Guidelines for Origination, Relay and Delivery of Radiogram-ICS213 Messages

Background:

This document outlines recommended practices for the management of communications traffic formatted as an ICS213 "General Message." These standards were developed using a variety of input from emergency management agencies, Amateur Radio Emergency Service® organizations and the traffic community. This was followed by a period of peer review consisting of the Radio Relay International Emergency Communications Committee and the ARRL NTS 2.0 Committee.

Dispelling ICS-213 General Message Mythology:

Considerable misunderstanding surrounds the ICS-213 message standard, much of which is undoubtedly rooted in the confusion between "form" and "format," as well as a misunderstanding of how government standards are implemented.

ICS213 is, in fact, not a message format, but rather a STANDARD, which defines the MINIMUM accountability information, which must be incorporated into record message traffic. Agencies and organizations often add additional fields or content beyond that exemplified in the sample "general message" form often seen in NIMS documents.

In many respects, the ICS-213 minimum defines the same content as that ancient and well-established document; the "inter-office memorandum," the purpose of which is *accountability.* Furthermore, government and commercial telecommunications systems used to convey ICS-213 messages also add additional *network management data* in the form headers, message precedence, and so forth, which is unrelated to the minimum standard. For example, an ICS213 message transmitted via e-mail will have considerable network management data appended to it. Therefore, one might see this network management data and the email framework itself as a "wrapper" or "envelope" containing the ICS213 message.

Just as with an email, there is no difference between a radiogram properly formatted for transmission to a served agency official and an ICS-213 general message except for the network management data appended in the radiogram header. It is for this reason that operational messages in radiogram format have been accepted by local, state, and Federal agencies during recent operations. In every respect, the radiogram format is fully compliant with NIMS ICS213 requirements.

Operational Considerations:

Amateur Radio networks offer excellent survivability and flexibility, but they are typically constrained by limited circuit capacity compared to commercial or government systems. This is true of ARES and NTS networks as well.

For amateur networks to function reliably in time of emergency, any standard developed must be compatible with the methodologies utilized during day-to-day traffic operation. It is simply NOT practical for volunteers to operate using one method 364 days per year only to change methods on that one day a major emergency occurs. Therefore, when an ICS213 or similar served agency message is wrapped in a radiogram "envelope," it should be originated and relayed in a manner similar in sequence to other radiograms.

Interoperability:

RRI and NTS networks are designed to ensure maximum interoperability across a wide variety of modes and methods. Therefore, the standards promulgated in this document must recognize the reality that a message may pass between different modes and networks to reach the last mile point of delivery. Therefore, some basic rules apply:

1. Radiogram-ICS213 messages should be as brief as possible while still meeting the operational requirements of the agency being served.

2. All capital text, and limited punctuation ensure full interoperability should a message pass through a manual mode network to reach its last mile point of delivery (voice, CW, public safety talk group, etc.).

3. The message may be formatted as an ICS-213 "general message," but it should be transmitted in the familiar sequence used in day-to-day traffic handling.

4. The handling instruction HXI ("deliver as radiogram-ICS213 message") must be indicated in the radiogram header (network management data).

5. The radiogram-ICS213 must be viewed as a "wrapper." Originating stations can use plain text or numbered fields, but this is at the discretion of the originating station and the agency they serve. It is extremely important to understand that:

    a. A variety of ICS213 formats contain different numbered fields.

    b. If originating a radiogram-ICS213 with a text containing numbered fields, one must have full knowledge of the forms and standards used at the point of delivery. In other words, if the agency receiving the message has additional numbered fields or other variations, confusion could result.

    c. All-capital message texts make it clear that a radiogram-ICS213 *may* have passed through a radio circuit that is not equipped to process mixed case traffic.

    d. Experience may vary widely across any group of ARES or NTS volunteers. Understand this limitation and work with your served agency to keep message content as concise as possible.

The examples below cover the Winlink RRI Radiogram-ICS213 templates, however, the same basic rules and procedures for origination, relay, and delivery of radiogram-ICS213 messages apply across all modes and networks.

Winlink-RRI Radiogram-ICS213 Template:

Radio Relay International, in cooperation with the Winlink Development Team, has developed a template for formatting a fully accountable and properly serviced Radiogram ICS213 message. This template incorporates the usual NIMS ICS-213 fields and appends the network management data needed to ensure the message can pass through multiple networks to reach its last mile destination. This ensures full interoperability and efficient message transfer between all available Amateur, government, and commercial telecommunications modes. Because the text is exclusively defined by the originator, this process can convey any type of ICS213 message without inherent error.

Consider this example: Converting a Radiogram-ICS213 for origination and relay to last mile:

46 R HXI KB1TCE 15 OWLS HEAD ME 1214Z SEP 5
[TO]
JAMES WADES WB8SIW   RRI EMERGENCY MGMT DIR
810 SKYLINE DR
MARION IL 62959
833 377 0722 X 700   JAMES DOT WADES ATSIGN RADIO DASH RELAY DOT ORG

[FM]
STEVE HANSEN KB1TCE   RRI LIAISON
NEW TEMPLATE PUSH   0916
BT

THE NEW RRI 213 HAS
NOW BEEN PUSHED TO ALL
WINLINK EXPRESS USERS X 73
[AR

Note the following:

1. The components in the red block incorporate the radiogram preamble, which is identical to the components one would include for any radiogram message transmitted to an agency official.
2. The components in the blue block incorporate a signature and the *optional* "subject" field requested in the ICS-213 standard.
3. The components in the green block incorporate the <u>text</u> formatted for the interoperable traffic system, thereby allowing the Radiogram ICS-213 to pass between digital, voice, or CW circuits without concerns about unusual punctuation, capitalization, or the like. The "all capitals" sends a clear message to the recipient (addressee) that the message was originated in a non-case-sensitive format.

One can reformat the message for transmission via a traffic net simply by resequencing the blue and green blocks.

46 R HXI KB1TCE 15 OWLS HEAD ME 1214Z SEP 5
[TO]
JAMES WADES WB8SIW   RRI EMERGENCY MGMT DIR
810 SKYLINE DR
MARION IL 62959
833 377 0722 X 700   JAMES DOT WADES ATSIGN RADIO DASH RELAY DOT ORG

BT
THE NEW RRI 213 HAS
NOW BEEN PUSHED TO ALL
WINLINK EXPRESS USERS X 73

BT
[FM]
STEVE HANSEN KB1TCE   RRI LIAISON
NEW TEMPLATE PUSH   0916 [AR]

Some Additional Points:

1. Obviously, the "TO" and "FROM" headers need not be transmitted when the message is transformed into the standard radiogram sequence.

2. The title and agency can be placed on a separate line for clarity. For example:
    JAMES WADES WB8SIW
    RRI EMERGENCY MANAGEMENT DIR

3. Resequencing the text and signature to standard radiogram practice is recommended when refiling to traffic nets to prevent confusion when relaying messages to inexperienced or uninformed operators.

4. Operators originating Radiogram ICS-213 messages can add an op-note to clarify message type (e.g. "ICS 213RR MESSAGE" or "HICS 213 MESSAGE")

Delivering the Radiogram-ICS213 Message:

When delivering a hard copy of a Radiogram-ICS213 message, either as a PDF attachment to an email or within the physical EOC environment, it is recommended that operators use the agency form if available, being certain to retain a copy of the original message containing the network management data for reference. If the proper form to be used is in question or unknown, utilize RRI Form 1703 or 1704 for delivery. These are available on the RRI "Publications" Page at: https://radiorelay.org/publications/

This example shows a radiogram-ICS213 formatted for delivery on RRI Form 1703:

Radiogram ICS-213 Message

Number 231	Precedence P	HX I	Station of Origin W6RRI	Check 22	Place of Origin MARION IL	Time of Origin 1334 Z	Date of Origin MAY 23

To (Name):
MARY ANN COLLINS

Position (Title & Agency):
LOGISTICS AMERICAN RED CROSS

2224 BROADVIEW ST

City, State, Zip:
CHICAGO IL 60034

Telephone and optional e-mail:
312 555 1904   MACOLLINS ATSIGN ARC DOT ORG

From (Name):
STEVEN TREMBALSKI

Position (Title & Agency):
JOB DIRECTOR

Subject:
MATERIALS REQUEST

Agency Local Time (conversion from UTC):
0834 CDT

DAMAGE WORSE THAN ORIGINALLY ANTICIPATED. FIVE ADDITIONAL SHELTERS OPENING REQUIRE DELIVERY OF 250 ADDITIONAL COTS AND BLANKETS. PLEASE ADVISE ETA

Please be brief – Use only the period for punctuation – Assume message may be delivered in all capitals

Message Routing (Received from call sign / DTG):
WC9EOC ILN 231352 Z MAY 2025

Message Routing (Transmitted to call sign / DTG):

Radio Relay International: www.radiorelay.org

RRI Form 1703 ICS213
v 2024-6

In the above example of a Radiogram ICS213 formatted for delivery on RRI Form 1703 ICS, we see the typical ICS-213 sequence:

1. Preamble including address information first.
2. Signature second
3. Text last
4. Additional accountability information for service/reply message routing at the bottom.

Note that the operator is at liberty to transcribe either five or ten words to a line, depending on preference. Served agencies may find ten words to a line more comfortable to read and comprehend.

When a hard copy Radiogram or Radiogram-ICS213 is delivered to a served agency or non-amateur recipient, please consider the following:

1. Convert the "X" or "X-ray" to a period.
2. The "QUERY" may also be changed to a question mark.
3. It may be helpful to convert the "R" for "decimal" in groups such as "1017R5 MILLIBARS" to a decimal point. However, be absolutely certain you are not changing the meaning of the message.

General Principles when Originating a Radiogram-ICS213:

ALWAYS remember that interoperability is essential. A message may originate on a digital circuit that supports upper and lower case, complex punctuation, and the like, but it may be transferred to an amateur, public safety or military voice circuit to reach the addressee. Keep the "last mile" process in mind. Therefore:

- Avoid any unnecessary punctuation. The period (transmitted as "X" or "X-ray" in a radiogram) or the question mark (transmitted as "Query" in a radiogram) are usually sufficient. Other punctuation, if necessary to the meaning of the message, should be spelled out (e.g. "COMMA").
- Avoid scientific abbreviations. Instead, write them out. For example, "micrograms" instead of "MCG," or "milligrams" instead of "MG." If in doubt about the meaning of an abbreviation, confirm its correct meaning with the originator (agency official).
- <u>Brevity is absolutely essential</u>. Explain the need for brevity to served agencies and other customers. Explain its role in retaining the benefits of interoperability.

Questions regarding this document, emergency communications training, or other assistance may be directed to Radio Relay International: www.radiorelay.org or the NTS2.0 Committee https://nts2.arrl.org/