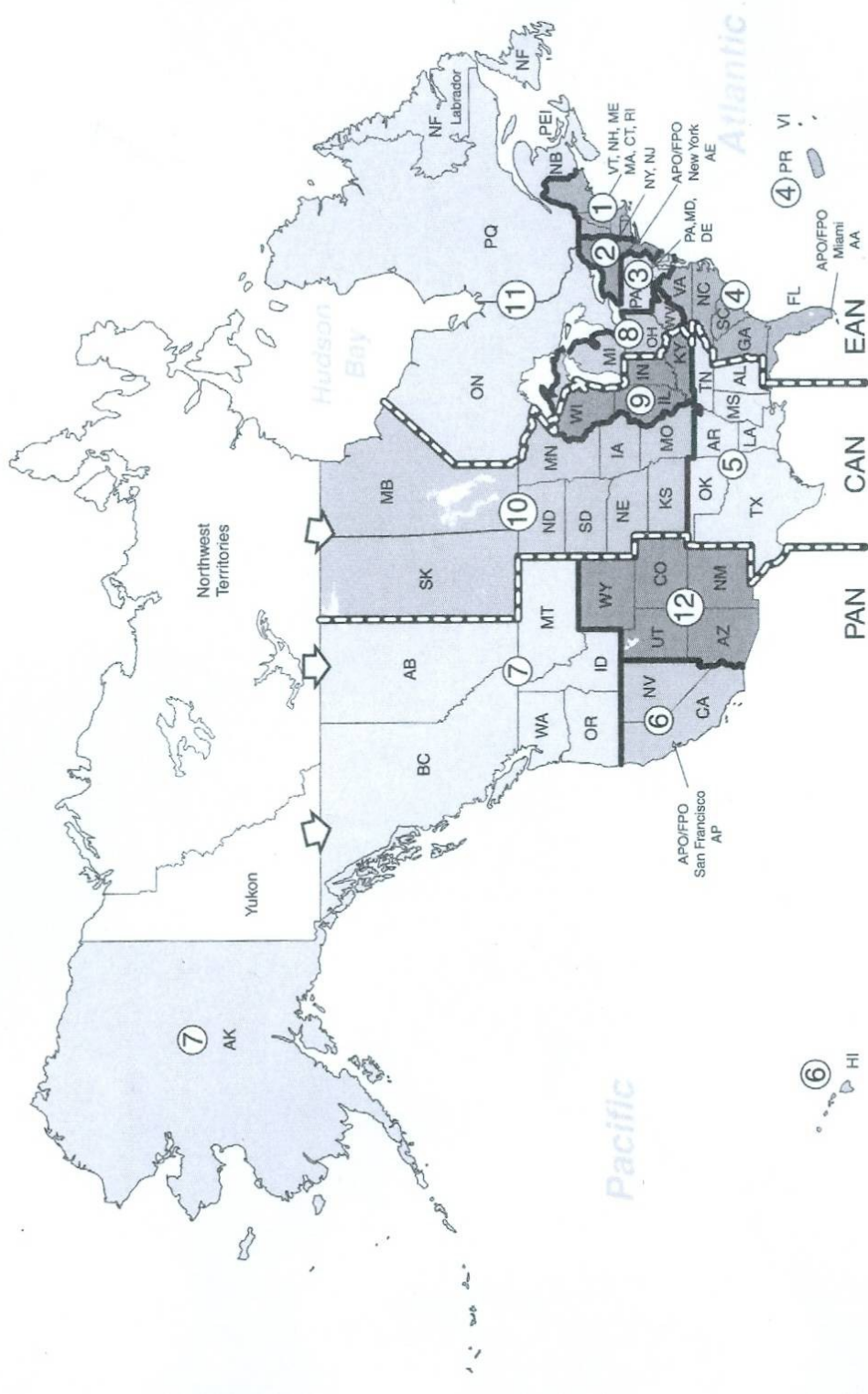
Times shown are local (central). Frequency SSB except where indicated. Dy = Daily.
Please suggest additions.

Time	Frequency	Days	Name	Who
08:30 - 09:30 AM	7285	M-Sat	Daytime Texas Traffic Net www.daytimetexastrafficnet.org	NTS Roger Podsim KD50TH
10:00 AM 12:00	7290	M-Sat	7290 Traffic Net www.7290trafficnet.org	Independent Jo Ann Keith KA5AZK
10:30 AM	7280	M-Sat	Fifth Region Cycle 1	NTS
01:00 - 02:00 PM	7290	M-F	7290 Traffic Net www.7290trafficnet.org	Independent Jo Ann Keith KA5AZK
01:30 PM	7280	Sun	Fifth Region Cycle 1	NTS
02:15 PM	14345	Dy	Central Area Net Cycle 2	NTS
03:30 PM	7243	Dy	Fifth Region Cycle 2	NTS
05:20 PM	7120.6	Dy	Oklahoma Slow Speed Training Net	NTS Pat Garvin WB5NKG
06:30 - 07:30 PM	3873	Dy	Texas Traffic Net www.texastrafficnet.org	NTS Sharon Heivilin KC8EO
06:30 PM	146.88 – PL 110.9	Dy	Dallas Metro Traffic Net www.dfwtrafficnet.com	NTS Local Herman May KE5HYW
06:30 PM	3552	Dy	Oklahoma Net (CW)	Independent Daniel Reynolds AA0NI
07:00 PM CST 08:00 PM CDT	3935	Dy	Central Gulf Coast Hurricane Net	Robert Turner KG5YK
07:00 PM	3541 or 7108 or 3643 Contest*	Dy	Texas CW Net (TEX) http://homepage.mac.com/sr_phillips/K6JT_Tex	NTS Section Steve Phillips K6JT
07:30 PM	3567 W or 7045 S	Dy	Fifth Region Cycle 4 (CW)	NTS Region Frank Thrash W4DLZ
07:45 PM	3570	Dy	Texas Slow CW Net http://www.atcweb.com/tsn/Texas_Slow_Net	Ind Pat Allison KD5TXD
08:30 PM	3552 W 7052 S	Dy	Central Area Net Cycle 4 (CW)	NTS Area Jim Lasley N0JL
09:30 - 10:30 PM	3935	Dy	Southwest Traffic Net	Independent
09:30 PM	3567	Dy	Fifth Region Cycle 4 (CW)	NTS Region Frank Thrash W4DLZ
10:00 PM	3541 New Freq 3643 During Contest*	Dy	Texas CW Net (TEX) http://homepage.mac.com/sr_phillips/K6JT_Tex	NTS Section Steve Phillips K6JT
10:30 PM	146.72 - PL 110.9	Dy	Dallas Metro Traffic Net www.dfwtrafficnet.com	NTS Local Herman May KE5HYW
ARES, RACES, and Emergency Nets				
08:00 AM	3835	2 Sat	Texas Red Cross Net	RED CROSS
07:30 PM	3873	Mon.	Texas ARES Net	ARES
01:30 PM	7248	1,3,5 Sn	District 32 RACES	RACES
01:30/02:00 PM	3975/7255	2 & 4 Sn	RACES Net	RACES
08:00 AM	3910	Sun	Central Texas Emergency Net	Independent Ray Farley WA5DQW
09:00 AM	3905	M-Sat	SATERN Net	Salvation Army
As Req.	7285 3873	Day Night	Emergency & Tactical Traffic Net	W Gulf ARES Net Sharon Heivilin KC8EO
As Req.	7290	Day	7290 Traffic Net Extended Sessions Health and Welfare	Independent Jo Ann Keith KA5AZK
As Req.	3935	Night	Gulf Coast Hurricane Net Health and Welfare	Independent Robert Turner KG5YK

*NOTE: 7108 is used during the summer only, and is an alternate frequency at the discretion of the NCS when band conditions warrant. ALSO, 3643 is used ONLY on Friday and Saturday evenings when a major CW contest is in progress.
Thanks to Steve K6JT and Randy KE5LY for their tireless effort to ensure the accuracy of this information



By Steve K6JT



Additional Resources

ARRL Net Directory – Excellent NTS reference with net listings by state (\$5 from ARRL). Online version is accessible free at the ARRL web site (www.arrl.org).

Public Service Communication Manual – Detailed reference on NTS message handling on ARRL web site.

Winlink 2000 web Site <http://www.winlink.org>

Central Area NTS Status White Paper (K6JT)
<http://dl.dropboxusercontent.com/u/73013707/NTS%20Status.pdf>

TEX Website (www.k6jt.com),
7290 Traffic Net (www.7290trafficnet.org),
DFW TrafficNet (www.dfwtrafficnet.org),
Texas Traffic Net (www.texastrafficnet.org)

W Gulf Division Director
David A. Woolweaver K5RAV

W Gulf Division Vice Director
John Robert Stratton N5AUS

ARRL W Gulf Division N TX <http://arrlwgd.org/> &
<http://www.arrl.org/sections/view/north-texas>

ARRL W Gulf Division S TX <http://www.arrlstx.org>. &
<http://www.arrl.org/sections/view/south-texas>

ARRL W Gulf Division W TX <http://www.arrlstx.org>. &
<http://www.arrl.org/sections/view/south-texas>

www.arrl.org ARRL web page

QRZ.com for looking up call sign information

When *Not* to Operate

During emergency operations listening and common sense are key.

Steve Sant Andrea, AG1YK

As this is being written in January 2010, Haitian earthquake disaster operations are ongoing. Such a disaster is immediately accompanied by a loss of the communications links that are vital for obtaining aid. We all have a desire to help those in need, but hams can do something immediate and concrete — supply that needed communications.

The down side to this desire to help comes when we fail to realize that equipment and training are two different things.

Emergency Nets

The Salvation Army and the International Red Cross have nets that operate on a regular basis. In an emergency these nets automatically shift to disaster mode. Other nets are often established and a general notice goes out regarding these frequencies on the ARRL Web site, through ARRL news broadcasts and at other ham oriented Web sites. All hams are requested to keep those frequencies clear.

A request to keep a frequency clear signifies that a guard band is established around the frequency. All modulation forms have a typical bandwidth. For example, the SSB bandwidth is 3 kHz. In order to keep an SSB net frequency clear, stations not involved in net operations should not transmit within ± 3 kHz of the net frequency.

When monitoring an emergency net, you shouldn't be transmitting unless the Net Control Station (NCS) has transmitted a specific request to the net that you are able to fulfill. Getting on frequency just to advise the NCS that you are present takes time away from essential net operations. If you can't meet a *specific immediate* need of the net, keep your carrier to yourself.

The Business Side of Amateur Radio

Another thing to be

aware of is that emergency nets are not contests. The disaster doesn't suddenly disappear at 0000Z. Activity often comes in bursts. Just because the net frequency is quiet doesn't mean it's inactive. Disaster operations may go on for days or even weeks so before keying up on an emergency net frequency listen or at the least give a quick call to see if the net is active.

This also goes for tuning up. In fact it goes double for tuning up. A few minutes ago while monitoring the 20 meter Salvation Army net frequency I heard a case of "dueling tuneups" — two operators tuning up on the frequency simultaneously. If there is a net, DX pileup or just a ragchew taking place on a frequency, tune up somewhere else. Shifting the frequency of your transmitter 5, 10 or even 20 kHz from the target frequency will not have much impact on your SWR.

A Different Kind of Communication Problem

Natural disasters have no regard for poli-

tics or people. In the Americas, outside of the Caribbean, the predominant language is Spanish and while English is widely understood in the Caribbean, in Haiti the official languages are French and Creole. When a disaster occurs in a non-English speaking part of the world, if you aren't *fluent* in the local language it is best to remain in listening mode.

Traffic Technique

Emergency operations have evolved and the methods for passing traffic have expanded. Much bulk information such as lists of people at a particular shelter are best sent using a digital mode. Health and welfare messages are still frequently handled in standard ARRL message format. When was the last time you handled a radiogram?

A member of my ARES® group was deployed to Hurricane Katrina operations. One of the problems he found was that many of the operators who were deployed had excellent go-kits and technical ability

but were seriously wanting in traffic handling skill. In one case it took almost 15 minutes to pass one 25 word message.

Before you can provide effective help you need the smartware (procedural knowledge) to go with the hardware.

Don't know anything about message handling? ARRL Numbered Radiograms? Go to www.arrl.org/public-service-resources and you'll find a wealth of information. Listen to a traffic net for a few days. Learn the procedures and then join in. Pass some traffic and accept some. The experience will be invaluable in the event of a real emergency.

Steve Sant Andrea, AG1YK, is an Assistant Editor at QST and can be reached at agsyk@arrl.org **QST**



Shown here are destroyed buildings in Jacmel, Haiti. According to local officials about 350 people lost their lives in Jacmel due to the earthquake that hit the region January 12, 2010.

Twenty Five Words or Less

Learn about traffic handling because "all else" eventually fails.

Steve Sant Andrea, AG1YK

A simple Christmas greeting in standard NTS message format ready to be passed into the traffic system.

“This is AG1YK net control for the Hurricane Zachary emergency net. The net is currently holding traffic for Connecticut. Is there any station on frequency that can take Connecticut traffic?”

Well, there it is. You have been monitoring the net with the vague idea of helping out. You have great copy on all the stations and you're in Connecticut. The opportunity to help out in a real emergency is knocking on your beam — but you hesitate.

“Traffic?” you think, “I've never tried any of that before...”

Getting the Message Through

A hundred years ago in the early days of ham radio, relaying messages, passing them from station to station to get them to their destination, was the most essential service we provided. Although it is one of the most fundamental of all ham radio operations, many active hams have never handled traffic. The American Radio Relay League was started to knit together the jumble of traffic nets that existed in 1914 into a coherent message handling system.

Today's ham has a multitude of ways to enjoy the airwaves. From AM to WSPR, contesting to ragchewing, Amateur Radio provides us with a broad range of activities. Some would argue that passing message traffic is the most essential of all.

Whether or not you are interested in emergency communications, you never know when you might be thrust into a situation where your radio is the only means of communication.

“Hey now, hold on. I live in a city, not the backwoods of Alaska. It's not like I'm going to be caught in any kind of emergency where I am.”

Think again. On April 1, 2010 the southeastern section of Nebraska, including 12 counties and 40,000 people, lost all landline

and cellular telephone service — including 911. What caused it? Earthquake, wildfire, flood, terrorists? No — an equipment malfunction at a commercial switching station. All else failed, and when it did it took 62 hams working all day to maintain essential communication in the city of Lincoln. As a ham you should always be prepared to help get the message through.

Formal Messages

“Formal message? What is that supposed to mean? I'm just a regular guy. I don't even own a tux.”

And you don't need one. Message traffic is handled by the National Traffic System. Messages passed through the NTS use a standardized form. Hence, messages that are prepared in the NTS style are referred to as formal messages. Getting to know the NTS message form is the first step in preparing yourself to serve a useful role should some unpleasant occurrence befall your community.

The NTS message form is broken up into four areas: preamble, address, text and signature. The ARRL Web site has an excellent PowerPoint presentation of the NTS system that includes an explanation of the NTS message form. (go to www.arrl.org/nts and select the **National Traffic System—An Introduction** link)

The form is designed for a message that is 25 words long. This may not sound like much but, considering a “standard” word is 5 characters long, that's 150 characters — 10 more than you can use for a Twitter message and we all know how much information people manage to pack into a Tweet.

Learning What's Important

I hope at this point you can see that handling messages is an important ham radio skill. That brings us back to the Hurricane

Zachary emergency net: Should you jump in to take that piece of traffic?

No.

An emergency net is not the place to learn how traffic nets work, how to pass a message, or how to relay or deliver it. These are skills that you need to cultivate during normal times. Like right now.

“Okay, I can see that makes sense. So how do I learn how to handle a message, just in case?”

First start by reviewing the NTS *Power Point* presentation. Next go to www.arrl.org/nts, open the RADIOGRAM IN PDF FORMAT link and download the radiogram form. Once you have some idea of how NTS works and a message blank, make up your own message. With the holiday season approaching, think of a ham friend in some other part of the country you would like to greet. Make up a holiday greeting in 25 words or less and prepare it in the proper form. Have a look at the photo for an example using the ARRL Numbered Radiogram codes or make up something more personal.

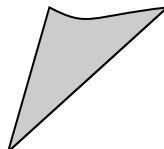
Now go to www.arrl.org/arrl-net-directory-search and search for a local net, in your state, that is NATIONAL TRAFFIC SYSTEM AFFILIATED. Listen in for a couple of sessions to get a feel for the procedures, then call net control, check in and tell the NCS that you are new to traffic handling but you have a message you would like to pass. Soon your holiday greeting will be wending its way to your buddy's holiday homestead.

ARL Sixty One to All and to all good DX.¹

¹What does ARL Sixty One mean? Download the FSD-3: ARRL Numbered Radiograms form from www.arrl.org/nts and find out.

Steve Sant Andrea is an Assistant Editor at QST who came to message handling through his involvement in ARES®. He can be reached at agslyk@arrl.org

WORKING CW TRAFFIC NETS
by Pat Allison KD5TXD



WORKING CW TRAFFIC NETS

By Pat Allison KD5TXD

pja@atcweb.com

Just as with voice nets the NCS should ask first if the frequency is in use.

Who	What sent	Meaning
NCS	QRL?	Is the frequency in use?

NCS opens the net with the Net Preamble.

Who	What sent	Meaning
NCS	CQ TEX TEX DE KD5TXD TEXAS CW NTS SECTION TRAFFIC NET IS OPEN X ALL WELCOME	Standard net preamble opening the net and saying who is welcome

NCS identifies.

Who	What sent	Meaning
NCS	QND	This is a directed net
	QNZ	Tune to NCS's frequency
	QNN KD5TXD / PAT IN KINGSVILLE TX =	Callsign, name and location of NCS

NCS calling for checkins. Some nets have a set of liaison stations assigned. In a CW net those are requested to checkin first in a particular order.

Who	What sent	Meaning
NCS	TEX QNA RN5 K	RN5 liaison please checkin
Station 1	DE W5GKH GE PAT QRU K	W5GKH checks in as RN5 liaison
NCS	W5GKH GE CHARLIE PSE AS	NCS greets Charlie and asks him to stand by
NCS	TEX QNA TTN K	NCS calls for TTN liaison
Station 2	DE KA5KLU GE PAT QTC RN5 1 K	Doug checks in as TTN liaison with traffic for RN5
NCS	KA5KLU GE DOUG PSE AS	NCS greets Doug and asks him to stand by

Now NCS has two stations. One has traffic for the RN5 net and one is the liaison station going to the RN5 net. NCS will send them off the main net frequency, down 3kHz, to pass the traffic.

Who	What sent	Meaning
NCS	GKH	NCS calls Charlie
Station 1	E	Charlie signals he is ready
NCS	KLU	NCS calls Doug who is holding the traffic
Station 2	HR	Doug answers he is here
NCS	QNY D 3 RN5 1 K	NCS sends both stations down 3kHz from net frequency to pass one message going to RN5
Station 1 and Station 2	G	Each station sends a "G" indicating that they are going to

		the assigned frequency and understand their instructions
--	--	--

The two stations will move off frequency to pass their traffic. Now NCS continues asking for liaison station and begins to ask for general checkins.

Who	What sent	Meaning
NCS	TEX QNA DFW K	NCS asks for Dallas/Ft Worth liaison station
Station 3	DE K6JT GE PAT QRU K	Steve checks in as DFW liaison with no traffic
NCS	K6JT GE STEVE PSE AS	NCS greets Steve and has him stand by
NCS	TEX DE KD5TXD QNI K	NCS asks for general checkins
Station 4	Z	Now any station may check into the net by sending one letter called the "Hail Sign" to identify themselves
NCS	Z	NCS answers allowing the station sending "Hail Sign" Z to check into the net
Station 4	DE AC5Z GE PAT QRU K	Bert checks into the net with no traffic
NCS	AC5Z GE BERT PSE AS	NCS greets Bert and asks him to stand by
NCS	TEX DE KD5TXD QNI K	NCS continues to ask for checkins

The stations who were sent off frequency now return to the net to report that they have completed transfer of traffic.

Who	What sent	Meaning
Station 1	GKH	Charlie is returning to the net frequency and signals NCS with his suffix
NCS	GKH PSE AS	NCS acknowledges Charlie's return and asks him to stand by
Station 2	KLU	Doug also returns to the net
NCS	KLU PSE AS	NCS acknowledges Doug and asks him to stand by

Now it is time for NCS to start releasing stations in preparation for closing the net. NCS will call on each station and tell them they are free to leave the net. NCS will tell each station "QRU" meaning the net has no more traffic for you. NCS will excuse the station with "QNX".

Who	What sent	Meaning
NCS	KLU	NCS calls Doug
Station 2	E	Doug signals he is here
NCS	KA5KLU TU DOUG QRU QNX 73 DE KD5TXD K	NCS tells Doug thanks, the net has no traffic for him, he is excused and 73
Station 2	73 PAT DE KA5KLU SK	Doug leaves the net and signals SK, meaning out or clear
NCS	JT	NCS calls on Steve
Station 3	HR	Steve indicates he is here
NCS	TU STEVE K6JT QRU QNX 73 DE KD5TXD K	NCS excuses Steve from the net

Station 3	73 PAT DE K6JT SK	Steve leaves the net
NCS	5Z	NCS calls on Bert
Station 4	E	Bert indicates he is here
NCS	TU BERT AC5Z QRU QNX 73 DE KD5TXD K	Bert is excused by NCS

NCS will release all of the stations. Time to close the net and release the frequency for general amateur use. CW nets use "QNF"

Who	What sent	Meaning
NCS	TEX QNF DE KD5TXD SK	Net is closed, freq available

So, what happened off frequency with the stations passing traffic??? Just as on a voice net the receiving station calls for the transmitting station.

Who	What sent	Meaning
Station 1 (receive)	QRL?	Charlie (receive station) checks for clear frequency
Station 1 (receive)	KA5KLU DE W5GKH GE DOUG K	Charlie calls for Doug
Station 2 (transmit)	W5GKH DE KA5KLU GE CHARLIE QRV? K	Doug (transmit station) acknowledges that he is copying Charlie and asks if Charlie is ready for traffic (QRV?)
Station 1 (receive)	QRV	Charlie is ready to receive
Station 2 (transmit)	QSK HR NR 123 R HXG WB5IZD ARL 4 KINGSVILLE TX JUN 9	Doug sends the preamble and indicates that he can hear if Charlie needs to stop for a fill *
Station 2 (transmit)	RALPH SMITH <AA>	Doug sends the addressee information
	3333 GRAND PARKWAY <AA>	Each line of addressee is followed by a Double A
	MINNEAPOLIS MN 55419 <AA>	The Double A indicates a line break in the addressee or signature
	612 555 0000 <BT>	The last line of the addressee is followed by a Break

* The Q signal, QSK, indicates to the receiving station that the sending station can hear something sent to him between the dots and dashes. This allows for immediate interruptions for fills and is a very good tool for CW nets.

The transmitting station will not stop until the message is complete unless interrupted by the receive station for a fill. If the transmitting station does not say "QSK" the receive station will wait until the message is complete before asking for fills. The next part is the text just as in any Radiogram.

Who	What sent	Meaning
Station 2 (transmit)	ARL FIFTY HAPPY BIRTHDAY <BT>	Doug sends the text followed by a Break

The transmitting station has completed sending the text of the Radiogram but does not stop unless the receive station asks for a fill. The transmitting station will send the signature.

Who	What sent	Meaning
Station 2 (transmit)	CHARLES WB5IZD AR N DE KA5KLU K	Doug completes the message sending the signature, "AR" meaning end of message and returns to the receive station for

		confirmation
Station 1 (receive)	QSL TU 73 KA5KLU DE W5GKH K	Charlie acknowledges receipt of the message
Station 2 (transmit)	73 W5GKH DE KA5KLU SK	Doug signs off

Note that the message number is not sent after QSL as is done in voice nets. Both stations return to the net frequency to report.

You are welcome to check into these CW nets and participate. Bring your traffic or listen to learn the flow. It is always a good idea to listen along for a few sessions to learn the flow of each net. This is the same suggestion given to new members of the voice nets.

New	Frequency	Time	Day
Texas CW (TEX/1)	3552 kHz	19:00 local	Daily
Texas CW (TEX/2)	3552 kHz	22:00 local	Daily
Texas Slow Net (TSN)	3552 kHz	19:45 local early checkins	Daily
Ok Training Net (OTN)	7120.65 kHz	17:20 local	Daily
Region 5 (RN5/1)*	3567 kHz	19:30 local	Daily
Region 5 (RN5/1)*	3567 kHz	21:30 local	Daily
Central Area (CAN)*	3552 kHz	20:30 local	Daily

* CAN and RN5 are high speed nets. Also CAN and RN5 are normally for liaison stations to meet although anyone can check in with traffic as long as they know how to route it appropriately. As on the voice nets, always listen first to get the flow of the nets and learn the procedures.

The net format show in this presentation is courtesy of the Texas CW Net and Steve, K6JT. My thanks to all of the great CW operators on the NTS nets who have made me feel welcome and helped me to learn the ropes.

Texas CW New at <http://k6jt.home.att.net/>

Texas Slow Net at http://geocities.com/scottamcmullen/Texas_Slow_Net