2020 MARS/NTS Exercise Traffic

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Presentation objectives

- High level overview of the traffic system
- High level overview of the radiogram format
- Converting an ICS 213 to radiogram for introduction via voice or Morse code traffic nets
- ICS 213 to radiogram conversion requirement when bringing messages to traffic nets
National Traffic System overview
Organized network of amateur radio operators who move traffic (messages)

Started in 1915 as the formal ARRL system to relay messages across the country

Goal: Relay the message so that it arrives as it started

Word for word, letter for letter
Primarily set up to serve the United States and Canada

- NTS does support global traffic, dependent on amateur radio reciprocity agreements with other countries

Transmit and receive modes

- Voice
- Morse code (CW)
- Digital (Digital Traffic Network)

Four traffic “types”

- Emergency (life-and-death)
- Priority (time is of the essence)
- Welfare (health and welfare inquiries)
- Routine (day-to-day)
NTS traffic flow

- Area Nets
  - Region Nets
    - Section/Local Nets
    - Section/Local Nets
    - Section/Local Nets
    - Section/Local Nets
  - Region Nets
    - Section/Local Nets
    - Section/Local Nets
    - Section/Local Nets
    - Section/Local Nets
Example message movement

I want to send a message to a family member in Michigan.
Example message movement

1. List the traffic and relay to station able to take the traffic

Message relayed on DFW Traffic Net
Example message movement

1. List the traffic and relay to station able to take the traffic
2. Relayed to IN

Traffic relayed over digital network
Example message movement

1. List the traffic and relay to station able to take the traffic
2. Relayed to IN
3. Relayed to MI
Example message movement

1. List the traffic and relay to station able to take the traffic
2. Relayed to IN
3. Relayed to MI
4. Local delivery

Station calls destination to deliver
The ARRL radiogram format
Why radiograms

Standardized message format

- We all follow the same thing, even internationally
- Allows for faster relaying with some built-in error correction

Traceable

- We can replay the message’s movements if needed
ARRL radiogram components

The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.
ARRL radiogram components

- **Header**
- **Addressee**
  - Receiving station info (only if needed)
- **Text**
- **Signature**
- **Received/Sent info**
## Radiogram header

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Unique number (assigned by amateur radio operator introducing the traffic)</td>
</tr>
<tr>
<td>Precedence</td>
<td>Importance (Emergency, Priority, Welfare, Routine)</td>
</tr>
<tr>
<td>Handling Instruction</td>
<td>Specific instructions we can request (such as, “Please get a reply”)</td>
</tr>
<tr>
<td>Station of Origin</td>
<td>Who brought this radiogram to the system</td>
</tr>
<tr>
<td>Check</td>
<td>How many words are in the text</td>
</tr>
<tr>
<td>Place of Origin</td>
<td>Where is this message from</td>
</tr>
<tr>
<td>Time Filed (optional)</td>
<td>Coordinated Universal Time (UTC) preferred</td>
</tr>
<tr>
<td>Date</td>
<td>Month and day – again, Coordinated Universal Time (UTC) preferred</td>
</tr>
</tbody>
</table>
Radiogram addressee

Where the radiogram is headed

Just like a letter – name (and callsign if they have one), address, phone

Does not need to be an amateur radio station (you can send one of these to a family member, friend, ...)

Phone number preferred (this is the typical delivery method)
Radiogram text

**Generally 25 spaces for routine traffic, but supports longer messages when needed**

- Be concise and clear
- Punctuation is written (X or XRAY for period, QUERY for question...)
- Count the words, put this number in the check
Directly below the text section

Yes, unlabeled

Typically a first name, and callsign if sender has one
Radiogram tracking info

For tracking who you received it from and/or who you relayed it to

24-hour time format

UTC is preferred

Example:

K8AMH      JUL 28      17:22
Example radiogram

This does not change while the radiogram is relayed to its destination.
Transferring a MARS message with 213 to radiogram
## Compiling a Radiogram with ICS 213 content

<table>
<thead>
<tr>
<th>ICS 213 field</th>
<th>Equivalent radiogram field</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Incident Name (Optional)</td>
<td>Not transferred</td>
</tr>
<tr>
<td>2. To (Name and Position)</td>
<td>Addressee section</td>
</tr>
<tr>
<td>3. From (Name and Position)</td>
<td>Signature</td>
</tr>
<tr>
<td>4. Subject</td>
<td>Addressee section OP NOTE, along with an indicator the radiogram is carrying an ICS 213. For example:</td>
</tr>
<tr>
<td></td>
<td>OP NOTE ICS 213 MESSAGE SUBJECT SHELTER SUPPLY REQUEST</td>
</tr>
<tr>
<td>5. Date</td>
<td>Date</td>
</tr>
<tr>
<td>6. Time</td>
<td>Time filed</td>
</tr>
</tbody>
</table>
## Compiling a Radiogram with ICS 213 content

<table>
<thead>
<tr>
<th>ICS 213 field</th>
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</tr>
</thead>
<tbody>
<tr>
<td>7. Message</td>
<td>Text section</td>
</tr>
<tr>
<td>8. Approved by (Name and Position/Title)</td>
<td>If necessary, place in signature OP NOTE. For example:</td>
</tr>
<tr>
<td></td>
<td>JANE DOE OPERATIONS SECTION CHIEF OP NOTE APPROVED BY JOHN SMITH INCIDENT COMMANDER</td>
</tr>
<tr>
<td>9. Reply</td>
<td>Not transferred</td>
</tr>
<tr>
<td>10. Replied by (Name, Position/Title, Signature)</td>
<td>Not transferred</td>
</tr>
<tr>
<td>Radiogram field</td>
<td>Instructions</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Precedence and Handling Instruction</td>
<td>Use the appropriate precedence and, if warranted, handling instruction, such as HXC if you need delivery confirmation.</td>
</tr>
<tr>
<td>Station of Origin</td>
<td>The amateur radio operator introducing this radiogram into the traffic system should use their call sign.</td>
</tr>
<tr>
<td>Place of Origin</td>
<td>Use the incident location or source (City ST) of the ICS 213, if known, and add, “VIA MARS”. If location/source not, use the location of the amateur radio operator introducing this radiogram into the traffic system, again adding, “VIA MARS”.</td>
</tr>
<tr>
<td>Addressee section OP NOTE</td>
<td>Include an OP NOTE here indicating that the radiogram is carrying an ICS 213 form, even if no subject or incident name is included:</td>
</tr>
<tr>
<td></td>
<td>OP NOTE ICS 213 MESSAGE</td>
</tr>
</tbody>
</table>
**MARS message with 213 to Radiogram**

V2CZCMM999
RR UHWWCC
DE UHCHBPM #0676 2021356
ZNR UUUUU
R 201356Z JUL 2020
FM ARMY MARS PROGRAM MANAGER CHIEF ARMY MARS
TO UHWWCC/REGION TEN RJMOG
BT
UNCLAS
ICS-213
1. COMEX
2. MONTE SIMPSON (360-633-7665 OR W7FF@ARRL.ORG)/W WA SM
3. PAUL ENGLISH/CHIEF ARMY MARS
4. HF SKILLS EXERCISE
5. 07/20/2020
6. 0800L
7. This messages is part of a Military Auxiliary Radio System HF skills exercise. Mr. Simpson please call 254-630-9472 or email paul.a/english.civ@mail.mil to confirm receipt of this message. Your assistance is greatly appreciated.
8. ENGLISH/CHIEF ARMY MARS
BT
#0677
[DIGEST:676E83CAFA01FA418C7B425006F38CC7]
NNNN
ICS 213 conversion required prior to listing with NTS
The traffic system does not use the ICS 213 form

It does not contain critical components needed to ensure efficient, accurate relaying.

Any traffic brought to a traffic net must be converted to ARRL Radiogram beforehand

Stations bringing ICS 213 forms will not be able to list or relay their traffic

Unless the MARS liaison has done the needed Radiogram conversion
High level overview of the traffic system

High level overview of the radiogram format

Converting an ICS 213 to radiogram for introduction via voice or Morse code traffic nets

ICS 213 to radiogram conversion requirement when bringing messages to traffic nets