



# THE RADIO RELAY INTERNATIONAL FIELD EXERCISE CONTEST

*TRAINING – COMPETITION – PUBLIC  
OUTREACH - FUN*

# BACKGROUND – WHY A CW EMCOMM CONTEST?

- During a recent Federal Government exercise, RRI CW operators scored an accuracy rate of 99.998 percent across over 13,000 data points contained in five letter cipher group messages.
- CW nets turned in a superior time performance for transcontinental messages transmitted between the Pacific Northwest and Washington, D.C.
- CW nets have since proven superior in subsequent internal disaster exercises conducted at the national level.
- CW Operators are therefore encouraged to develop basic emergency communications skills.

# WHY NOT RELY ON ARRL FIELD DAY?

- The ARRL Field Day event is a fun, incredibly enjoyable event. However, it provides little in the way of emergency communications training.
- ARRL Field Day provides some value by testing portable equipment and antennas, but nothing in the way of emergency communications procedures or skills.
  - Most participants plan the event well in advance.
  - Once the equipment is operational, Field Day is mostly just another contest.
  - Predictable QSO exchanges.
  - Communications takes place with locations propagation favors as opposed to locations with which connectivity must be established (as would happen in a real disaster).

# WHAT IS THE GOAL OF THE RRI CONTEST?

- Expose new CW operators to the structure of formal messages using the radiogram or the NIMS radiogram-ICS213 message.
- Encourage radio amateurs to develop portable field equipment with sufficient efficiency to “get the message through” to a *required destination* in time of emergency, rather than simply establishing communications with locations that propagation favors.
- Provide a unique and operating challenge that goes beyond the predictable “cookie-cutter” QSO format.
- Incorporating a bit of adventure and the “FUN” factor. Radio amateurs are encouraged to get out in the field and try their hand at real emergency scenarios.

# HOW THE FIELD EXERCISE CONTEST WORKS

- Two to four “contests” per year. Typically conducted on a Saturday or Sunday afternoon.
- Each contest date will feature a different task designed to provide an interesting operating challenge with the added benefit of some emergency communications training.
- For example, participants may be asked to originate an operational readiness message, or a weather observation message based on the *RRI National Response Plan*. During other contest events, operators may be asked to originate a simple “Fast Telegram (Certified) radiogram message to a friend or relative. Each event will feature something a bit different.
- **Operators receive bonus points for message originations in association with a POTA or SOTA activation, message originations from public safety facilities (with agency permission), maritime mobile activations, and so forth.**

# EXERCISE STRUCTURE

- The contest period will be brief; no more than four hours.
- Experienced CW Traffic Operators will serve as target (gateway) stations by monitoring specified frequencies to receive traffic during the contest period. A list of these target stations and their locations will be published on the RRI web page in advance of the contest.
- Participants must select the best of several watch frequencies to clear their traffic based on time of day and propagation conditions.
- Once communications is established, the target station operator will advise when he's ready to copy (QRV) message traffic.
- The participant will then transmit his radiogram message.



# CONTEST SCORING

*First through third place winners will receive an award certificate.*

# SCORING SYSTEM

- RF Output Power:
  - 10 points: 5 watts or less
  - 5 points: 10 to 20 watts
  - 1 point: Greater than 20 Watts.
- Location:
  - 15 points for origination in association with SOTA activation.
  - 15 points for message origination from a public safety facility (with agency permission).
  - 10 points for origination in association with POTA activation.
  - 10 points for origination from a maritime mobile installation.
  - 5 points for origination from a mobile station (e.g., automobile, truck, etc.).
  - 5 points for portable (field) operation at any random location (not associated with other activity).
  - 2 points for each radiogram transmitted to an RRI target station.
  - 5 points for each radiogram relayed to an RRI target station.
- **Participants are encouraged to earn extra points by relaying radiograms received *from* other radio operators/organizations via any radio service, whether amateur radio, GMRS, CB/REACT, etc.**



# SCORING SYSTEM EXAMPLE

- W8IHX is spending the afternoon engaged in a POTA activation. He decides to take an hour or two to also participate in the RRI Field Exercise scheduled for that day. He has arranged in advance for three club members to transmit radiograms to him via the local repeater at a specified time.
- Having received the three messages via two-meters, and having formatted a radiogram for himself, he selects one of three RRI watch frequencies (QSX) and calls W6RRI, the general call sign for Radio Relay International.
- Upon being acknowledged, he sends the four messages, receives confirmation that they were received (QSL), and his participation is complete.
- His score is as follows:
  - W8IHX is using a Yaesu FT-817ND operating at 5-watts: 10 points
  - He is participating in association with a POTA activation: 10 points
  - He has transmitted one radiogram for himself: 2 points
  - He has *relayed* three radiograms received from others 15 points
  - **His total score is: 37 points.**

# CONTEST WATCH (QSX) FREQUENCIES

- The contest watch frequencies are:
- 7117.5 kHz
- 10117.5 kHz
- 14117.5 kHz
- Once a target station acknowledges your call, he may send you up or down frequency, particularly if things are busy.
- Listen for instructions such as “W8IHX QNY down 3” or W6ABC QNY up 6.” This tells you to move to an adjacent frequency to clear the traffic. Remember! The operator receiving the message traffic ALWAYS establishes contact on the adjacent frequency.





# SCORE SUBMISSIONS

- Scoring is on the honor system.
- The three highest scoring stations will receive an attractive award certificate.
- Contest participation and results will be published on the RRI web page. [www.radiorelay.org](http://www.radiorelay.org)



# RADIOGRAM



via Amateur Radio

NR	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME (UTC)	DATE (UTC)
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ADDRESSEE

DELIVERED BY

## HOW TO TRANSMIT A RADIOGRAM

*AN EASY GUIDE FOR CW OPERATORS PARTICIPATING IN THE  
RRI EMERGENCY COMMUNICATIONS CONTESTS*

# TRANSMITTING A RADIOGRAM IS QUITE EASY

One needs to know a few simple prosigns (“procedural signs”)

**AA (di-dah-di-dah):** Transmitted at the end of each line of an address

**BT (dah-di-di-di-dah):** Transmitted between the address and text as well as between the text and the signature of a radiogram.

**AR N (di-dah-di-dah-dit):** End of message....NO further messages to follow

**AR B (di-dah-di-dah-dit):** End of message....More messages to follow

# TRANSMITTING A RADIOGRAM IS QUITE EASY

One needs to know a few simple Q-Signals:

**QSX:** I am standing watch (monitoring).

**QNY:** Move up or down  $n$  kHz. *Usually 3, 6 or 9 kHz.*

**QRK:** QRK-1 to QRK 5 Used by receiving operator to indicate signal quality.

**QRV:** I am ready to copy.

**QRS:** Send more slowly.

**QTC:** I have messages for \_\_\_\_\_ *Usually State/QTY.*

# ESTABLISHING CONTACT WITH TARGET STATION

- W6RRI DE W8ABC W8ABC K → *Participant calls Radio Relay International (W6RRI).*
- W8ABC DE W6RRI K → *W6RRI acknowledges the call.*
- DE W8ABC QTC MI 1 IA 2 → *W8ABC lists one radiogram for Michigan and two for Iowa.*
- DE W6RRI QRK 3 QRV K → *W6RRI tells W8ABC his signal is fair and he's ready to copy.*
- HR NR .....AR N → *W8ABC sends the radiograms*
- QSL DE W6RRI QSX K → *W6RRI acknowledges the radiogram and says he's ready for the next station with traffic.*

W6RRI is the official callsign of Radio Relay International.

# A TYPICAL RADIOGRAM TRANSMISSION

HR NR 1 C W8IHX 20 HAVENS NE 1330Z APR 20

SAM SNEAD AA

2334 GREEN JACKET LANE AA

ATLANTA GA 30304 AA

405 555 3455 AA

SSNEAD ATSIGN GMAIL DOT COM

BT

CONGRATULATIONS ON EXHIBITION DRIVE OVER WRIGLEY FIELD SCOREBOARD X AN

IMPRESSIVE ACHIEVMENT X WISHING YOU GREAT SUCCESS IN THE TOURNAMENT

BT

JACK NICKLAUS

AR N



# OPERATING TIPS

- Don't sweat the small stuff. The contest is meant to be both fun and a learning experience. Mistakes are OK, even if you "gum up" everything.
- Transmit at the speed with which you are comfortable. Don't rush.
- Listen to some of the more experienced operators first, but don't be afraid to "jump in" and send your message. Everyone learns by making mistakes.
- The receiving operator may send you a "readability" report using the Q-signal "QRK."
  - QRK-5 = Excellent Readability      Repeat only unusual names or words/groups.
  - QRK-4 = Good Readability      Repeat only unusual names or words/groups.
  - QRK-3 = Fair Readability      Slow down somewhat, leave a bit more space between groups.
  - QRK-2 = Weak/Poor Readability      Spoon-feed the message. Take your time, slow down.
  - QRK-1 = Weak/Unreadable.      Cancel (QTA) and try a different watch frequency.

# LAST BUT NOT LEAST..... "FILLS"

- The receiving operator may ask you to repeat a word or group(s) in the message. Procedures are as follows:
  - "Fills" are preceded by the "question mark" di-di-dah-dah-di-dit
  - ? WB \_\_\_\_\_ = Repeat word before
  - ? WA \_\_\_\_\_ = Repeat word after
  - ? BN \_\_\_\_\_ & \_\_\_\_\_ = Repeat between (repeat a section between two words/groups in text).

WE LOOK FORWARD TO  
YOUR PARTICIPATION!

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