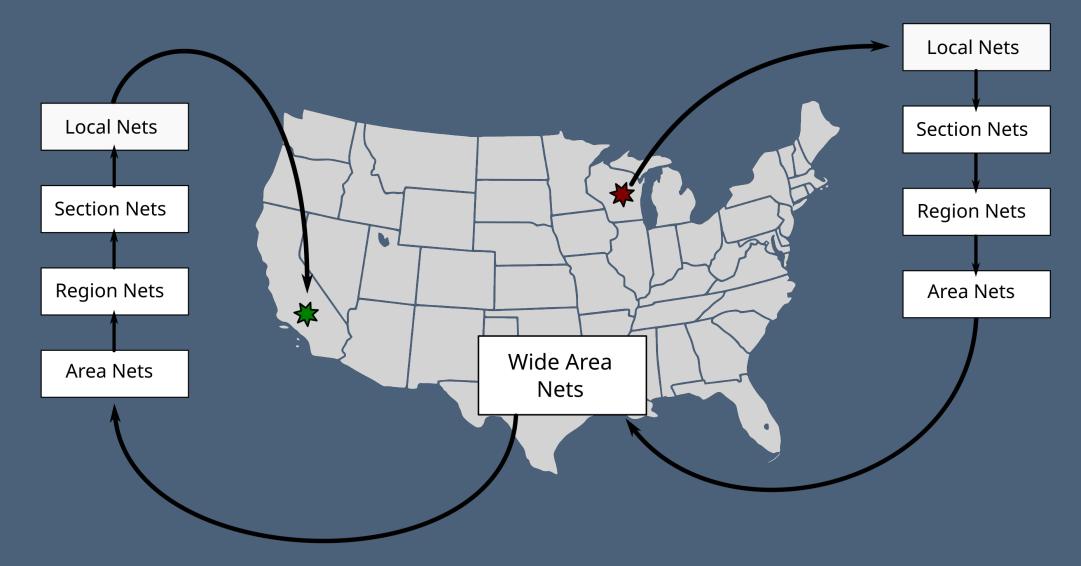# Net Control Operations

Radiograms

Chris, KJ5DJC

NTS / Radiograms

- **The National Traffic System (NTS)** is a nationwide network of amateur radio operators who relay formal written messages (radiograms) across local, regional, and national levels.

- **Radiograms** are standardized message forms used within the NTS for efficient, accurate, and traceable communication.

- The NTS operates 365 days a year and is a core part of **ARES (Amateur Radio Emergency Service)** and other emergency communications efforts.

- Messages are relayed using a **layered system of nets (local, section, region, and area)** to ensure reliable delivery.

- Radiograms are often used for **health and welfare messages**, routine traffic, and critical emergency communications when other systems fail.

- The NTS ensures message **accuracy, redundancy, and national reach**, making it a valuable asset during disasters or large-scale events.

Parts of the Radiogram

- Header
  - Filling out the top line of the Radiogram
- Address
  - How to address the message and what to look for
- The Message
  - How to write down the message
  - Precautions and use of abbreviations
  - Counting the words
- Sending and Receiving messages
  - What to fill out when sending a message
  - What to fill out when receiving a message

Header / Preamble
Message / Precedence

THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
VIA AMATEUR RADIO

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE

- Message Number

  - Pick the Number, go consecutively starting at the beginning month.

- Precedence (E, P, W, or R)

  - **E**mergency (Life or Death urgency in a declared Emergency)

  - **P**riority (Official traffic in a declared Emergency)

  - Health & **W**elfare (Used only in a declared Emergency to report persons wellbeing)

  - **R**outine (this is the most used precedence covering everything else)

Header / Preamble
Handling Code

THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
VIA AMATEUR RADIO

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE

- HX –Handling Codes

    - A[#] Collect landline delivery authorized by addressee within...miles. (If no number, authorization is unlimited.)

    - B[#] Cancel message if not delivered within...hours of filing time; service originating station.

    - C Report date and time of delivery (TOD) to originating station.

    - D 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.

    - E Delivering station get reply from addressee, originate message back.

    - F[#] Hold delivery until...[date].

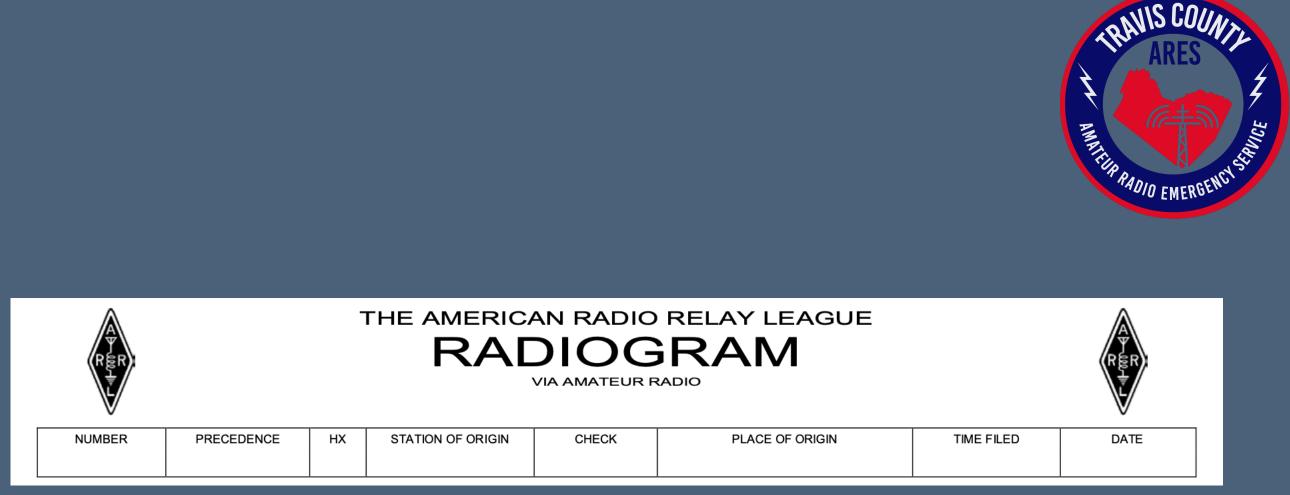   - G Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.

Header / Preamble
Origins

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE

- Station of Origin

  - This is the person who is filling out the Radiogram form!

  - If someone else sends the message–by whatever means–the originator is still the person who filled out the paper form. The answer, if there is one, should be returned to the person who originally took the message or the "Station of Origin".

- Place of Origin

  - This is the City and State where the person taking the message was when the message was originated.

  - If you live in Austin, TX but you are in Dallas, TX when you take a message for someone to be delivered to Las Vegas, NV your message is from Dallas, TX

Header / Preamble

Date / Check / Time

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE

THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
VIA AMATEUR RADIO

- Date

  - This is the Date on which the message form was filled out. Use Alpha characters for month and two digits for the day. Don't include the year.

- Check

  - This is the word count for the body of the message. Don't count words in the Preamble, Address or Signature. (Do this after the message area has been filled in)

- Time Filed

  - This is the local time at Place of Origin. Don't forget to indicate your time base (Z, EDT, ET, CDT, etc.) (Do this last – After everything else is filled out)

Address

TO

TELEPHONE NUMBER

THIS RADIO MESSAGE WAS RECEIVED AT

AMATEUR STATION _____ PHONE _____

NAME _____

STREET ADDRESS _____

CITY, STATE, ZIP _____

- To

  - Enter the complete mailing address for the recipient. If the recipient is a "Ham" then include the Call Sign. No punctuation.

- Telephone Number (IMPORTANT)

  - The telephone number is part of the delivery address. Most messages are delivered by Telephone.

- This Radio Message was Received At

  - If you are receiving this message for delivery, then fill out this block. There is an additional Received block at the bottom of the Message Form for the "From, Date and Time Information."

Message

ARRIVED	AT	SHELTER	IN	AUSTIN
TEXAS	X	WILL	CALL	SOON

Chris Kacerguis KJ5DJC

- The Message Body

  - Each space contains one word, five to a line. The X indicates a period and the message can be ended with the word 'END' or 'AR'. The check is 10

- Signature

  - There is no space for your signature. Just include it along with your call sign at the bottom of the message.

Send and Receive

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 ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CT 0611

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 COMMUNICATION AMONG AMATEUR OPERATORS. TO THAT END, THE LEAGUE HAS ORGANIZED THE NATIONAL TRAFFIC SYSTEM FOR DAILY NATIONWIDE MESSAGE HANDLING.

- The Sent block

  - If you are the person sending the message fill out this block. The 'To' block is the person/phone number/PBBS/etc. where you left the message. The "Date" is recorded as MMMDD (MAR25) and the "Time" is recorded as 0000 CDT

- The REC'D block

  - If you are using the Radiogram form to receive a message then you fill out this box. This block is the person/phone number/etc. who is sending you the message.

How to Send

- Don't say labels such as "priority" and "station of origin"

- Read at about half of normal reading speed

- Say "Break" and unkey immediately before and after the text

- If the text is long, unkey during the text to allow recipient to ask for fills

- When spelling, use ITU phonetics, at the end of the message say "End, no more", or "End, one more", etc.

- State your call sign

How to Receive

- to ask for "fills", say:

  - "please say again, word after …"

  - "please say again, word before …"

  - "please say again, all between …"

  - "please confirm …"

- compare the check to the number of words you copied

- once you have copied the message successfully, say "I roger your number …"

Misc Notes

- NEVER "correct" the text of a message.

- If, for some reason, you feel the text was received incorrectly, ask for a fill.

- If the fill is the same as the original copy, but you still feel it is incorrect, NEVER "correct" the text yourself. Use the text as sent to you.

- It is OK to query back to the originator.

How to Deliver

- By telephone, e-mail, US mail

- If delivering by phone, identify yourself and say that you have a "greeting message" or "friendly message"

- Probably not talking to a Ham. Don't say "X-ray" or "Query", and Expand ARL radiograms

- If you can't deliver the message, service it back to where you got it from

73, KJ5DJC