QNI NEWSLETTER

JULY, 2021

SECRECY OF COMMUNICATIONS?

Those old enough to remember an era before the Internet will undoubtedly also recall a time when the secrecy of communications provision of the Communications Act of 1934 strictly governed private correspondence including third-party messages transmitted via the Amateur Radio Service. Certainly, those using commercial telecommunications common carrier services could reasonably assume that information was not disclosed without warrant. However, this didn't mean that abuses never occurred.

While Franklin Delano Roosevelt is generally regarded by historians as one of the better United States Presidents, this doesn't mean that he was without faults, including what one might call "control issues," combined with a very political nature

Harold Ickes of New Deal fame once described the differences between Herbert Hoover and Franklin Delano Roosevelt in a wonderfully concise manner. If asked, he said, Hoover, having studied the economic problems of the Great Depression so thoroughly, could describe every technical detail of the banking crisis down to the amount of capitalization and asset-debt ratio of every major bank in the country, On the other hand, Roosevelt could provide no technical details, but he could offer great insights into the personality of every important

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Summer Issue

In this issue:

QNI MISSION STATEMENT

QNI is dedicated to promoting genuine emergency communications preparedness.

Our newsletter is independently published and distributed free of charge to the Amateur Radio and emergency management community. The opinions contained herein do not reflect the policies or opinions of any particular net or emergency communications organization.

Our mission is to provide a forum for EmComm volunteers throughout North America. We operate on the premise that Amateur Radio public service volunteers should be, first and foremost, communicators and technicians.

If you share this vision, please support *QNI*. Submit your news and articles for publication.

political boss throughout the United States. A bit of hyperbole, perhaps, but FDR certainly had a disposition that laid the foundation for a good relationship with the press at the beginning of his administration.

While FDR is remembered in a positive light, by 1936, his relationship with the media was deteriorating. Roosevelt was known for having a relatively thin skin. He complained about the media's "poisonous propaganda," adopting a condescending, patrician tone when dealing with reporters who asked difficult or challenging questions. Much of this nuance wasn't heard by the public in an era during which news stories were still being originated by press telegraphy and televised press conferences were far in the future.

During the 1936 election, Roosevelt claimed the press was overwhelmingly against him, but historians who have studied his claim indicate that coverage was actually reasonably balanced. Nonetheless, Roosevelt complained in 1938 that "our newspapers cannot be edited in the interests of the general public, from the counting room. And I wish we could have a national symposium on that question, particularly in relation to the freedom of the press. How many bogies are conjured up by invoking that greatly overworked phrase?"

Roosevelt's relationship with the Fifth Estate (radio) was far more positive than with the print media. With the implementation of the Communications Act of 1934, broadcast station licenses were subject to renewal every six months. This short license term provided the Administration with a political Sword of Damocles with which to pressure broadcasters. Roosevelt appointed Herbert L. Pettey, the radio manager of his 1932 campaign as secretary of the FCC. After this appointment, Pettey worked in tandem with the Democratic National Committee to handle "radio matters" with both the networks and local stations.

Broadcasters heard the message of political leverage loud and clear. Sarnoff's NBC immediately announced that it would limit broadcasts "contrary to the policies of the United States government." CBS announced that "no broadcast would be permitted over the Columbia Broadcasting System that in any way was critical of any policy of the Administration." With a few exceptions, radio, as a whole, was firmly pro-Roosevelt. Furthermore, the famous "fireside chats" allowed Roosevelt considerable control over messaging, with minimal dissent from outside resources.

Even as he applied pressure to the broadcast industry, FDR sought to suppress criticism from the print media. Two years into his administration, his press conferences became increasingly orchestrated. He singled out some reporters who wanted to ask questions and ignored others. In 1938, Harlan Miller of the Washington Post commented that Roosevelt only answered questions which enabled him to "utter an oral editorial.…He selects only those on which he can ring the bell."

FDR eventually recruited former Ku Klux Klan officer and later Supreme Court Justice Senator Hugo Black, a zealous New Deal operative, to chair a Senate Committee on the subject. The committee's original mission was to develop methods to allow, under certain circumstances, the dissolution of utility holding companies, particularly those controlled by New Deal opponents. Black expanded the investigation of the use of telegrams to oppose public utilities legislation into a general probe of anti–New Deal voices, including those of journalists. This "enemies list" was then used to apply pressure to those who might challenge the Administration's agenda.

The IRS turned over the tax returns of New Deal opponents in the press dating as far back as 1925. Black then moved to obtain his targets' private telegrams, demanding that telegraph companies let the committee search copies of all incoming and outgoing telegrams for the first nine months of 1935. When Western Union refused, citing the Secrecy of Communications Provision of the Communications Act of 1934, Black ordered it

to comply.

For three months in 1935, Democrat operatives on the FCC and Black's Committee illegally inspected great stacks of telegrams in Western Union's D.C. office. Operating with no oversight or judicial authority, they read the communications of sundry lobbyists, newspaper publishers, and Republican political activists as well as every member of Congress. One investigator was reported to have gone through "35,000 to 50,000 [telegrams] per day." It was later estimated that FDR's political operatives had examined some five million telegrams over the course of the investigation. Today, this would be much the same as Donald Trump or Joe Biden's staffers colluding with Google to illegally read the emails of their political enemies in the press!

Ultimately, Hugo Black used the information it found as a basis for more than 1,000 subpoenas targeting those who opposed the DNC and FDR's policies. This overreach eventually alarmed Western Union executives, who felt assent to such conduct would be perceived by the public as a complete abrogation of the privacy requirements, thereby eroding confidence in the telegraph company's service. In February 1936, Western Union began notifying all targeted individuals that the Black Committee had searched their telegrams, lifting the veil of secrecy. Intense opposition immediately arose.

Newton D. Baker, who had served as Secretary of War under Woodrow Wilson was one such individual informed of the illegal search of his private telegraphic correspondence. Outraged, he wrote: "Man of peace as I am, I am quite sure I could not keep my hand off the rope if I accidentally happened to stumble upon a party bent on hanging him."

Black was soon taking on William Randolph Hearst. A believer in "law and order" and a jingoistic nationalist, Hearst had done much to ensure Roosevelt's nomination in 1932, but had since come to oppose some of what was thought to be overreach of the New Deal. Roosevelt reciprocated by using the instrumentation of the Internal Revenue Service against Hearst. In February 1936, the Black Committee served a subpoena on Hearst for a telegram he had sent to James T. Williams Jr., an editorial writer for the Hearst papers. The telegram, marked "Confidential," asked Williams to write editorials calling for the impeachment of Congressman John J. McSwain, a Democrat from South Carolina who served as chair of the House Military Appropriations Committee. Hearst telegraphed, "He is the enemy within the gates of Congress.…He is a Communist in spirit and a traitor in effect. He would leave United States naked to its foreign and domestic enemies."

Ironically, Black already had a copy of the telegram. The subpoena was simply a stalking horse action designed to shield Black from embarrassing questions about his actions. Hearst responded by petitioning the Supreme Court of the District of Columbia to enjoin Western Union from handing over the telegram. The suit charged that the Black committee had violated the First, Fourth, and Fifth Amendments, adding that the telegram contained no reference to lobbying.

Black responded in a manner characteristic of a man who places politics above ethics. He distributed copies of the Hearst telegram to the press, and then withdrew the subpoena. Of course, he already had a copy of the telegram and this maneuver shielded him from the legal consequences. Instead, Black attacked Western Union. In a public letter addressed to the Manager of the Washington, D.C. office, he accused the owners of placing the revenue of an important customer, William Randolph Hearst, ahead of the public good.

One of Black's colleagues, Senator Sherman Minton (D–Ind.), used the occasion to mount an attack on Hearst and his record. In a speech on the Senate floor, he revisited the newspaper mogul's misdeeds dating back to

the Spanish-American War. Hearst, Minton proclaimed, "would not know the Goddess of Liberty if she came down off her pedestal in New York Harbor and bowed to him. He would probably try to get her telephone number." Like Black, Minton depicted Hearst and other anti–New Dealers as the real enemies of free speech for spreading fascist propaganda and stealthily promoting a financial dictatorship.

Black's release of the Hearst telegram backfired. Critics pointed out that it directly contradicted the committee's previous pledge to only reveal telegrams found to be relevant. By releasing the telegram, *The Washington Post* editorialized, the Black Committee showed it had become "rather too smart for success." Instead of discrediting Hearst, the action had "sharply underlined the indefensible nature of its own dragnet tactics" that had revealed "a private wire from a citizen who has filed a charge of conspiracy against the committee." *Editor and Publisher* wondered "if anything is safe" when a congressional committee and the FCC are able to fish a "private message out of the Western Union office for political reasons solely." Arthur Krock, the Washington bureau chief of *The New York Times*, dubbed the release a misguided ploy to "gain public approval of Snoopocracy."

Caught flat-footed, Black's defenders claimed that they were following the precedent set by earlier congressional investigations, such as the probe of the Teapot Dome scandal. But those earlier subpoenas had not included anything approaching the Black Committee's open-ended demands for telegrams—fishing expeditions that hadn't specified particular individuals. Black further hurt his cause with a continuing tone-deafness toward privacy concerns. For example, he claimed that the "law doesn't recognize that a telegram is a man's" but "is the telegram company's and is retained for subpoena purposes," a clear misrepresentation of both law and precedent.

Despite this outward self-confidence, Black had cause for concern. He was meeting resistance from unexpected quarters, including a leading spokesman for liberal reform; syndicated columnist Walter Lippmann. The committee, Lippmann wrote, was "becoming an engine of tyranny in which men are denied the elementary legal protection that a confirmed criminal caught red-handed in the act can still count upon." Lippmann, who had impeccable civil liberties credentials, thought Black's investigation resembled those led by right-wing "Red hunters" who "cared nothing about whom they slandered." Lippmann unsparingly challenged the senator's motivations and abilities: Black, he declared, "is an enthusiast for investigations, but in the realm of justice he is an obvious illiterate." He closed his column by calling for an investigation of the investigators.

The American Civil Liberties Union (ACLU) denounced the committee's actions too. Black found it perplexing that he had to worry about his left flank, asking in a letter to a Kansas ACLU officer why a group claiming "to protect the masses of the people from loss of their economic and political liberty" had aligned itself with those who valued "property" over "human" rights. The ACLU renewed its campaign against the committee after news reports that the National Woman's Party, led by equal-rights crusader Alice Paul, was on the target list. The ACLU's executive director, Roger Baldwin, wrote to Black asking why he was probing a group that had nothing to do with utility legislation. In his reply, Black evaded the question, claimed that the committee's procedure did not depart from time-worn American traditions, and added, somewhat ominously, that he was "sure that upon mature consideration, you will wish to withdraw your request for information."

In the face of mounting congressional opposition, and to fend off a possible injunction, the FCC announced that any telegrams it had seized were now "in the possession of the Special Committee of United States Senate." Moreover, it did not intend any "further investigation or examination" of telegrams at Western

Union. Short of funds and under fire, Black had no choice but to end the "field investigation." The FCC's decision forced the Black Committee to retreat on future searches but also shielded it from direct legal sanctions.

The committee's most powerful champion was Roosevelt himself, although he carefully avoided tipping his hand in public. He referred specifically to the Black Committee at a May 1936 meeting, according to former FDR advisor Raymond D. Moley. In the midst of a "nightmarish conversation [that] went on and on in circles for some two hours," Moley bluntly asked Roosevelt about the lack of "moral indignation" when Black's committee had "ruthlessly invaded the privacy of citizens." Moley opined that he would rather let the guilty "go free than to establish the principle of dragnet investigations." Roosevelt responded with a long discourse on how Black's actions had "ample precedent." Moley inferred that Roosevelt believed "the end justified the means."

Although members of the committee talked about resuming the deliberations in the winter, it never met again under Black's chairmanship. The senator had sometimes churned up embarrassing information on anti –New Dealers, but his methods had proven too toxic.

The final decision of the U.S. Court of Appeals for the District of Columbia in the Hearst case, handed down just after Roosevelt's landslide re-election victory in 1936, gave only mixed solace to Black Committee foes. The Court blasted the FCC for sanctioning a "wholesale" examination of telegrams and then turning these over to the Black Committee, declaring that this was "without authority of law and contrary to the very terms of the act under which the Commission was constituted (The Communications Act of 1934)." It added that "telegraph messages do not lose their privacy and become public property when the sender communicates them confidentially to the telegraph company," elaborating that in many states it was a "penal offense" to violate this privacy. The Court also affirmed that it had jurisdiction over the FCC's future actions. Yet it ruled that it had no constitutional basis to assert jurisdiction in the case, despite the "unlawful nature of the search," because the investigation had ceased.

Still, the Hearst ruling was a precedent against any future mass seizure of private telegrams by a congressional committee, at least via the FCC. One can only imagine what Joseph McCarthy could have done had he been able to get similar access to private communications. In later years even Black, who often championed civil liberties after he joined the Supreme Court, expressed some regret about his actions as a senator and beforehand.

The Hearst ruling meant little to Roosevelt, who appeared to have no need for more investigations. He now had overwhelming Democratic support in both houses of Congress and seemed free to get a Third New Deal if he wanted one. His window of opportunity soon closed, however.

In 1937, the president overplayed his hand by pushing a plan to appoint additional justices to the U.S. Supreme Court. The hard pushback, most visibly by Democrats, threw him off balance. A leader in the opposition was the Committee for Constitutional Government (CCG), led by newspaper publisher Frank Gannett, formed only days after Roosevelt announced his plan. The CCG pioneered direct mail methods and had an impressive list of supporters, including the progressive reformer and civil libertarian Amos Pinchot, the novelist Booth Tarkington, and the Rev. Norman Vincent Peale. The group soon expanded its agenda to oppose the New Deal as a whole.

Alarmed New Dealers resumed the investigations of the Senate Special Committee on Lobbying to target those who opposed "objectives of the administration." By this time Black had joined the Supreme Court, so

now Sen. Minton was chair. Minton was an even more zealous defender of Roosevelt's agenda than Black had been. According to credible accounts, Roosevelt had first offered him the Supreme Court job that later went to Black but Minton demurred, wanting to stay in the Senate.

While the Hearst decision had closed off Minton's power to seize copies of telegrams, his methods were still extremely heavy-handed. Committee staffers arrived en masse at the CCG's office, where they began copying financial records, membership lists, and other files. After watching this for some time, Edward H. Rumely, the CCG's energetic secretary, ordered them out, charging an illegal "fishing expedition." Meanwhile, the IRS gave Minton access to Rumely's income tax returns. The defiant secretary refused to hand over donor or member lists on the grounds that the demand violated privacy and constitutional rights. The Justice Department contemplated a prosecution but ultimately decided that it might backfire by making Rumely a martyr.

Minton struck back by proposing a "libel bill" imposing a prison sentence of up to two years for publishing newspapers or magazine articles "known to be false." (Many years later, a confidante of Minton said that someone else, possibly from the administration, had asked him to do it.) While rolling out the bill, Minton charged, in confused but revealing language, that "the free press of this country does not want encroachment upon democracy by the radio of the country. If there is going to be any encroachment on democracy, the free press wants to do it itself. It wants a free hand to do all of the encroaching it wants to do." He cited several examples of "propaganda," including articles in the *Philadelphia Inquirer*, a prominent anti–New Deal voice. He also alleged that publishers "want to curb the radio" and "deny the president the right to sit down before a microphone in his own home and speak to the people of the country about their government."

Minton's proposed bill encountered outrage across the political spectrum. The ACLU condemned it, and the American Newspaper Publishers Association declared it part of a "lawless inquisition" that showed "arrogant disregard of the Bill of Rights." Denying any threat to radio, Gannett promised that he and other publishers would "fight to the end for freedom of speech, freedom of the press, and freedom for radio." The strongly pro–New Deal Rep. Maury Maverick (D–Texas), grandson of the man whose name inspired the term, also rejected the bill, emphasizing "the right of Mr. Roosevelt's opposition to express its opinions freely."

Roosevelt was not one to needlessly risk political capital in a losing battle. Asked at a press conference to take a stand on Minton's bill, he punted, joking that he did not think the federal government had sufficient funds to build enough new prisons to make room for everyone who could be convicted under such a law. Before moving on to the next question, he quipped for the benefit of the reporters present: "You boys asked for it, you know."

Taken completely aback by the opposition, and no doubt by Roosevelt's reluctance to weigh in, Minton withdrew his bill and soon called off further investigations. It is quite possible too that Minton himself did not fully believe in his own proposal. Two years later he lost his re-election race, but he bounced back in 1949 when his old Senate ally, Harry S. Truman, offered him a slot on the Supreme Court. This time Minton said yes.

While today’s concerns about internet privacy, hacking and surveillance may seem new, the reality is that when it comes to political power, wealth and influence, the temptation of the powerful to seek damaging information on those who threaten that power and wealth is not new. Likewise, respect for the spirit of the law is not now, nor has it ever been, a universal trait.

SOME LESSONS FROM FIELD DAY

By James Wades (WB8SIW)

Due to an unexpected illness of a key volunteer, the author found himself filling in as the Winlink-RRI Region 4 digital liaison (gateway) on field day. The experience turned out to be quite informative. Therefore, let's share some lessons that could be helpful for emergency planning.

- Region 4 radiogram quantities were extremely heavy. Getting to the game late proved to be a significant disadvantage. It was a bit like drinking from a fire hose. Many hours were spent working through a major backlog of traffic. Connect times alone on the digital network took a significant amount of time.

- Many originators were not seasoned traffic operators. A large number of messages were originated *without an email address or telephone number*. Many of these were mailed USPS directly to the recipient, thereby avoiding the morale problem that arises when rank-and-file traffic operators have to deliver incomplete traffic.

- A surprising number of messages contained only a name, call, city and state. No additional address or contact information was provided. These were deferred in favor of delivery of more "complete" message traffic.

- A variety of minor formatting issues arose, most of which weren't critical. In particular, there was a lack of understanding of how to insert the signature in the radiogram. While the Winlink-RRI template enforces the requirement for a proper signature, in some cases the message ended up with two signatures, one of which was in the text and the other of which followed the second break in the proper signature field.

- A fair number of messages were originated in radiogram-ICS213 format. These were delivered accordingly on the proper form (RRI Radiogram Form 1703).

- With just a few exceptions, message brevity was excellent and concise construction of message content was common. We're definitely getting the word out in this area.

There is good news: There is much more interest in traffic handling and radiograms this year, despite a lower than usual field day turn-out. Clearly both ARRL officials and RRI registered radio operators are doing a good job of encouraging traffic handling as an operating activity and skill set.

Ultimately, several important lessons from Field day recommend some changes in policy:

1. We need to continue our training activities. The interest is there, but it needs to be leveraged to ensure that radio operators fully understand the radiogram format, its components and their purpose, and how to format a message correctly.

2. We need to activate the *National Emergency Communications Response Guidelines* for next year's Field Day. Of particular importance is setting the required connect/download frequencies (connect times) for both DTS liaisons and Winlink/RRI Gateway liaisons. Perhaps some additional Region Net meeting times could also be established to facilitate more frequent distribution of radiogram traffic, rather than allowing it to "stack-up" over the course of the event.

3. As with other exercises, experience indicates that we need to add depth to our digital bench. Each state or section should have the DTS function staffed three deep. The old expression "one is none and two is one" applies here. Not only does this full staffing allow for redundancy, it allows DTS operators to alternate shifts during a disaster, thereby more efficiently transferring and distributing traffic and, when necessary, expediting delivery of priority or emergency radiograms.

4. We need to ensure that radiograms have VALID phone numbers, even when an email address is provided. Not only do many addressees not answer a call from an unfamiliar number, many also will not open an unfamiliar e-mail. By leaving a message that a radiogram has been delivered via e-mail, we can make the recipient more likely to open that e-mail.

Lastly, Radio Relay International would like to thank all who originated radiogram as well as those RRI and ARRL Field Organization officials who are encouraging the practice. We learned a lot and undoubtedly, and many rank-and-file radio operators and ARES® members did too!

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TRAFFIC FIRST

When calling a net, it is wise to ask for stations with traffic first. This allows the net control to quickly pair outlets with the traffic and dispatch them off frequency as soon as stations check-in. The process saves considerable net time and greatly improves efficiency.

There will, of course, be situations where an immediate pairing is not practical. One example might be a station that lists a large quantity of traffic for one destination, with several single messages for various other, dispersed locations. In the interest of efficiency, it may be wise to wait a short period of time until all outlets can be identified, then clear the miscellaneous individual pieces of traffic first, and lastly, clear the large file to the single destination/station.

Regardless of traffic quantities, however, it is always best to obtain the QTC list FIRST, before accepting general check-ins (QNI).

DI-DI-DI-DAH-DIT DAAAHHH

SIGNAL REPORTS

When establishing contact to exchange traffic, it is helpful for the transmitting station to have an indication of signal quality at the receiving station. This allows the transmitting station to adjust his sending technique to ensure the best possible readability on the first transmission. If the circuit is marginal, a CW operator may slow his speed or repeat unusual names and words in the radiogram. Likewise, a phone operator may use more phonetics or repeat confusing content.

On CW, an exchange might be:

TX Station: HW CPY?
RX Station: QRK 3 (Use QRK 1 to QRK 5) QRV K
TX Station: HR NR ……

On phone, an exchange might be:

TX Station: Station B, this is Station A, how copy?
RX Station: Fair Readable, Ready to Copy, Over
TX Station: Message follows…..

Recommended signal reports for voice nets are:

Loud and clear
Good readable
Fair readable
Weak readable
Weak barely readable
Weak not readable

These reports are, of course, self-explanatory.

Obviously a report of “weak barely readable” or “weak not readable” might recommend a return to net frequency to request a relay. Remember: relaying a message is likely more efficient than struggling to exchange traffic on a marginal circuit.

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DENIAL AND THE CONNECTIVITY DELUSION

By James Wades (WB8SIW)

During a recent meeting with a major metropolitan transit agency, the agency representatives disclosed the fact that most communications with their field forces was conducted using cellular telephones. It was said that evolution and worker preferences demanded this mode of communications, with dedicated two-way radio use now limited primarily to train crews. This situation is informative on several levels, so let's take some time to deconstruct it and respond.

Disaster Response:

When asked how communications would take place in the event of a cellular outage or during periods of extreme overload, such as another 9-11 attack or a major natural disaster, the answers amounted more to an evasion. The solution, as it turns out, would be to rely on train crews and the limited number of two-way radios available for communications. This was obviously an off-the-cuff response designed to defuse the real intent of the inquiry.

Follow-up questions such as these also resulted in evasion or denial:

- What would happen during a mass evacuation in which on-going coordination with multiple work teams and extensive interaction at all levels would be necessary? How would this be accomplished in the event of cellular disruptions?

- If employees aren't familiar with two-way radio circuit discipline during normal day-to-day operations, what leads one to believe they will "magically" develop the necessary circuit discipline and efficiency needed in timer of emergency?

- Two-way radio networks have limited circuit capacity. How would radio nets/frequencies be layered based on function and how would communications traffic move between functional groups. Is it practical to expect reasonable circuit efficiency without net layering based on operational or emergency management function? How would communications traffic flow from a functional talk-group/frequency to a central coordination facility such as a dispatch center or EOC type facility?

These are just a few questions for which there were no answers.

Generational Myopia:

The situation illustrated above is an excellent example of **generational myopia**. A sizeable percentage of managers and employees within the organization have likely had a cell phone in their hand (and central to their day-to-day life) since they were pre-teens. Because of this, denial trumps the reality that situations could arise during which the cellular data networks that support this centerpiece of their lives is unavailable.

Denial is a powerful force in human behavior. Negative or discomfiting data is often dismissed in favor of data that is felt to be validating. Without digressing too far, perhaps the best example of this non-beneficial human trait exists in the realm of politics and social issues in which individuals dismiss data from those who offer an alternative perspective to their preferred worldview. The author has even coined a term for this:

Intellectual hedonism.

The intellectual hedonist generally rejects any ethical obligation to seek objective truth. This is often based on the discomfort that arises when one's prejudices or beliefs are challenged. Whether it's the latest social or political issue, or the perceived value of the "tech narcotic" that now consumes our lives, the intellectual hedonist chooses not to start down the uncomfortable road to truth. In the worst-case scenario, one even hears such individuals argue that "everyone has their own truth," or they promote intellectually addled theories such as "positional truth;" but again, we digress. Simply put, most individuals suffer from a degree of intellectual hedonism; some more so than others. On the other hand, emergency planners and business managers have a fiduciary responsibility to transcend their own intellectual hedonism in the interest of the organization.

Emergency Management:

One sees a similar type of denial in emergency management agencies. It's hard to sell the concept of "survivability and decentralization" in the form of ARES ®, MARS, SHARES or the like to agencies composed of individuals who have come of age with highly reliable cellular data networks. Many simply can't conceive of how they might operate in the event of a network outage. For that matter, most can't even plan a lunch date in advance, let alone construct an emergency response plan that challenges the assumption that their preferred methods of communications will always remain intact.

Even some radio amateurs fall victim to this myopic view of commercial telecommunications common carrier service. They see themselves in competition with commercial services and, as a result, dismiss those modes and techniques, which are inconsistent with modern data communications methods. Modes such as CW and SSB, FM voice or the like, which are universal, decentralized and survivable are simply judged "obsolete."

The Sales Problem:

Ultimately, this tendency toward denial creates a significant "sales problem" for organizations that offer survivable communications options, including the Amateur Radio Service. Internally, this problem manifests itself as difficulty recruiting EmComm volunteers, while externally, it becomes increasingly difficult for served agencies to see the value of basic EmComm capabilities. Therefore, the challenge to ARES® and similar programs is to develop a suitable apologia that makes an extremely strong case for developing and retaining independent, survivable systems.

Moving forward, our national organizations need to look beyond the administrative and tactical management of EmComm and instead implement a broader, strategic plan, which incorporates an educational component targeting served agencies, community organizations, and radio amateurs themselves.

Three core problems must be addressed:

- Outreach to radio amateurs who are not active in public service communications must be improved. This is particularly important with new radio amateurs, some of whom obtain licenses for reasons other than integrating into the ham radio community.

- Served agencies must be better educated about the vulnerabilities of commercial telecommunications infrastructure. Sufficient data and case histories must be included in training and educational material to overcome denial.

- The image of the Amateur Radio Service must be revamped. It's no longer enough to show "Joe Hamm" holding an HT on the front of a colorful brochure. Rather, the diversity of Amateur Radio capabilities and technologies must be explained and demonstrated.

One place radio clubs and EmComm groups can begin building more resilient communications within a community is by developing a "Neighborhood Hamwatch Program." Reach out to local VOADs. Get them equipped with basic GMRS and FRS capabilities. Train them in standard radio procedures, situational awareness reporting, basic traffic handling and the like. Assign amateur radio gateways to their nets/ frequencies. Incorporate them into your exercises.

Don't overlook the value of public service events such as races, parades, and similar events. For larger events, deploy a message center, provide the administrative capabilities that impress, assist with efficient coordination and monitoring. These events provide basic training, field deployment and numerous public relations opportunities.

Lastly, avoid myopia and denial. Don't be afraid to ask the "what if" questions. Don't be afraid to bring up those discomfiting scenarios. Both volunteers and professionals need some reality checks now and then!

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DENVILLE TOWNSHIP, NJ CERT/RACES TAKES FIRST PLACE!

By Chris Dix (W3CJD)

On Saturday 24 April 2021, members of the Denville Township, NJ CERT/RACES radio operators participated in the Radio Relay International ("RRI") First Quarter 2021 Emergency Communications Exercise. They scored in first place amongst all participants. Here is their story…..

This exercise simulated a widespread communications outage in which field deployment was necessary. Since participation was open to all licensed radio amateurs, the following radio operators participated in the event: Chris Dix W3CJD, Ron Gounaud KC2ZKE, and Mike Kiener W2MAK. The station was operated under the Denville Community Radio callsign, KD2EKH.

At minimum, each participating individual/group was to establish a portable High Frequency ("HF") station in the field, check into a traffic net, and originate an RRI *Operational Readiness Report* (OPRED) radiogram message. This OPRED message format is described in the RRI National Emergency Communications Response Plan, Appendix A.

The goal was to exercise portable HF stations (capable of communicating with local, statewide, and regional agencies) and to provide an environment in which operators must implement field-expedient solutions to communications problems. (Continued Next Page)

Donate to Radio Relay International

Did you know that Radio Relay International operates entirely on donations? RRI was structured as an IRS recognized 501(c)(3) nonprofit public benefit corporation in order to remains non-political and more responsive to the needs of those in the traffic operations and public service communities.

Please consider making a donation to RRI at:

http://radio-relay.org/charitable-support/

One may also mail a check payable to "Radio Relay International" at this address:

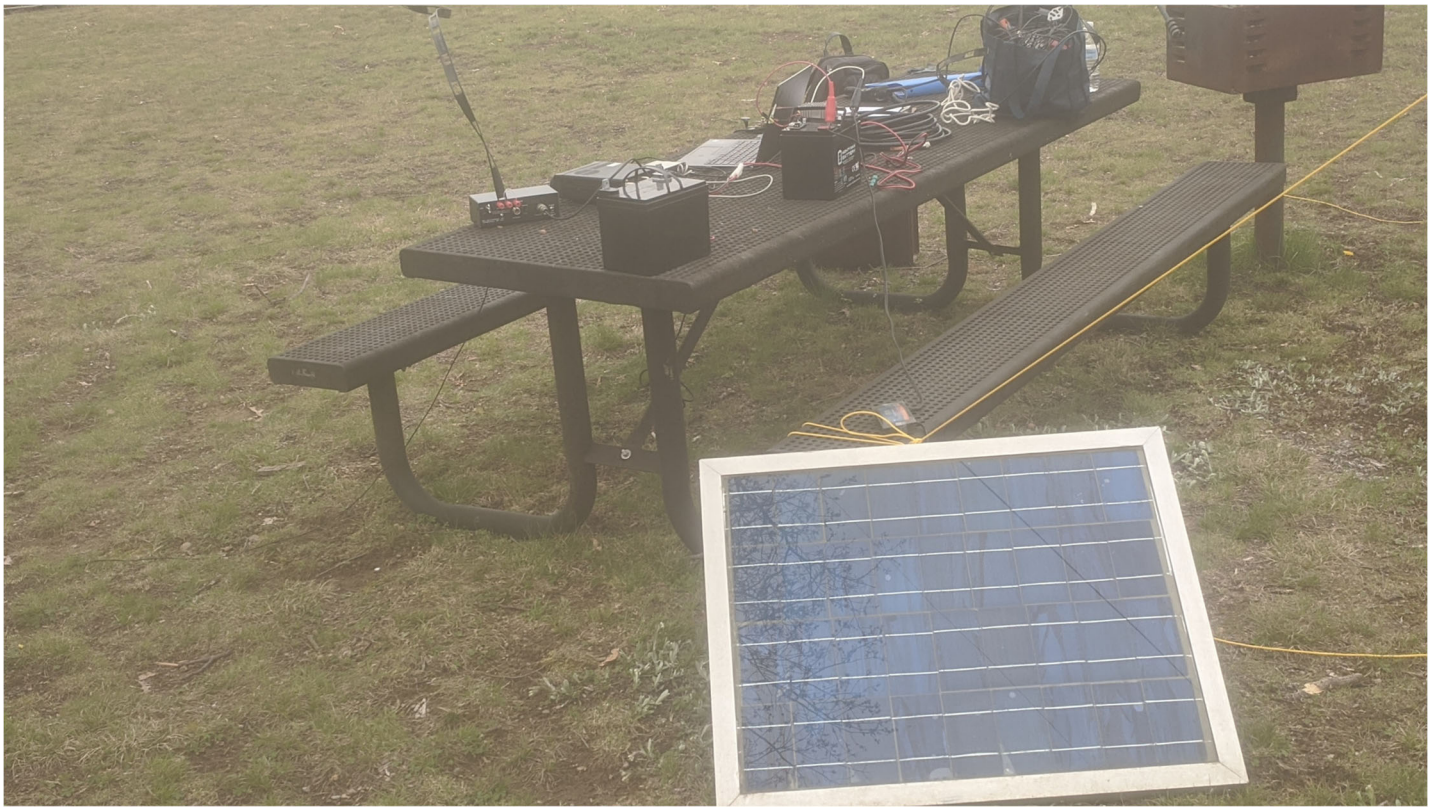
Radio Relay International
C/O Emergency Preparedness Services, LLC
PO Box 43
Niles, MI. 49120

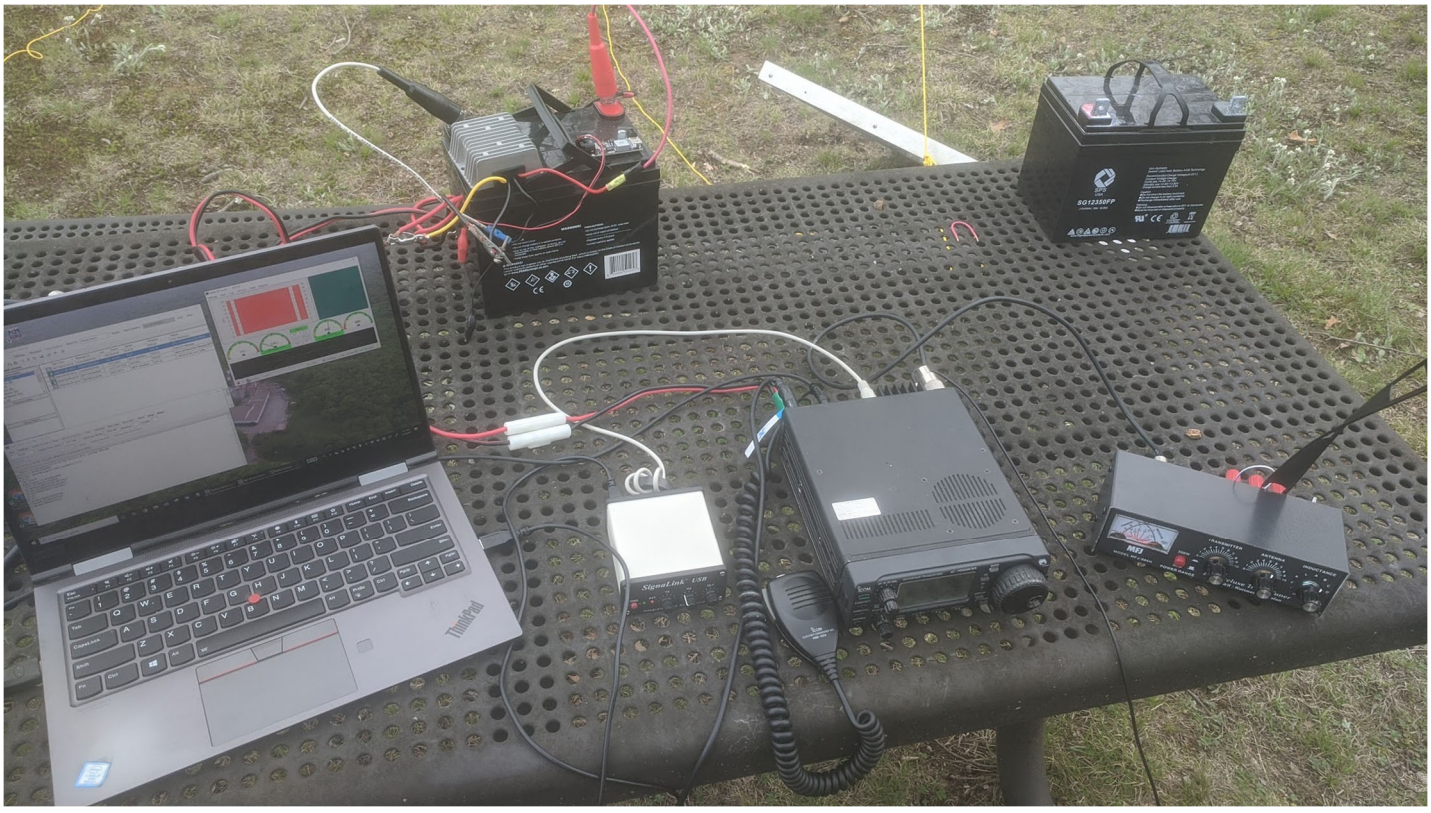
Our group met at approximately 4:30 PM to establish the operating base. Two trees were used to raise the dipole antenna that would be used to check into a voice traffic net and contact the RRI Digital Traffic Network ("DTN"). This simulated a lack of Internet and cell phone communications and the ability to provide both data and voice communications using amateur radio equipment and frequencies.

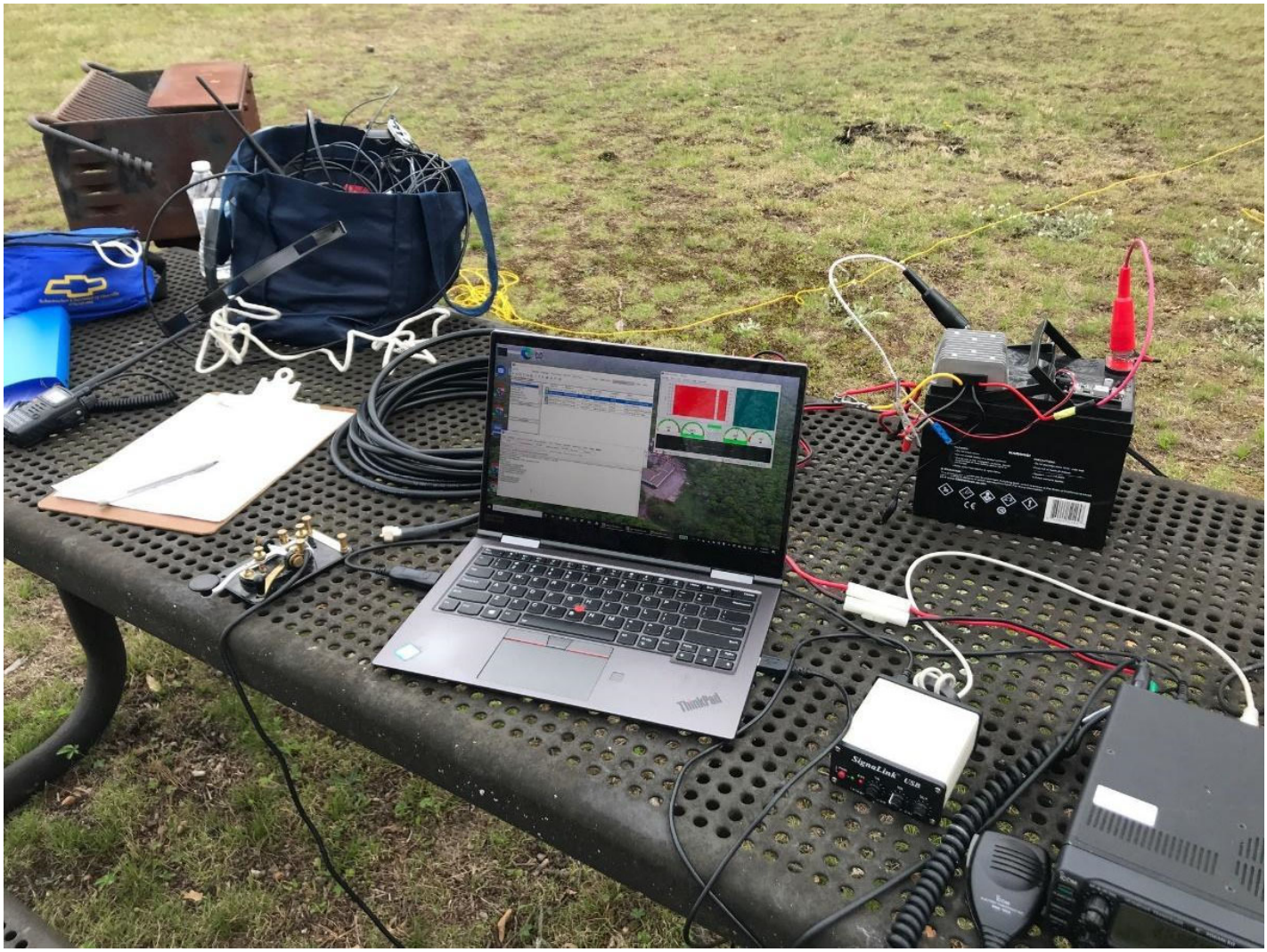
The NE tree is in the background with the rope extending up the tree.

This image shows the antenna elevated approximately 25 feet to the working position.

The radio, digital interface, and computer were connected to the antenna, a manual antenna tuner, and a 35Ah battery power supply. A solar panel was used to augment the battery power, and a spare battery was kept in reserve.







Ron Gounaud KC2ZKE and Mike Kiener W2MAK secured the antenna at an elevation of 25 feet while Chris Dix W3CJD set up and verified radio operation.

Equipment used included an Icom IC-706MKIIG transceiver and an MFJ-904H “travel” manual antenna tuner. A SignaLink USB interface connected audio between the transceiver and laptop, with a separate serial-to-USB cable providing PTT control via RTS. A buck converter, connected in conjunction with the battery, regulated the voltage going to the radio, thus providing a longer effective operating time per charge. Also shown, but not used, is a 12V to 5V buck converter attached by Velcro to the top of the battery, which can be used for charging/powering other USB accessories in the field. (W3CJD previously used this to power a Raspberry Pi as a field computer. Both of these regulators are inexpensively available from Amazon.) Each leg of the wire antenna was 30 feet, or 10 meters, in length, connected to the tuner by approximately 25 feet of ladder line.

At approximately 5:15PM local time, contact was established between our field station and the 2RN DTN hub (operated by KY2D in Morristown, NJ, approximately 10 miles from our location). This connection was made on the 80-meter band with 5 watts of transmitting power, using Winlink Express and the VARA HF digital mode. This digital traffic hub accepted our OPRED radiogram, along with 2 other pre-prepared radiogram messages, and automatically forwarded them to other digital hubs across the country near the message addressees (more information about the DTN is available at http://radio-relay.org/about/dtn). The digital connection was automatically unlinked after receiving verification of our message transmission. Data

throughput was at a very slow bitrate, simply due to a weak connection into the Morristown station (due to our low transmitting power and a relatively-poor match on the manual antenna tuner).
At 6:00PM local time, Chris W3CJD checked into the New Jersey Phone Net, also on the 75-meter band (on 3.950MHz), transmitting approximately 20 watts using lower sideband. A piece of radiogram traffic (pre-planned for this event) was passed to us in the field through other stations on the net, all from the northern New Jersey area.

At 6:15PM, Chris W3CJD attempted to contact RRI volunteers monitoring the event using 10-watts of continuous wave (Morse code) on the 40-meter band and a straight key, but no contact was established.

After this unsuccessful contact and verification of earlier radiogram transmission and receipt, we dismantled our HF station.

VHF/UHF capability was also deployed using a DBJ-2 portable J-pole antenna and the IC-706MKIIG, along with several separate handheld radios and antennas. A connectivity test yielded successful, clear access of the Denville RACES KD2EKH repeater on the 70cm band. At 7:30 PM local time, this deployment was used to check into the New Jersey VHF Net on the Morris County, NJ Office of Emergency Management's 2-meter FM repeater using 5 watts of power. Two additional, pre-prepared radiogram messages were passed, and two additional radiograms were received (total 4) on this net. VHF/UHF capability was fully dismantled afterward at approximately 7:45 PM.

Our biggest technical challenge and setback during the event was the manual antenna tuner; we were not able to achieve a great tune in the field, causing very little RF power to actually be radiated. Operating from a full charge, and with the voltage regulator, the battery lasted for about 2 hours of operation under a heavy duty cycle (with most of the time spent transmitting VARA digital). Our field deployment was dismantled right as the first battery ran out of charge. Cloudy weather conditions made the solar panel relatively ineffective in providing much additional power; the second battery was still available for use, however, having been charged before the event.

The exercise was scored using a point system, designed to reward additional capabilities such as liaison with local emergency communications organizations, overall deployed station technical performance, and operator proficiency. It also awarded additional points to activities which require a more advanced skill set or capabilities that diversify emergency communications capabilities.

The official score sheet was sent in for verification and scoring by Chris W3CJD.

DELIVERING RADIOGRAMS & RADIOGRAM-ICS213 MESSAGES

By James Wades (WB8SIW)

With so many innovations occurring in the world of traffic handling, we are seeing much more interest from new users of the system. Along with this new opportunity comes new challenges including a requirement for a higher degree of professionalism in the area of delivery methods. It is now common for ARES® organizations to train operators in the art of traffic handling. AUXCOM classes are now implementing exercises requiring the origination of radiograms and radiogram-ICS213 messages.

As Radio Relay International continues to promote and modernize traffic handling in an inclusive manner that retains both traditional manual modes and digital methods, we find ourselves with a "good problem." Long-time traffic handlers need to adopt new methods and new traffic handlers need to better understand real-world interoperability requirements to ensure smooth circuit operation and message transfer across multiple networks, modes and radio services, which may range from a Winlink-RRI interface to a CW net, public safety talk group or any range of communications circuits. Therefore, let's look at a few radiograms recently originated via Winlink so that we may all take home some lessons about the modern EmComm environment.

What is Interoperability?

Those for whom Amateur Radio is primarily a collection of digital modes tend to apply email techniques to the origination of radiograms and radiogram-ICS213 messages. The close similarity to daily email methods sometimes results in a failure to recognize the value of brevity. When originating message traffic via a digital interface, it is easy to forget that the "last mile" might need to take place on a voice or CW circuit. Some faults observed in both exercise and daily message traffic include:

- Excessively long message numbers: Message numbers should be simple. The message number exists to provide quick and easy reference to a file of messages when reply messages or reply service messages are received. The operator should imagine himself at a message center, EOC, or similar location at which a reply message is received. If the reply states "reference message number 43…." the operator can quickly pull a message from a file for reference either for administrative purposes or to provide context for a served agency official. Message serial numbers should start with "1" and increase sequentially. Depending on traffic volumes, one can start a new string of serial numbers annually, monthly, or even at the start of a disaster operation.
- Place of Origin: During Field Day and during AUXCOM training exercises, operators occasionally omit the "state" from the place of origin. Perhaps the assumption is made that it is moving within the same state. However, in complex networks, this may not be the case. For example, a message may be routed to a region net or it may be downloaded from a digital node five states away. The place of origin should ALWAYS include the state. Routine radiograms should always include city and state. Operational radiograms in the emergency management environment might include county and state or a suitable substitute; for example, "WILLIAMSON COUNTY IL," or "MICHIGAN STATE EOC"

- Complete Address: It has been observed that most people today will not answer an unfamiliar telephone number. However, they will listen to a voicemail. The same is true for email; most people no longer open unfamiliar emails due to the rapidly expanding series of cyber attacks conducted by narco-terrorist states and criminal syndicates. *When possible, a **valid** phone number should be included*. The addition of a valid email is also advantageous. A delivering station can email a PDF copy of the radiogram and follow-up with a telephone call introducing himself, explaining the radiogram and indicating that a copy has been sent via email. This is particularly important in the case of official or served-agency messages.
- Text: The text should default to "all-capitals." This is a loud-and-clear message to the addressee that the message may have been conveyed via a non-case-sensitive mode at some point on its journey. While a competent press telegraph operator back in 1950 or 1970 could convey a complete news story in mixed case and complex punctuation as fast as a teleprinter circuit, this skill is decidedly lacking in the Amateur Radio Service! It is unrealistic to expect a voice traffic net or a public safety talk group circuit to convey a complex message in mixed case. Some tips that are helpful:
    - Spell-out scientific terms (e.g. "MILLIAMPS," "MICROAMPS," "MICROGRAMS," etc.)
    - In the case of tall man pharmaceutical notation , use a combination that includes phonetic substitutes. For example the drug may normally be transcribed as "acetaZOLAMIDE." By incorporating phonetic equivalents, this requirement can be fulfilled. For example, a substitute text (not transmission method) might be; "ACETAZOLAMIDE COMMA ZULU OSCAR LIMA ALPHA MIKE INDIA DELTA ECHO."
    - Remember that "brevity is the soul of emergency communications." There is no word limit on official messages, but operators have a duty to explain interoperability and the need for brevity to their customers.

Delivering Messages:

It is during the delivery process that first impressions are often made. Every **radiogram delivery reflects on the Amateur Radio Service.** Crude, unprofessional delivery methods can do harm to our public relations. On the other hand, professional delivery practices will enhance our reputation. When an operator originates a message with an email address, this creates a unique direct-advertising opportunity for ham radio. Email addresses should use "DOT/ATSIGN" format rather than the "./@" format. Never assume a message will stay on the same mode that it was sent on.

Radio Relay International has created a variety of fillable radiogram and radiogram-ICS213 forms that can be used to accomplish a memorable and very professional message delivery These are available under the "publications" heading of the RRI Web Page.

The RRI radiograms are not only modern and professional, they also include a back-side, which explains the purpose of our networks. Here are some simple steps for using these fillable radiogram forms to accomplish an email delivery:

1. Select either a radiogram form or radiogram-ICS213 form based on the originator's requirements (see below).

2. Using all-capitals, fill out the form, select "print as PDF," and save the PDF version to the desired folder on your computer. The author's preferred format for radiograms files printed as PDF are, for example:

    - "Radiogram Hall 071323Z Jul 2021 NR4G" This incorporates the last name of the addressee, the date/time of origin for the message, and the station of origin.
    - "Radiogram-ICS213 NOAA-Humphreys 071323Z July 2021 W6RRI" This is nearly identical, but it adds an associated agency when appropriate.

3. Draft a simple email text and attach the PDF version of the radiogram. The author uses this template:

> Hello:
>
> Attached you will find a radiogram-ICS213 message addressed to you.
>
> Originator: Samuel E. Goldwyn W6ABC
> Precedence: Routine
>
> Please contact me with any questions. Also please acknowledge receiving this message.
>
> Thank you,
>
> James Wades (WB8SIW)
> Radio Relay International

Formatting the Radiogram for delivery:

Most radio amateurs copy radiograms five words to a line. However, for the addressee of a radiogram, this is perceived as somewhat cumbersome. Therefore, the author tends to use the commercial practice of presenting ten words to a line, with an extra space between the first group of five on a line and the second group of five on a line. This is easier for the "civilian" to read.

When formatting a radiogram for delivery, the author also translates the "x-ray" into a "period." The x-ray is very useful and efficient when formatting a radiogram for origination on nets or for use when relaying radiograms, but it makes little sense to a served agency official or an addressee who is not a radio amateur. The same applies to other content that has special characters or prosigns/prowords for clarity during the traffic handling process, but which would make little sense to an addressee who is not a traffic operator. For example:

> "3214 JAC DASH A DASH ROE DRIVE" upon delivery becomes "3214 JAC-A-ROE DRIVE"
>
> "WB8SIW ATSIGN ARRL DOT NET" upon delivery becomes WB8SIW@ARRL.NET

The goal is to make the radiogram intuitive for the addressee. Leave the specialized prosigns, abbreviations and so forth for the origination/relay process.

Let's take a look at some recent radiograms that might serve as examples of the above concepts:

Avoid large message numbers

RADIOGRAM

via Amateur Radio

NR	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME (UTC)	DATE (UTC)
75627	R	F27	[redacted]	ARL15	NAPLES FL		JUN 26

ADDRESSEE

NAME: DANIEL MIZELL AC9GT

STREET ADDRESS: 4521 AUDUBON DRIVE

CITY, STATE, ZIP: TRAVERSE CITY MI 49686

TELEPHONE / EMAIL: [redacted]

OP NOTE:

DELIVERED BY

DELIVERY TIME & METHOD

OPERATOR NAME TELEPHONE or EMAIL

STATION LOCATION or ADDRESS

RADIO RELAY INTERNATIONAL is an IRS 501(c)(3) non-profit corporation dedicated to the relay and delivery of radiogram messages. Unpaid amateur radio operators volunteer their equipment, time and skill to operate and maintain the radio networks that make this service possible. Learn more at www.radio-relay.org.

BODY TEXT

NON-CASE SENSITIVE COMMUNICATIONS; TYPE USING ALL CAPS

GREETINGS ON YOUR BIRTHDAY AND BEST WISHES FOR MANY MORE
TO COME FROM THE 75 METER ISBN JOIN US AT
0100Z 3985 KHZ 73

Note 1: Telephone numbers and email addresses redacted to protect privacy of addressee.

Note 2: Call sign of originator redacted to protect privacy of originating operator

SIGNATURE

NAME	POSITION	ORGANIZATION
THE 75 METER INTERSTATE SIDEBAND NET		

REPLY VIA

RADIO OPERATOR NAME	ADDRESS OR LOCATION	TELEPHONE / EMAIL
J. WADES	BUCHANAN, MI.	[redacted]

TRACKING DATA

RECEIVED FROM	NETWORK DESIGNATOR	TIME RECEIVED(UTC)
SENT TO	NETWORK DESIGNATOR	TIME SENT(UTC)

RRI FORM 1801 rev 1

RADIOGRAM

via Amateur Radio

NR	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME (UTC)	DATE (UTC)
3	R		KG5[redacted]	19	WASHINGTON NC	2122L	JUN 27

ADDRESSEE

NAME: MARVIN K HOFFMAN WA4NC

STREET ADDRESS: PO BOX 2208

CITY, STATE, ZIP: BOONE NC 28607

TELEPHONE / EMAIL: MKHOFFMAN@[redacted]

OP NOTE: FIELD DAY RADIOGRAM

DELIVERED BY

DELIVERY TIME & METHOD

UTC is the preferred time. Use local time only if radiogram is known to remain within your time zone, such as on a point-to-point circuit to a served agency.

profit corporation dedicated to the relay and delivery of radiogram messages. Unpaid amateur radio operators volunteer their equipment, time and skill to operate and maintain the radio networks that make this service possible. Learn more at www.radio-relay.org.

BODY TEXT

NON-CASE SENSITIVE COMMUNICATIONS; TYPE USING ALL CAPS

FROM THE PAMLICO AMATEUR RADIO CLUB FIELD DAY EVENT.
WE HAVE 12 PARTICIPANTS 2 ARE ALSO ARES OPERATORS

Provide a valid phone number when possible. While not mandatory, it can be used to clarify an error in an email or, for important messages, a phone call or voicemail can ensure the message was received and understood.

Note 1: Telephone numbers and email addresses redacted to protect privacy of addressee.

Note 2: Call sign of originator redacted to protect privacy of originating operator

SIGNATURE

NAME	POSITION	ORGANIZATION
PAUL [redacted]		

REPLY VIA

RADIO OPERATOR NAME	ADDRESS OR LOCATION	TELEPHONE / EMAIL
J. WADES		[redacted]

TRACKING DATA

RECEIVED FROM	NETWORK DESIGNATOR	TIME RECEIVED(UTC)
SENT TO	NETWORK DESIGNATOR	TIME SENT(UTC)

RRI FORM 1801 rev 1

Radiogram ICS-213 Message

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time of Origin	Date of Origin
5	R	C	N2[redacted]	25	WILLIMINGTON NC	1525L	JUL 3

To (Name):	Position (Title & Agency):
ROBERT ERIKSON	AUXC KG4OPX
7596 JAC-A-ROE DRIVE	
City, State, Zip: SUMMERFIELD NC 27358	
Telephone and optional e-mail: 336 404[redacted] RPERICKSON@[redacted]	
From (Name): BILL[redacted]	Position (Title & Agency): AUXC NEW HANOVER
Subject: ICS RADIOGRAM 202107031527	Agency Local Time (conversion from UTC):

GREETINGS FROM NC AUXCOMM WINLINK EXERCISE. EX7 CALLS FOR THIS MESSAGE SO WE KNOW HOW TO INTRODUCE MESSAGES INTO THE RRI/NTS SYSTEM USING WINLINK

[[redacted]@WINLINK.ORG]

UTC (Zulu) is the preferred time. Use local time only if a radiogram is known to remain within your time zone, such as on a point-to-point circuit to a served agency.

Avoid large an unwieldy numbers when practical. They are not prohibited, but remember, "brevity is the soul of emergency communications." Your message may need to be transferred to a voice or CW circuit to achieve "last mile" connectivity. UTC time is already available in the preamble and local conversion is available in the ICS213 if needed.

Note the very subtle difference between the spelling of the name on the "TO" line and the spelling in the email. The addition of the letter "C" resulted in a delay delivering this message. In the EmComm environment where important messages are processed, it is wise to assign a "clerk" to review message content for error before transmission. The "clerk" need not be a radio amateur.

Note 1: Telephone numbers and email addresses redacted to protect privacy of addressee.

Note 2: Call sign of originator redacted to protect privacy of originating operator

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

Message Routing (Received from call sign / DTG):	Message Routing (Transmitted to call sign / DTG):
KB5LZK/AR STATE EMA 040251Z JUL 2021	

info@radio-relay.org – www.radio-relay.org – Follow us on Twitter@RadioRelayIntl

RRI Form 1703 ICS
2017-5-1

POWERWERX DB-750X REVIEW

By James Wades (WB8SIW)

Today's vehicles lack room for two-way radios. The days of installing several different transceivers under the dash has mostly passed, with perhaps the exception of some large pickup trucks and SUVs.

The author found himself faced with the problem that he needed a Part 90 radio authorized for use on railroad AAR VHF frequencies. The radio had to be legal and capable of narrowband operation. Obviously, an "opened" amateur radio transceiver was not the answer. As a result, an inexpensive "Powerwerx DB750X" transceiver was selected.

A product of China, the build quality is perhaps not the equal of a Kenwood or Motorola, but it will be used only occasionally. On the amateur radio side, it's primary use would be to support local ARES communications and, if necessary, monitor GMRS channels to support the RRI "Neighborhood Hamwatch" and RRI "National SOS Radio Network" during a communications emergency (For clarity….Per FCC regulations, a Part 95 certified radio is required to transmit on GMRS frequencies).

The radio comes with a remote kit for mounting the control head at a convenient location in the vehicle. The control head is linked to the transceiver via a CAT5-E cable (provided). A DTMF microphone is also provided, which allows for "toning out" a dispatcher, activating a DTMF remote control unit as needed, or accessing an "autopatch" system on a local Amateur Radio repeater.

A small extension speaker was also installed in the vehicle for clarity, as the radio itself is not necessarily located in a place conducive to good audio intelligibility.

The author also installed a Motorola amplified speaker adjacent to a rear window. This is bridged with the interior speaker and a DC power switch allows it to be activated. One can simply roll the rear window down about five or six inches, flip a switch, and amplified audio can be heard some distance from the car. This allows one to easily monitor a channel while outside the car, sometimes a requirement under some normal working conditions and a potential benefit or even a requirement in time of emergency, such as when interfacing with public safety or other officials at an incident.

The radio is easily programmed using "RT software" (a disc is provided), and one can label each channel accordingly. A VFO function is also available and one can manually program it in the field if necessary.

For the price, it offers a fair amount of flexibility for those who might need to combine a Part 90 type function with Amateur Radio Service capabilities. Hundreds of channels are available for programming, allowing one to add a wide variety of Amateur frequencies and repeater pairs for either occasional casual use or for use in a public service function.

Time will ultimately prove the reliability of the unit. A few initial problems have been encountered with build quality, including loss of audio due to a poorly assembled RJ jack on the transceiver. So far, customer support has been excellent, and after warranty service, the radio is performing to expectations.

-30-

CALL SIGN LICENSE PLATES

How often do you encounter an automobile with a call sign license plate but without radio equipment?

One might argue that the use of a call sign license plate implies a social contract. Most state governments provide the call sign plates at much lower cost than a vanity plate based on the assumption that the radio amateur is committed to providing emergency communications and his vehicle is therefore equipped with at least basic two-meter FM equipment. Therefore, ***one might argue that the use of a call sign license plate implies a certain social contract, an obligation to equip one's vehicle with basic two-way radio communications.***

ARE YOU HOLDING UP YOUR END OF THE SOCIAL CONTRACT?

THE HRO SIXTY

By James Wades (WB8SIW)

The last in a long line of HRO receivers was the HRO Sixty manufactured from the mid-1950s through the late 1960s. The author recently had the opportunity to obtain one from a fellow radio amateur.

The HRO Sixty is a massive receiver by modern standards. Weighing in at slightly more than 80 pounds, it takes some strength to move it around! I'm glad I spent years lifting weights every other morning and running on alternate mornings to ensure good performance on physical readiness tests!

As with many old receivers, this particular HRO was packed with paper capacitors manufactured by a firm called "Elmenco." I am convinced that "Elmenco" is Spanish for "I leak." Several of these deficient paper capacitors had already been replaced by past users and a safe assumption when restoring old equipment to operation is that all paper capacitors will eventually fail. Sometimes, failure is slow and gradual, with decreased performance and even long-term damage to other components, such as resistors. On other occasions, failure is sudden and catastrophic, at the cost of a transformer, choke, or audio output transformer.

With the electrolytic capacitors, paper capacitors and several out-of-tolerance resistors replaced, and a CL90 soft start component installed in the AC line, the receiver was fired up and came alive immediately. RF alignment and tracking checked OK, so the receiver was placed in service as a replacement for an older, solid state Allied receiver that served as back-up unit when paired with a Drake TX4-C. The difference in performance is obvious. Whereas the old Allied unit was prone to front-end overload, particularly during contests or the like, the HRO-Sixty is bullet proof. Selectivity is extremely good even by modern standards thanks to a crystal filter that works extremely well. The stock receiver came with the four basic coils covering 1.7 to 30 MHz. While it would be nice to obtain some of the other coils covering the broadcast band or VLF frequencies, these are hard to come by. If anyone has some used "E," F," or "G" coil catacombs lying about, let me know. I would be interested in purchasing them.

While not intended to be a "daily driver," it will be paired with the aforementioned Drake T4X-C for occasional use or as a back-up pair in the event it is needed. I've already worked a fair amount of DX on 40-meters with the pair.

Above: A power supply electrolytic capacitor and some of the paper capacitors replaced.
Right: The HRO-Sixty ready for business.

This past April (2021), Oliver Dully K6OLI, the Northeast District Emergency Coordinator for Los Angeles Section (LAX), asked me to create educational material that would help voice traffic operators improve the speed and accuracy of their formal message traffic.

In this case, "message traffic" means ICS-213 forms, and also several special purpose forms used by Los Angeles County's Medical Alert Center. The "MAC" allocates patients to area hospitals during disasters, and handles logistics and supply for hospital mutual aid in the County. During normal operations, an internet-based system known as "Reddinet" is used for this purpose. This does, however, require the Internet to be functional. To get to the heart of efficiency, Oliver wisely petitioned the operators in the Section who routinely pass voice messages with high accuracy, namely the National Traffic System (NTS).

LAX Section is served by two voice nets on wide-area repeater systems: the Southern California VHF Net and the Los Angeles Net. These nets meet in the evening, following the first (of two) Region 6 CW net, so their main function is to distribute incoming RN6 and DTN traffic to local operators for delivery, and to collect outgoing traffic to go to "outbound" the next day. The messages that we pass are all (expected to be) in standard radiogram format.

I made the points that the success of both voice and CW nets depends on the use of standard procedures. The sending station knows what to say and how to say it, so that the message is copied right the first time. The receiving station knows what to expect, in what order, and how to accurately transfer it to paper or computer in the standard predictable fashion, with the least amount of time wasted.

One long-standing "tool" that NTS and RRI have is the set of net control procedures we use. Basically, the NCS tells everyone else when to transmit and when not to transmit. If done properly, this can eliminate time lost from "doubling" and keeps the net operation efficient. Exact net formats vary, but basically net control is responsible for calling the net, taking check ins periodically, listing the traffic that is brought, keeping track of who is, or is not, in the net at the moment pairing stations with traffic with stations that can take it, and deciding which traffic to pass in what order. net control may also send a sending and a receiving station "QSY" to another frequency (usually simplex, but might be another repeater) to pass one or more messages, and then come back.

Provided traffic is not in the process of being exchanged, a new station wishing to check in will 1) wait for a pause,

and voice their call sign suffix only (HTN), or 2) when net control calls for "further check ins," also with the suffix only. Once net control acknowledges, the new station gives their full callsign and lists the destinations of the traffic they are holding (e.g. in this case likely to be CMAC, NWDEC, or even DTN or RN6 if the traffic is for outside the local area). With luck, there will be an NTS/RRI operator lurking on the net.

Once a particular station has sent the traffic that they brought, and has received any that they need to take, net control will excuse the station. That station would then have the choice of going on to other urgent business, or he could listen in the background and check back in if, for example, he can take some particular "piece of traffic."

If the situation is of extended duration, another net control may take over for a period of time.

An ace net control station will conduct a net with few, if any delays or misunderstandings that eat up time and delay messages. For extended practice as net control, experience on the traffic nets is of superb value.

Other "tools" that we use include, of course, the standard [ITU] Phonetic Alphabet, appropriate sending speed, well-placed "breaks" for possible clarification, and standard phrasing or procedural words, or "pro-words." Examples of prowords are: "I spell," "I say again," "Affirmative," "Negative," etc. "Roger" is a Pro-word with a unique meaning … "I have successfully copied the message" ("received and understood"). They are standardized to make it clear that they are not part of the message.

We also have the concept of "Introducers," which tell the receiving op something useful about the next "word" or "group" (which could be any collection of numbers and/or letters without spaces in it). Examples of Words would be KATE, K6HTN, ARES, CMAC, RN6, etc.)

The Introducer FIGURES warns of a string of numerals coming.

INITIALS predicts an alphabetic string.

MIXED GROUP is followed by a combination of letters and numbers, such as a callsign. AMATEUR CALL is used specifically for, well, an amateur callsign.

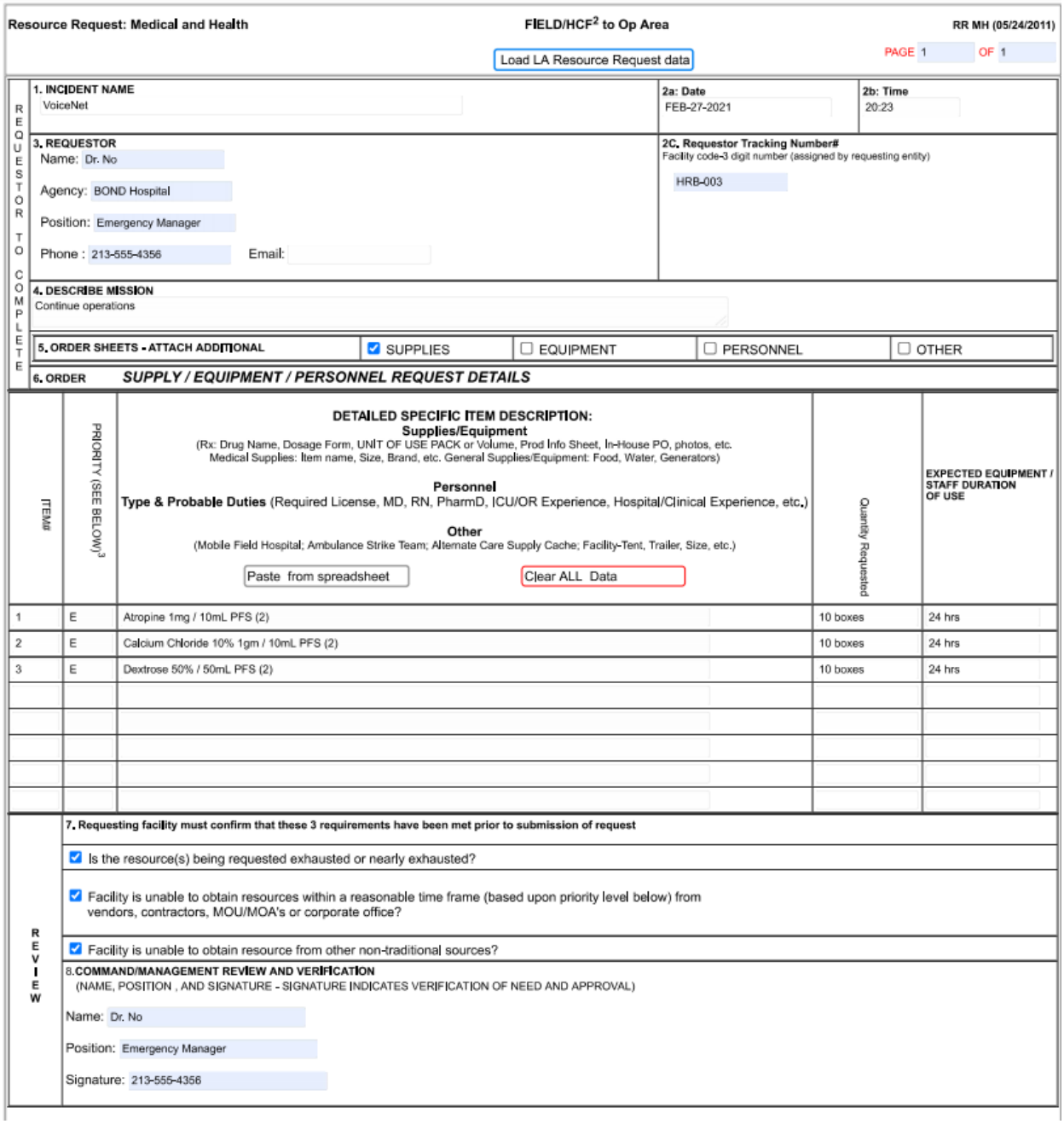
TELEPHONE FIGURES is a useful introducer that is followed by the three groups, with a voice pause between, of a telephone number.

NTS practice uses a limited character set. There is no such thing as upper/lower case (because the message could be relayed by CW or voice anywhere on it's route), nor specialized punctuation like the @, -, ?, and the like. Those particular characters are transmitted and relayed as ATSIGN or AT, DASH or HYPHEN, and QUERY. In the world of radiograms, an email address would be given as, say, "AMATEUR CALL K6HTN ATSIGN INITIALS ARRL DOT NET." In the radiogram world, this somewhat cumbersome practice facilitates transfer to CW, if necessary. ARES or other operators would not be expected copy it in that form, but it is still considered the best way to voice at email address, to minimize errors.

In order for the copied message to "look exactly like" the sent message, keep in mind that there is a difference between APR and APRIL, between CA and CALIFORNIA, 47 and FORTY SEVEN.

What about decimal points? 3.14 is actually three groups … FIGURE 3 DECIMAL, I spell Delta Echo Charley, etc., FIGURES 14. (Don't just send PI!)

Let's look at the following MAC form, which is a Resource Request:



Resource Request: Medical and Health — **FIELD/HCF² to Op Area** — **RR MH (05/24/2011)**

Load LA Resource Request data — PAGE 1 OF 1

REQUESTOR TO COMPLETE

1. INCIDENT NAME	2a: Date	2b: Time
VoiceNet	FEB-27-2021	20:23

3. REQUESTOR
Name: Dr. No
Agency: BOND Hospital
Position: Emergency Manager
Phone : 213-555-4356 Email:

2C. Requestor Tracking Number#
Facility code-3 digit number (assigned by requesting entity)
HRB-003

4. DESCRIBE MISSION
Continue operations

5. ORDER SHEETS - ATTACH ADDITIONAL ☑ SUPPLIES ☐ EQUIPMENT ☐ PERSONNEL ☐ OTHER

6. ORDER ***SUPPLY / EQUIPMENT / PERSONNEL REQUEST DETAILS***

ITEM#	PRIORITY (SEE BELOW)³	DETAILED SPECIFIC ITEM DESCRIPTION: Supplies/Equipment (Rx: Drug Name, Dosage Form, UNIT OF USE PACK or Volume, Prod Info Sheet, In-House PO, photos, etc. Medical Supplies: Item name, Size, Brand, etc. General Supplies/Equipment: Food, Water, Generators) Personnel Type & Probable Duties (Required License, MD, RN, PharmD, ICU/OR Experience, Hospital/Clinical Experience, etc.) Other (Mobile Field Hospital; Ambulance Strike Team; Alternate Care Supply Cache; Facility-Tent, Trailer, Size, etc.)	Quantity Requested	EXPECTED EQUIPMENT / STAFF DURATION OF USE
		Paste from spreadsheet / Clear ALL Data		
1	E	Atropine 1mg / 10mL PFS (2)	10 boxes	24 hrs
2	E	Calcium Chloride 10% 1gm / 10mL PFS (2)	10 boxes	24 hrs
3	E	Dextrose 50% / 50mL PFS (2)	10 boxes	24 hrs

REVIEW

7. Requesting facility must confirm that these 3 requirements have been met prior to submission of request

☑ Is the resource(s) being requested exhausted or nearly exhausted?

☑ Facility is unable to obtain resources within a reasonable time frame (based upon priority level below) from vendors, contractors, MOU/MOA's or corporate office?

☑ Facility is unable to obtain resource from other non-traditional sources?

8.COMMAND/MANAGEMENT REVIEW AND VERIFICATION
(NAME, POSITION , AND SIGNATURE - SIGNATURE INDICATES VERIFICATION OF NEED AND APPROVAL)

Name: Dr. No
Position: Emergency Manager
Signature: 213-555-4356

Please copy:

RESOURCE REQUEST MEDICAL AND HEALTH

Figure 1 INCIDENT NAME VOICENET

Mixed group 2A [two Alpha] Initials FEB Figures 27 Figures 2021

Mixed group 2B Figures 20 COLON 23

Break

Figure 3 REQUESTOR

NAME Initials DR NO I spell November Oscar

AGENCY BOND I spell BOND HOSPITAL

POSITION EMERGENCY MANAGER

PHONE 213 555 4356 NO EMAIL

Mixed group 2C [two Charlie] initials HOTEL ROMEO BRAVO figures 003

Break

Figure 4 DESCRIBE MISSION CONTINUE OPERATIONS

Figure 5 ORDER SHEETS SUPPLIES

Break

Figure 6 ITEM figure 1 PRIORITY initial E [echo]

ATROPINE I spell ...

Figure 1 Lowercase Initials MG figures 10 SLASH Figures 10 Lowercase Initials ML

Intials PFS Paren Figure 2 Paren

Figures 10 BOXES Figures 24 initials HRS

Break

Figure 7 CONFIRM THREE REQUIREMENTS

YES RESOURCE BEING EXHAUSED

YES FACILITY UNALBE TO OBTAIN WITHIN TIME FRAME

YES NO ALTERNATE RESOURCES

Break

Figure 8 COMMAND Slash MANAGEMENT REVIEW

NAME Initials DR NO I spell November Oscar

POSITION EMERGENCY MANAGER

SIGNATURE TELEPHONE FIGURES 213 555 4356

End no more

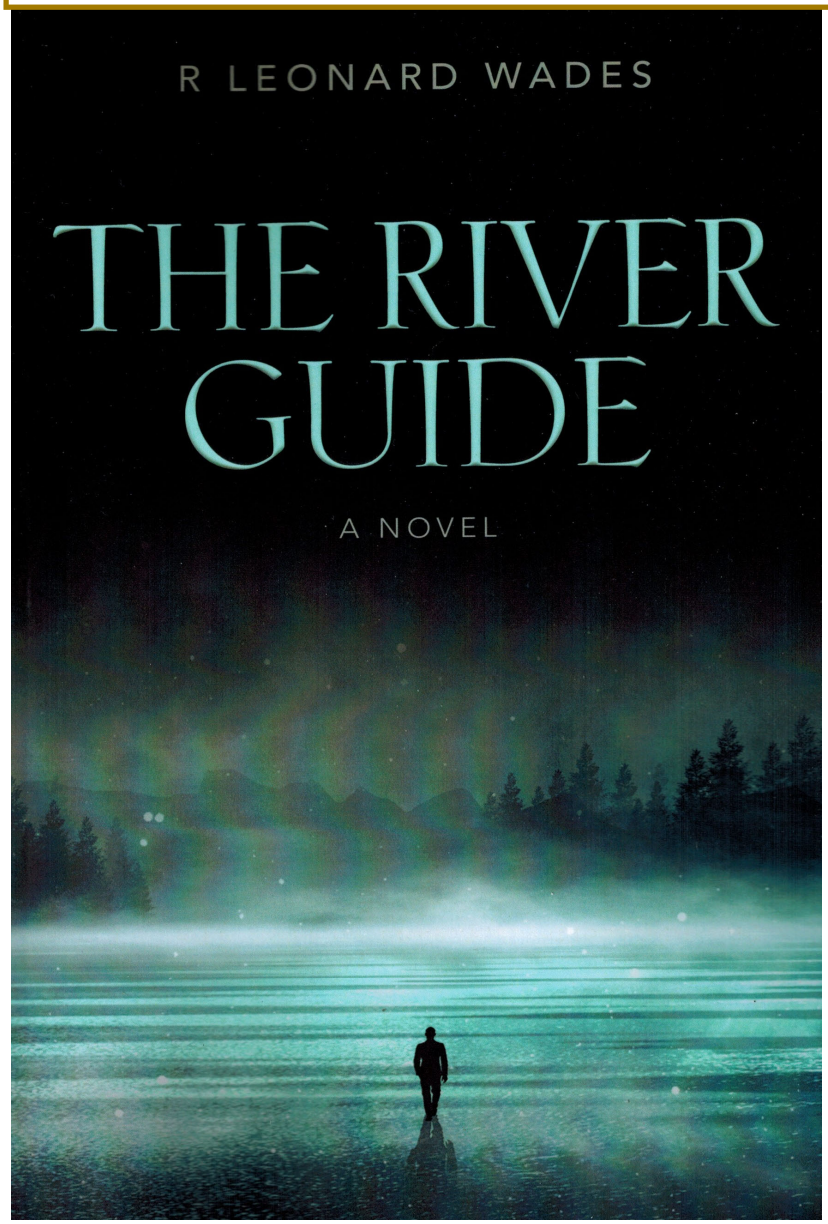
A copy of the power point file used in the presentation can be requested by NTS radiogram, addressed to:

KATE HUTTON K6HTN LAX STM
PASADENA CA 91104
K6HTN ATSIGN ARRL DOT NET

The Zoom presentation video can be had from: https://youtu.be/5KDy7W0J4-g

Thank you for your attention!

NR8TU RELEASES HIS FIRST NOVEL



It's not every day that an RRI Registered Radio Operator invests the time to write a novel. Therefore, your editor offers this shameless plug for his brother's first novel, entitled "*The River Guide*." A brief plot summary is provided below:

Henry Morrison works as a fly-fishing guide on a river in Northern Michigan where he first learned to cast a line sixty years earlier. His life should be settled, surrounded by family and friends, but nothing turned out as planned. Bitter and angry, Henry is struggling with the bottle. He's consumed by grief arising from tragedy and haunted by memories of a past love. The Vietnam veteran is practically a recluse, emerging from his home only to purchase necessities and to guide his many clients.

Mike Johnson is moving from California to Michigan, uprooting his family as he advances his career. His teenage son, Jake, is sullen and unhappy with the prospect of being separated from his friends. As a fly-fisherman, Mike taught his son the sport, and it had always been a wonderful bonding experience. He hopes a brief trip to do some fly-fishing might ease the strain in their relationship, but that isn't his only motive. Mike is on a mission, and Henry plays an integral role in its outcome.

During Fourth-of-July weekend, Henry is hired to conduct an evening float-trip for the father and son from California. He soon discovers that he has a past association with his older client. Henry has no recollection of the man, and Mike won't reveal his secrets until they're all together, alone on the river. Throughout the evening and the two days that follow, Henry is introduced to a series of strange, some could say miraculous events that might have the power to change both of their lives.

In addition to being available at Amazon, *The River Guide* by R. Leonard Wades is available from Barnes and Noble at: https://www.barnesandnoble.com/w/the-river-guide-r-leonard-wades/1139311187 and at Book Locker.com at: https://booklocker.com/books/11697.html

QNI NEWSLETTER

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A Traffic Operator's Newsletter

QNI is published quarterly…or more often when the Editor feels like it!

SHOULD WE ADD NEW HANDLING INSTRUCTIONS?

The introduction of the RRI Radiogram-ICS213 message form, as well as specialized radiogram forms for the holiday season, museum telegraph demonstrations (refiled to RRI/NTS), ensures a professional, appealing delivery with value-added public relations content.

In order to facilitate these specialized radiogram forms, we propose the addition of the following handling instructions to the traffic system:

HXI: Delivery via Internet email preferred.

HXJ: RRI Radiogram-ICS213. Please deliver using RRI form 1703 or equivalent.

HXK: Holiday season radiogram. Please deliver using RRI form 1801–Christmas or equivalent.

HXL: Railroad museum demonstration telegram. Please deliver using RRI form 1901-Telegraph

Let us know what you think. Do you have objections or concerns? Does it make sense to update our list of handling instructions to reflect the growth and emerging diversity of services provided by the traffic system. Contact us with you opinion: info@radio-relay.org

NEIGHBORHOOD HAMWATCH PROVING POPULAR

A number of radio clubs, ARES® units, and other EmComm organizations are adopting the Radio Relay International "Neighborhood Hamwatch" program. The name is sometimes changed somewhat to "Neighborhood Radio Watch," or an equivalent, but the fundamentals of this RRI program don't change.

RRI adopted and popularized the "Neighborhood Hamwatch" and "National SOS Radio Network" programs after the concept was dismissed by other organizations. **It offers great benefits to the local EmComm community by leveraging FRS and GMRS assets as a force multiplier.**

Neighborhoods organizations and VOADs use interoperable FRS and GMRS assets for their intra-unit (internal) communications in the field, with either an embedded radio amateur or a nearby radio amateur equipped with GRMS capability serving as a gateway to the local ARES and RRI nets for access to the PSAP, EOC or even national/international infrastructure via Radio Relay International or Winlink.

This program disrupts the old model of "shadowing," thereby using Amateur Radio assets more efficiently. The local radio club or similar organization provides the training in radio procedures, message formats and so forth.

Learn more at: http://radio-relay.org/emcomm/neighborhood-hamwatch/
http://radio-relay.org/emcomm/national-sos-radio-network/