QNI—THE NTS NEWSLETTER

JUNE, 2015

THE QSL CARD TRADITION

We may never know when the first "QSL" card was created. Undoubtedly, the QSL card tradition began when radio amateurs pressed the old penny postcard into service to acknowledge receiving a distant station or to memorialize a particularly intriguing contact.

The QSL Card of Henry W. Hall mailed March 31, 1933. His station was located atop the Rialto Theater in Beeville, Texas.

At about the same time radio was emerging, commercial post cards printed using lithography and containing photos and illustrations were becoming popular. It only made sense for radio amateurs to have some custom post cards printed featuring one's call sign, station details and the like. Once a few radio amateurs did this, the "QSL craze" was well underway.

Early QSL cards provided eminently useful information. During the '20s, most stations were entirely home-made, and radio amateurs were quite curious to learn which "hook-ups" and antenna systems provided the best signal. As operating awards emerged in subsequent decades, the QSL card become a trophy to prove one worked a particular DX station or an uncommon state or province.

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Summer Issue

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QNI MISSION STATEMENT

QNI is an *independent* newsletter dedicated to promoting NTS and 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 the *ARRL*, the National Association for Amateur Radio, nor those of any particular NTS net or emergency communications organization.

Our mission is to provide a forum for NTS 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.

QSL Cards
(continued from page 1)

Unfortunately, the tradition of sending a QSL card is now fading into the past. Few radio amateurs build their own equipment. Nationwide communications is common-place. New virtual tools exist for documenting one's contacts with rare DX entities or stations. Nonetheless, it's fun to take a look back at a time when a visit to the mailbox was an exciting moment of discovery during which one hoped a few interesting QSL cards might be waiting with the day's mail.

A few samples of QSL cards from the 1920s and 1930s are pictured in this issue of "QNI," . One of these cards is from Henry W. Hall, a pioneering radio amateur located in Beeville, Texas. Mr. Hall built a ham radio station atop his "Rialto Theater" in downtown Beeville and operated for a time under the call sign 5ZAI, eventually being licensed as W5WE.

The Rialto Theater was gutted by fire in 1936 and was rebuilt in an art deco style. It still stands in Beeville, where a small group of local citizens are doing their best to maintain and restore it. Hopefully, the day will come again when one can visit Beeville with his sweetheart, waltz the aisles of the five and dime and then hold hands while enjoying a movie at Henry W. Hall's Rialto Theater.

Using the Radiogram Format for Weather Data Reporting

by James Wades, WB8SIW

When one monitors various nets dedicated to weather data reporting (Hurricane Watch Net, etc.), one can't help but conclude that a degree of standardization could do much to improve the reporting process. Standardization would result not only in better quality control, but it might also eliminate some of the superfluous information that is volunteered on such networks ("winds are calm here in North Dakota"). One tool, which could prove of significant benefit, would be the radiogram format.

The radiogram format provides everything needed to generate an efficient, sequentially logical report. It provides:

- Accountability (who is reporting the observation?)
- Location information (where was the observation made?)
- Date-time group in UTC (when was the observation made?)
- Routing information (NWS CWA in which the observation occurs or routing to a particular EMA)

Standardized formats also allow both radio operators and meteorologists to more easily cull information from a series of messages, whether that data is culled through a quick reading of the message traffic or manually logged onto a spreadsheet or other form. If done properly, radiogram traffic can even be electronically stripped of its relevant data using software and converted into a tabular format for distribution through automated networks such as NOAA Weather Wire Service.

Best of all, radiogram format allows the data to cross multiple radio networks without confusion or loss of information. Additional resources, such as NTSD (digital), NTS voice and CW nets (which are ideal under poor conditions), could easily supplement the wide-coverage independent nets commonly heard on 20-meters.

Consider the following hypothetical example:

The Evangeline Parish ARES Group wants to collect weather data during tropical storm events. Of particular interest might be the following data:

- Barometric pressure
- Wind speed
- Wind direction
- Precipitation
- Damage summary

Certainly, one could simply ask ARES members to pick-up a microphone and call a NCS with the data. However, someone still needs to collect and log that data, and it's much easier to log this information if the data is transmitted in a predictable, repeatable sequence. In other words, imagine yourself sitting in front of a computer at a NWS office logging weather data reports from ARES members onto a spreadsheet (or paper forms). Would it not be easier if each observer transmitted the data in an identical sequence, which matched the blanks on the spreadsheet? Would it not be easier and quicker for the meteorologist, hydrologist or emergency manager to cull needed data from a quantity of reports if he intuitively knew where to look within each message for specific information?

Simply put, transmitting important data is not a simple matter of "telling" someone over a two-way radio about the weather in the same way one's teenaged daughter "tells" her friend about the scary weather on her cell phone. A degree of standardization speeds the process not just on the radio circuit, but administratively as well. This greatly improves efficiency, eliminates repetition, improves accuracy, and makes it easier to log information. For example, consider the following hypothetical weather data report transmitted in radiogram format:

3 P WB8SIW 6 ACADIA LA 1345Z AUG 13
NWS-LIX

PRESSURE 2954 SW 45/67 RAIN 322

WADES

In this simple six word message, the following information has been conveyed:

- The barometric pressure corrected to sea level is 29.54 inches Hg
- The wind is from the Southwest at 45 miles per hour gusting to 67 mph
- 3.22 inches of rain has fallen since the storm began.

You will note that no punctuation is used. It's not necessary. Through standardization, one knows that barometric pressure is measured to the 100th of an inch and rain is measured to the hundredth of an inch. One can also understand that the default for wind speed is mph (as opposed to knots). Thanks to radiogram format, we also know:

- Where the measurement was made ("Acadia, Louisiana")
- The observation was made at 1345 UTC on August 13.
- The station responsible for transmitting the report is "WB8SIW."
- The name (and title, if any) of the observer (the observer need not be the ham transmitting the message).

One might also add storm damage information. For example:

4 P WB8SIW 17 ACADIA LA 1500Z AUG 13
NWS-LIX

PRESSURE 2931 S 56/80 RAIN 503 X WIDESPREAD POWER OUTAGES TREES UP TO SIX INCH DIAMETER DOWN

JONES
FIRE CHIEF

In this latter example, the observer, who is the municipal fire chief, has appended a storm damage report. This adds valuable information without changing the data sequence in the message.

Universality

By standardizing observations using the radiogram format, the traffic can be routed and processed through any available mode, such as HF CW or voice traffic nets, NTSD, WinLink radio e-mail, packet radio networks and so forth. The data can then be easily stripped, manually or automatically from any of these methods and used as needed. By addressing the message to a specific CWA or agency (National Weather Service Office, NHC, EOC, etc.), observations can be routed to a specific location within wide-coverage nets, such as section nets or even region-wide operations.

While the use of radiogram format may seem counterintuitive to the *inexperienced* ARES operator, such standardized methods actually save time and enhance network efficiency. When informal methods are used, one loses the advantage of predictability. Data becomes confused, errors are introduced and operators on the circuit need to repeat important data for clarification. If one doesn't believe this, just listen to some of the charades heard on the 20-meter independent nets that spring-up during tropical storm season.

A mission for NTS?

Section NTS nets would be an ideal resource for implementing such a program. Net members could either collect the data directly and originate their observations to a liaison station responsible for delivering the traffic, or collect the data on local ARES nets and the transfer the data to a liaison station.

Such a program need not be conducted on 80 (75) meters. It might be helpful to establish a protocol through which observations are transmitted to a liaison station located far outside the affected area using 30 or 20-meters. The use of higher frequencies tends to minimize the problem of heavy QRN associated with tropical storms.

NTSD resources could be used to great advantage. Liaison stations could collect observations from their section nets and then upload the observations in the form of batch files to NTSD for automatic routing via efficient, automated NTSD PACTOR networks. All forwarding could take place automatically.

Quality Control

ARES and NTS could offer other advantages over observations submitted by the public using the Internet and social media. One significant advantage would be the implementation of quality control measures to ensure that volunteer weather instruments are regularly calibrated and maintained, rain gauges are located correctly and so forth. Best of all, Amateur Radio resources are decentralized and survivable and capable of operating even when the Internet is down or cellular infrastructure is overloaded. When the storm is over, the networks will already be in operation to transition into emergency response or health and welfare functions.

The real trick!

The real trick needed to make such a program work is to convince ham radio operators to participate in a program that doesn't involve their smart phone or the Internet. When such easy and familiar resources are available, it's very tempting to use them. It seems that more and more hams feel compelled to use commercial common-carrier resources for their activities, as opposed to supporting networks that develop and strengthen our own survivable resources. The result is a pathological "disuse atrophy" that has degraded our ARES and NTS nets over time.

It would be interesting to see if any ARES or NTS groups would want to start such a program. One could start out small in a single county, or a section and then expand over a multiple-state area. Such methods could do much to add professionalism and quality control to the process of supporting agencies such as the National Weather Service and local/state emergency management.

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Introducing Scouts to Morse Code

by James Wades, WB8SIW

The Morse Telegraph Club receives a number of requests each year from scouting groups seeking a brief "merit badge" class or introduction to Morse code. In recent years, I have had excellent success introducing both Boy and Girl Scouts, of various ages to Morse code, usually during short two to three hour sessions.

While MTC is a historical association dedicated to preserving the history of commercial and railroad telegraphy, which used the American Morse Code, we make a point of introducing scouts to the Continental Code (International Morse). This is done to set the stage for a possible future interest in the Amateur Radio Service. While knowledge of "CW" is no longer a FCC license requirement, radio amateurs remain the World's foremost users of radiotelegraphy. Ideally, such a class can plant some seeds of interest, a few of which may grow into a future interest in ham radio communications and CW.

Before outlining the structure of the class, one should mention the equipment needed. I have found the following items to be essential for conducting the class:

- A CW keyboard with code practice oscillator. I have found the MFJ Model 452 to be ideal for this application.
- A box of Code practice oscillators and keys. At least one set for every four students is helpful. These units should be of sufficiently good quality to withstand the abuse of youngsters, but lightweight and portable enough to transport easily. An excellent choice is the MFJ-557 code practice set.
- A stack of 8 ½ by 11-inch pads of paper.
- A box of pencils
- A stack of code charts.

In the past, I have borrowed code practice oscillators and keys from friends in the ham radio community. This had proven to be a fairly daunting logistical undertaking. I have now begun to slowly buy them one or two at a time at ham radio swap meets, the goal being the development of a "scouting merit badge kit" in which everything needed to conduct an introductory class is stored in a couple of transportable plastic tubs between uses. Such equipment can then be loaned out to other MTC chapters or volunteers for similar purposes. Our goal is to have a package assembled, which can be shipped across country to any MTC volunteer who wishes to assist with such an activity.

By the way……It should be noted that the Morse Telegraph Club is a 501 (c)(3) non-profit organization and we would be happy to accept donations of any unused code practice oscillators or garden-variety straight keys for this purpose.

Conducting the Class:

Before conducting the class, it is important to recognize that neither children nor most adults have any real concept of the process of conveying information using Morse code. Unless exposed to the art of telegraphy through a relative or friend, most envision the process as something that is slow, laborious and hopelessly old-fashioned. Therefore, the first job of the instructor is to dispel the notion that telegraphy is old-fashioned and inefficient. In order to do so, it is essential that the students see and hear the process of communications via telegraphy conducted by someone who is very proficient in the art.

As with all lectures or classes, the event starts with introductions. However, in this case, we do so with a bit of a twist. While the instructor introduces himself simply by stating his name and a bit about his background, the students are invited to introduce themselves in a far different manner. Each student is invited to step up to the head of the class, one at a time, and type his or her name on the CW keyboard. In my case, the CW keyboard is set to reproduce what is typed in Continental Code at approximately 35-words per minute. For example, if a student types "Jenny," I listen to the code and then say "pleased to meet you Jenny."

One quick point should be made about this process. There are some areas in which the names of children fall far outside the traditional norms of European culture. If you conduct a class in an urban area, be prepared for names that often seem like cipher groups, complete with hyphens, apostrophes and very unusual spellings. If you are not an expert operator, it may be wise to lower the speed of the CW keyboard a bit below your

maximum comfort level to allow some "breathing room" when one encounters an unusual name like "D'quone" or "Daon-she!"

Invariably, the children are absolutely amazed that one can understand their name from the seemingly random series of beeps heard emanating from the speaker. They are even more amazed at the fact that someone can copy a message so quickly. Invariably, the students want to do it again and again. Sometimes, they want to send someone else's name a second time just to see the process at work.

Just as in the adult world, one will also encounter children who are skeptics. In most classes, one or two of the children will insist that I "turn around" and face the wall in such a manner that it is impossible to catch a glimpse of the keyboard; their assumption being that it is impossible to actually decode the CW and instead, they are victims of some sort of magic trick! When they realize one can't possibly see the keyboard, they invariably become true believers!

The next step in the class is to introduce them to the sound and rhythms of the code. Of course, this takes place at a much slower speed. Each student is given a simple code chart with the "dots and dashes" juxtaposed with their phonetic "di" and "dah" equivalent. I simply go around the room, sending each letter myself and then having each student repeat the rhythm pattern on his or her key. In other words, the first student repeats "A" several times, the next child in line repeats "B" several times and so on, until we have gone completely through the alphabet and available students. *It is not important for the children to get the timing perfect*; rather, the goal is for the children to simply grasp the basic timing of the "real thing."

While not essential to conducting a class, I also have the benefit of a portable US army code training set. This set uses a common, high quality code oscillator and multiple "J-36" telegraph keys, all of which can be wired on a common circuit. This allows me to better control the class and the scouts hear their CW characters reproduced at the same volume and tone as that demonstrated by the instructor. If one can find such a set, it makes an excellent addition to the event, provided it has not been robbed of all of its keys by some ham looking to make a buck at a swap meet.

During the process, one will find that most children have a natural sense of rhythm. They are also great at imitation. If one sends a clean, neatly-formed letter a few times, the child will quickly imitate the spacing and dot-dash ratio. During this process, I concentrate only on the letters and tend to ignore the numbers. The goal is to simply explain the concept of how code is sent and to prepare the students for the final phase of the interactive exercise in which they get to format a brief text message of a few words and send it to their friends.

Break-out Session:

After each child has had a chance to send a character or two in turn, I break the students into groups of four, with two teams of two scouts each. This is best done by placing each group of four scouts at separate tables, with some isolation between each table. One team of two children then sits on one side of the table while the second team of two children sits on the opposite side of the table. Each group of four shares a code practice oscillator and key.

Once the students are broken into these groups, they are instructed to take turns, with one team of two composing a very brief message of not more than three words, which they then transmit to the opposite team at a very slow speed. The opposite pair then receives and tries to decode the message. The roles are then reversed with the opposite pair then having an opportunity to compose a brief message to send to the others.

It is important to note that most scouts receiving the message will want to write down the dots and dashes as heard and then translate them from the code charts provided. With only a couple of hours for the class, this is the only real option available. However, the instructor should always take a moment to explain that should the students want to pursue CW or telegraphy, they should learn to recognize the sound patterns of the characters and not rely on such a crutch.

One should plan on having sufficient time for the kids to engage in this latter phase of the exercise. It is also *essential* to have several adult leaders or older scouts assigned to assist each break-out group. The adults can keep the children on track, offer mature advice, and keep the event from breaking into a "free-for-all" of beeping, chirping and out-of-control laughter! With a bit of structure, everything will move along smoothly and the scouts always have great fun trying to send a "secret message" to their peers. A bit of coaching from an adult will ensure that they send the message very slowly, allowing sufficient time for the children to write out the dots and dashes and decode them on paper.

It is important to understand that the idea of the class is to simply explain Morse code and hopefully generate an interest in learning CW. One needn't worry too much about how the children "decode" nor should one try to get them to memorize the character set or send perfectly. They need to know just enough to have a bit of fun and perhaps even experience a bit of laughter as they try to compose or decode a message.

Optional demonstration of telegraphy or Amateur Radio:

Once the break-out sessions are done, one can either end the class, or, in the case of older students, demonstrate telegraphy. I have demonstrated both commercial telegraphy (key, relay, sounder and American Morse Code) as well as HF radio. In the latter case, I often set up a portable transceiver and originate a radiogram message or two via CW. The messages are usually solicited from one of the scouts and are often addressed to a parent. The process of originating the radiograms is designed to simulate a message they might send in the event of a disaster. This gives the students a chance to see CW in action and it draws

the obvious connection between the development of the skill and its practical application. Not only do the scouts get a big thrill out of seeing their message transmitting using the old Army Signal Corps bug, but I am told by the NTS members delivering the messages that the parents often greatly enjoy receiving the messages.

Of course, one isn't going to make a Morse operator in a couple of hours. However, the exercise is an excellent way to introduce young people to the basic concept of telegraphy (radiotelegraphy) in a manner that is both fun and entertaining. Undoubtedly, it will also leave a few with a lasting fascination with the art and skill of telegraphy.

Field Deployment Exercises—Fun and Training

by James Wades, WB8SIW

Kalamazoo County, Michigan ARES has had excellent success with a concept called "LoST" ("Line of Sight Team"). The idea behind the program is to combine the weekly VHF ARES net(s) with a field exercise during which members meet at a local park, fire station or similar facility to deploy their portable stations. While primary emphasis is on "line of sight" (VHF and UHF) methods used to support a local ARES operation, HF methods are also encouraged and included.

These weekly drills provide an excellent opportunity for members to test the equipment they might use in the event of a disaster. By regularly testing their field equipment, they are less likely to find themselves missing critical components or important operating aids when they are actually needed. By conducting regular exercises, ARES can enhance operational readiness and improve the quality of technical training within an ARES group.

As discussed in previous articles, many weekly "two-meter" ARES nets are of little or no value. Individuals report into the network from their homes, offer a few comments, and then the net is closed. Little knowledge, if any, is gained from such a mundane exercise. By combining an occasional weekly ARES net with a field deployment exercise, one can do much to enhance the basic response skills of ARES members.

Obviously, one need not do this on a weekly basis. A monthly or even quarterly drill would offer considerable value to any ARES group. If one combines such a drill with the process of pushing around a few simulated messages or collecting and reporting data from a field site, one might find that not only do members learn a lot, but they also have considerable fun in the process.

Such an exercise might also be of value for NTS net members. A STM or NTS Net Manager could develop a periodic drill around the same concept. For example, once per quarter, net members would be encouraged to set up a portable station, report into one or more traffic nets, and originate a message to the STM, Net Manager, SEC or other official reporting their participation. These messages could contain some type of requested data, such as the location of the deployment, exact geodetic coordinates or even a pre-arranged "test message" drafted by an EC, AEC or a served agency official. If one wanted to get really organized, one could break a section into districts or zones and have a different district deploy each month or each quarter. This would leave some operators in alternate portions of the state/section available to facilitate message origination or delivery from their better equipped home stations.

By deploying a portable station to the field, one can learn a lot about its efficiency. The antenna that works fine for casual "QRP" contacts may not provide a traffic-quality signal when one must transmit a radiogram under less than optimal conditions on schedule and on a specific frequency. The battery pack that supports 5-watt operation for casual contacts via HF may not have sufficient capacity to support network operation at 10 or 20-watts. One may find that their portable HF station lacks sufficient efficiency for SSB work, but is adequate for a net using CW or one of the narrow-bandwidth digital modes.

Such a drill also allows one to learn a lot about the realities of operating in the field. A simple CW station, with some self-carbon message forms, a waterproof notebook and a few sharpened pencils may prove more efficient than attempting to deploy a power-hungry laptop computer and printer to a damp field location. Simplicity often trumps the "bells and whistles" when one must attach multiple interface cables and devices to conduct data communications.

If one must set up his/her station in an unfamiliar building, he will quickly learn about the need for sufficient coax, the relationship between frequency and building penetration at VHF and UHF frequencies and the problematic nature of background noise from lamp ballasts, IT networks and the like, all of which might also be a real problem in time of emergency.

Ideally, individual ARES or NTS members needn't go to great lengths to participate in such a drill. A test of portable equipment can be conducted in one's back yard, at a nearby picnic area or campground or at a random location in a national forest. HF-mobile operation can also be included in such a drill. For example, one could use such an exercise to determine if the "ham stick" is of sufficient efficiency for field operation as compared to the Hustler mobile antennas or "Texas Bug Catcher" arrangement.

Another advantage of such an exercise might be the fact that it would encourage some of our regular NTS net members to actually originate a few messages. Many NTS volunteers report into nets regularly to relay, receive and deliver radiograms, but few originate unique message traffic. By requiring a message origination during the drill, one can encourage these infrequent originators to get some practice transmitting message traffic using the mode of their choice.

A cycle of drills could also be used to encourage ARES groups to participate in NTS. An EC could have several volunteers establish a portable HF and VHF station in the field. He could then transmit a message or two via VHF to each deployed team, which would then relay the message via HF radio to the NTS net of their choice for routing and delivery.

An enterprising STM may want to assign an "Assistant STM" to supervise such activities. This individual could schedule the dates, promote the program and serve as point-of-contact for incoming messages when necessary. He could even develop the measurable standards to gauge overall system efficiency, collect the necessary data to determine the successes and failures within the drill, and issue the occasional after-action report identifying areas requiring improvement.

After each drill, participants could report their activity to the STM or ASTM so that useful data on the exercise could be used to document ARES and NTS preparedness within a section. If your section is not doing so already, you will find it beneficial to track the total staff (volunteer) hours spent on training and net activities for regular reports to local and State EMAs. By assigning a dollar value to volunteer time, served agencies can assign a measurable value to the development and maintenance of a volunteer communications "reserve" for emergency management purposes. Such "dollar value" measurements have considerable political value when the time comes to challenge onerous antenna regulations or legislation restricting mobile amateur radio operation.

Finally, such an activity does not require official sanction any more than setting up a QRP rig in a park requires official sanction. Ideally, such a drill would be conducted under the auspices of an ARES, RACES, MARS or a similar group, but if such support is not forthcoming, any group of NTS volunteers can form a local "emergency communications team" and meet in the field for a periodic drill. Remember that in time of emergency, one's customer base may be quite diverse. Even if ARES refuses to play with NTS, one may still find himself providing a critical link for a nearby served agency, his neighbors, or others who are aware of Amateur Radio's emergency communications capabilities.

With the spring season approaching, why not develop a program of field deployment drills. None of us want to fail when the "big one" hits and the only way to ensure this is through training and exercising. Ultimately, our core competency is emergency communications and one achieves real emergency communications preparedness in the same way one gets to Carnegie Hall…..*practice*!

The Assistant STM Position
By James Wades, WB8SIW

The ARRL Board of Directors recently authorized the creation of the "Assistant STM" position. This could prove of significant benefit to many sections.

The STM position in many areas has devolved into an administrative post in which the STM collects net reports, perhaps appoints the occasional net manager and reports basic data to the Section Manager.

The ASTM position opens some new possibilities for improving and revitalizing NTS at the Section Level. For example, one could create the following ASTM positions:

***ASTM Training*:** A STM could develop a cadre of one or more experienced individuals for training purposes. These individuals would be available to present talks on NTS, net procedures and emergency communications preparedness to radio clubs and ARES groups. A "travel area" could be defined for each ASTM for Training so that the burden of presenting talks to various organizations does not fall on one person.

***ASTM Emergency Preparedness*:** This individual could be responsible for developing and exercising an effective alert procedure designed to ensure that Section nets can be brought up on frequency to support an emergency operation. He could develop a system consisting of several dispersed points of contact which would then be responsible for disseminating bulletins to NTS members throughout the section when they are needed.

***ASTM National Weather Service*:** If a section were to develop a standardized method of reporting weather data during significant weather events, a competent individual could be tasked with developing the necessary liaison procedures for transmitting this data to NWS and its partner agencies.

Such tasks would free-up a STM to concentrate on the "big picture" administrative tasks which should include not just record-keeping, but also representing NTS at important ARES and section functions.

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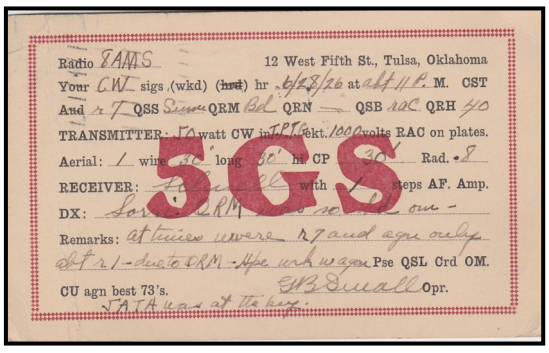
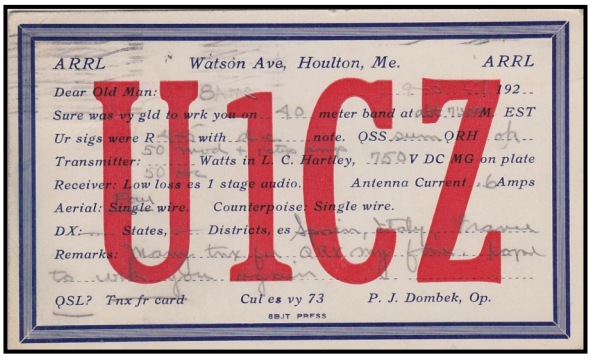


QSL card of 5GS mailed June 29,1926

QSL card of 1CZ mailed Sept.10,1927



Some Service Message Statistics

By Kate Hutton, K6HTN

If you think the bulk traffic originators don't read their service (SVC) messages, you may be in for a surprise. Coincident with my retirement at the end of January this year, I have now had time to apply some basic data analysis to what I've been getting back through NTS.

First some background: I originate messages to newly licensed hams in calling areas 1, 2, 3, 9 and 7. Other NTS ops take care of the other calling areas (including the "Westphalia" Section). I download the FCC ULS updates weekly for my locations and then look up publically available phone numbers for as many as possible. I don't probe the internet very deeply, because it would be time consuming and would probably yield mostly older information. If I don't find a phone number in about 30 seconds, I don't welcome that particular ham. I will use any number listed for a person with the same last name, at the same address, if the area code is appropriate. Looking at four weeks of welcome messages sent, I got phone numbers for 548 hams (only 30% or 40% of the ULS download).

One of my motivations for looking through the SVC messages is to try to get a handle on how many of the phone numbers are actually good. Based on looking up my friends and relatives, I have a "feeling" that the 411.com and whitepages.com, which may in fact use the same source, are at least one year behind. We can think of them as equivalent to last year's paper phone book.

My other motivation is to get some idea of how many of my messages are actually getting through. In this regard, the project doesn't help a great deal, because, if a message is not serviced, I cannot tell if it was delivered or not. I was sort of appalled, in my naiveté, at the low rate of servicing. I am left wondering whether the other messages were delivered and just not serviced, are still marooned on a MBO somewhere, or fell into the nearest black hole. The mystery reminds me of the dark matter controversy. Where/what is the missing matter in the Universe?

In this quick-look analysis:

- After allowing ample time for SVC messages to arrive, four-weeks-worth of new ham messages were scrutinized.
- I excluded AK and HI because of the very small number of data points.
- Because calling area 7 is so huge & has so many new hams, I divided it into two parts, which I chose to call TWN & RN7, even though the calling area boundaries do not actually match the NTS regions (for example, I got no hams in NM for my search, even though NM is in NTS TWN).
- I took the delivering station's word for what was an ARL FORTY SEVEN and what was an ARL SIXTY SEVEN, since most of the time the delivery method, or any other editorial comment, was not included.
- If the SVC messages did not use an ARL Numbered Radiogram, I looked for key terms such as "delivered" or "undeliverable."
- However, any that included "mailed" or "USPS" went to a third category.
- Quite a few messages referred to the wrong original message NR, probably due to a transmission error of some sort. Either I got two SVC on the same message, originated by different ops, or the callsign (if given) didn't match the NR, or the servicing station was completely in the wrong location.
- I am still getting SVC messages trickling in, so the last week's data may be incomplete.
- I have only gotten one SVC message that did not include even the original NR … "ARL SIXTY SEVEN GETTING NO ANSWER."

Here are some of the quick-look results:

	SVCD	DLVD	NOT DLVD	USPS
1RN	67%	43%	7%	7%
2RN	31%	21%	3%	8%
3RN	19%	15%	2%	1%
9RN	50%	29%	19%	2%
TWN	50%	32%	15%	2%
RN7	42%	22%	15%	6%
AVG	43%	27%	12%	4%

- The percentage of messages serviced varied from 19% in 3RN (largely due to an extremely low servicing rate in PA) to a whopping 67% in 1RN.
- There are, on average, slightly over twice the number of ARL FORTY SEVENs (27%) as there are ARL SIXTY SEVENs (12%).
- I was surprised at how few messages were serviced as NO OUTLET; only a handful. Of course, an undetermined number of those not serviced could be getting lost for just that reason.
- Most of the ARL SIXTY SEVEN messages had phone number problems; disconnected numbers, numbers no longer in service, numbers not answered, or numbers that

turned out to be fax machines or dial-up modems. Some or all of the 4% that were delivered by US Postal Service may also be a result of telephone number problems. So a good "wild" guess is that up to 15% of the numbers listed by 411.com/whitepages.com are no good, OR lower if a significant number of the telephone numbers were corrupted during message transmission.

- Most (I still have to look at the figures) of the SVC message arrived by digital means, either via NTSD or directly via WL2K, whether or not the original message was transmitted by manual net or on NTSD. If the new ham messages ended up on a local net, where random delivering ops picked them up, this would make sense.

Why might a message bearing HXC not be serviced?

- It might not have arrived in the first place.
- It might be ignored, as a shining example of "spam" traffic.
- The delivering op may not have read the preamble closely enough to notice the HXC, or may have forgotten to carry it out.
- The delivering op may not know the meaning of HXC (a training issue).
- If a message was delivered on the air, it may be unclear to the operators involved who was supposed to service the message.
- The SVC message may have been lost in transit, in which case the disappearance rate of original messages would have been lower than estimated.

Diligence to detail of this type is not a perfect way to probe the health of the NTS. For one reason, there are known personal biases out there, not sanctioned by the MPG, that are likely to cause higher message loss than for other types of radiograms. However, the data are at hand and some people, myself included, cannot resist a pile of data.

This review does suggest that a significant number of NTS messages, maybe more than 50%, are not getting through to their destinations. One can only hope that Priority and Welfare messages (or the rare personal message) get better treatment!

INTERESTING SIDE NOTE: Where does the term "service message" come from? Maritime CW service, which charged per word, had various categories of "free" messages, including "deadhead" & "service" messages. "SVC, or A. Service messages refer to previous messages that have been handled, to the operation of the communications system, or to the nondelivery of messages. Since SVC messages refer to previous traffic, they have priority over any other routine messages. They carry no charges. They may or may not carry a serial number." From Electronic Communications, by Robert L. Shrader (1967 edition), Chapter 33 "Communicating by Radiotelegraph"

Morse Code is Cool! Who knew?

By James Wades, WB8SIW

I recently spent a rainy, cold, damp Saturday at Tamarack Boy Scout Camp in Michigan assisting with an "Emergency Preparedness Fair." During the event, scout troops visited a number of "training locations" at which they received training on everything from first aid to survival skills. I was responsible for introducing them to disaster communications techniques.

The event was arranged in such a manner that groups of approximately 10 to 15 scouts would hike between training locations scattered throughout the campground, spending approximately 30 to 45 minutes at each location learning some new skills and ideas.

In addition to discussing such topics as the limitations and vulnerabilities of cellular data networks, the telephone network and the Internet, we discussed such topics as how to properly communicate using two-way radio, the application of the phonetic alphabet, some basic voice radio procedures. I also gave each group of scouts a brief introduction to the International Morse Code and discussed ways in which information could be conveyed using Morse Code via different improvised techniques ranging from flashlights to signal mirrors, whistles and even automobile horns. After some practical exercises designed to introduce the scouts to the use of International Morse, I demonstrated Amateur Radio.

For this phase of the training event, I had set up a battery-power station consisting of a Yaesu FT-897D, solar panels and an end-fed half wave 40-meter antenna erected using a nearby tree for support. Instead of relying on casual contacts on the ham bands, I had arranged for a QMN CW Net member (WB9JSR) to be available on 40-meters. At the conclusion of each training session, I would invite one or two scouts from each group to originate a "disaster message" in the form of a radiogram to a parent at home. Of course, instead of a welfare text, the scouts were encouraged to tell their parents that they were enjoying the event. I would then transmit the radiograms while the scouts watched.

The results were fantastic. The scouts were fascinated with ham radio and they particularly enjoyed the radiogram transmission process during which I transmitted their messages using my old reliable Army Signal Corps J-36 bug. We even received a reply radiogram from the father of one of the scouts, which I transcribed onto a radiogram form for hand delivery.

After the training event concluded, I was approached by a number of parents who were assisting with the event, all of whom told me how much their son enjoyed the communications training in general, and the ham radio and Morse code

demonstrations in particular. One woman reported that "all [her] son will talk about is how cool ham radio and Morse code are and he keeps telling me we've got to get a ham radio."

Apparently, traffic handling and CW can be cool! Who knew?

-30-

Dayton Hamvention Booth

By James Wades, WB8SIW

Thanks to the efforts of Seth Honeycutt, KD8RBP, ARRL Headquarters Staff, and others, NTS had the benefit of a booth within the "ARRL Expo" area at the Dayton Hamvention this year. This presence sent a bold statement to the nearly 20,000 radio amateurs who attended the event, clearly stating that NTS is alive and well.

Of particular importance was the support offered by the ARRL staff. They arranged for an excellent location in a high-traffic area that guaranteed high visibility.

Of course, a NTS booth by itself is of little value without the cadre of volunteers who donated their time to promote NTS. Volunteers included:

Lane Kendal, WK4WC
Gary Mentro, N3OS
Seth Honeycutt, KD8RBP
Hal London, WB4ZIQ
Lexie Kensington, WX1WX
Mike Lacumsky, W8MAL
Henry Koenig, WD8Q
Connie Hamilton, N8IO
Pete Young, K3IN

In addition to those who volunteered their time, NTS members donated $ 125.00 to offset the costs of printing the fliers and producing the signs and other items needed to make the booth appear professional and inviting.

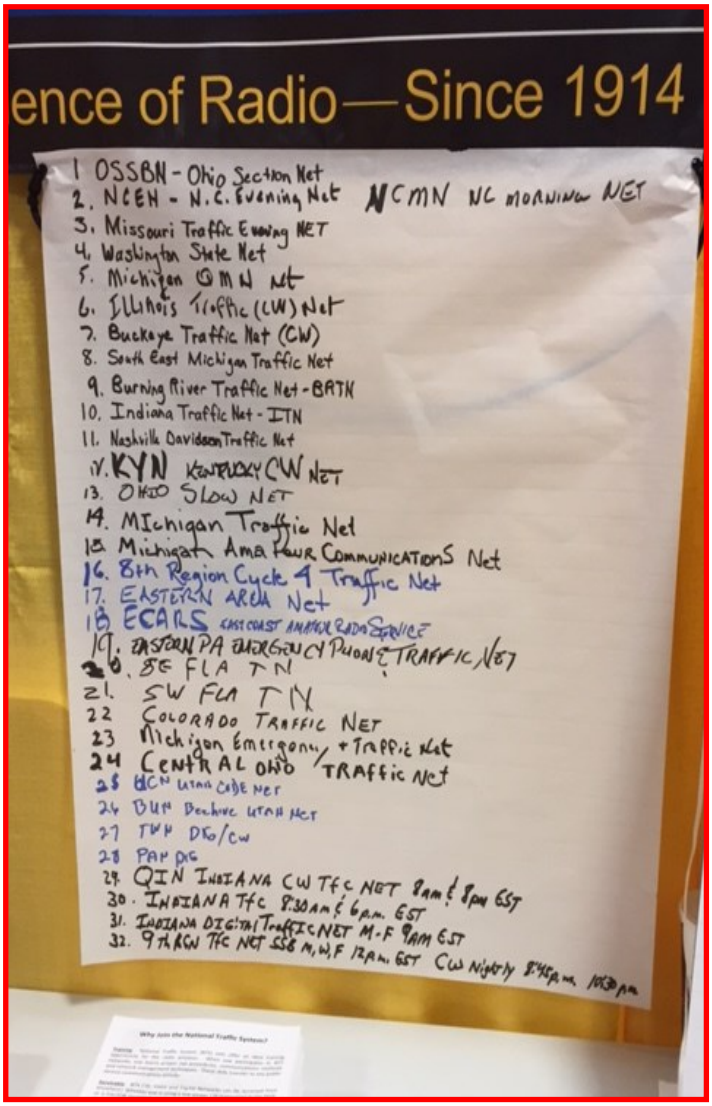
The feedback from visitors was excellent. Some asked "where have you guys been?" Others expressed an interest in becoming involved in the National Traffic System. Of course, long-time traffic handlers renewed friendships and visited.

Laminated maps showing the structure of the layered nets and the network topography of NTSD (NTS Digital) were available to assist volunteers while explaining the structure and operation of both manual and digital NTS nets.

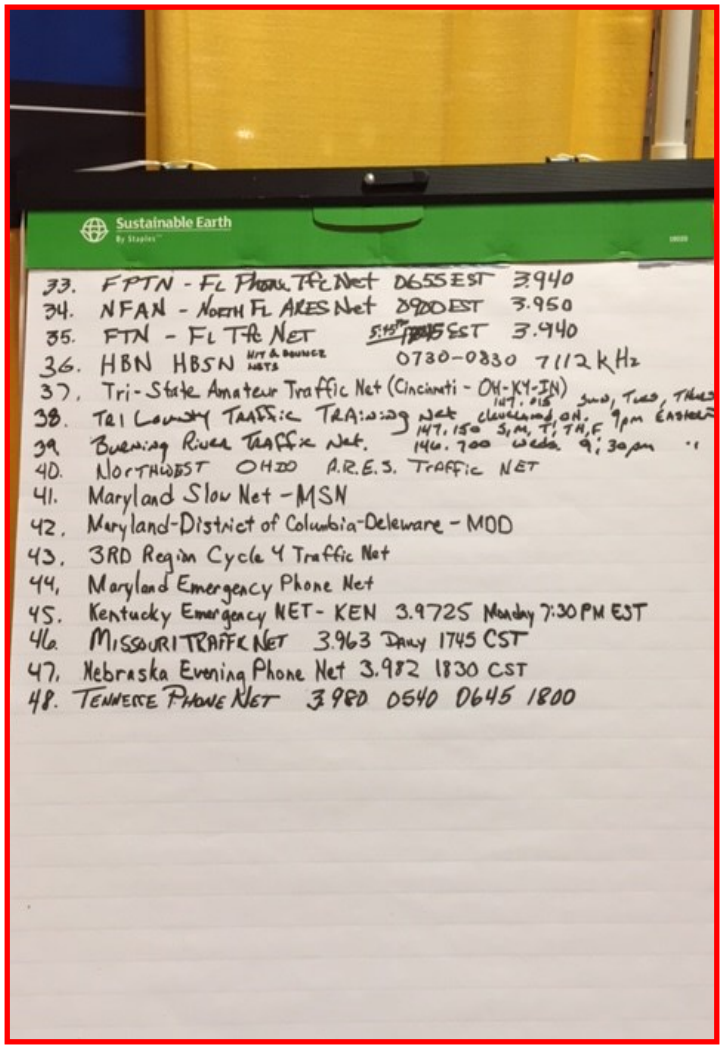
Overall, the booth was a BIG success. We would like to thank those who volunteered, those who donated funds and the staff at ARRL headquarters who made it possible!

All-in-all, we had a good return on investment that we hope to repeat in subsequent years. Best of all, everyone involved had a great time

The National Traffic System booth ready for the first crowds to invade Hara Arena.



Visitors who were already active in NTS were asked to write the name of their net on a large note board. This sent the message to the crowd that NTS nets were active, alive and well.



More nets represented at the NTS Booth!

NTS Awards Presented at Dayton Hamvention

By James Wades, WB8SIW

An awards ceremony was held during the Dayton Hamvention to honor two NTS members who have made outstanding contributions to the program. Unfortunately, neither recipient could attend, so the awards were accepted on their behalf by ARRL officials who live in their respective areas. Formal, local presentation will take place at a later date.

The first award was presented to Joseph F. Tracey, KB3LNM. Accepting the award on his behalf was Jim Cross, WI3N, Section Manager for the Maryland/DC Section. Jim will present the award to Mr. Tracey at a later date.

Mr. Tracey's award reads:

> ***Special Service Award presented to Joseph F. Tracey, KB3LNM, in recognition of his NTSD Message Parser for the National Traffic System, presented May 16, 2015, Dayton Hamvention, Dayton, Ohio***

Jim Cross, WI3N, Maryland/DC Section Manager accept an award on behalf of Joseph F. Tracey , KB3LNM with Steve Ewald from ARRL Headquarters in the background

The second award was presented to Kenneth W. Jacobs, KD6PGI, and accepted on his behalf by Jim Fenstermaker, K9JF, ARRL Second Vice President. Mr. Jacob's award reads:

> ***Special Service Award presented to Kenneth W. Jacobs, KD9PGI, in recognition of his outstanding support of the National Traffic System's Digital H.F. Network BPQ32 Modernization Project, presented May 16, 2015, Dayton Hamvention, Dayton, Ohio.***

Jim Fenstermaker, K9JF, ARRL Second Vice President accepts an award on behalf of Kenneth W. Jacobs, KD9PGI with Seth Honeycutt,

These awards are much deserved and the contributions of these two men represent the outstanding diversity of skills and interests, which are revitalizing NTS. With contributions such as these, NTS moves another step closer to again becoming the premier public service communications program within the Amateur Radio Service.

Samples of Radiogram Compliant IC-213 Message Forms Requested

By James Wades, WB8SIW

As discussed in prior issues of "QNI-The NTS Newsletter," the radiogram format is not only compliant with IC-213, it exceeds the minimum requirement in terms of both accountability data and necessary network management tools.

Of course, less confusion results when all incoming message traffic within the EOC or ICS environment is delivered in the identical format. This minimizes potential confusion and allows emergency services officials to quickly look over a message and cull the important data. Therefore, the goal of ARES and NTS should be to develop an interoperable version of the IC-213 form, which maintains the integrity of the basic, FEMA recommended layout while nonetheless incorporating the *necessary* network management data essential to maintaining the integrity of our networks and our ability to transfer message traffic between various modes and networks.

ARES and NTS members should be cautioned to avoid taking a simplistic view of how message traffic might move in a disaster. For example, a message may start its journey on a VHF voice net, move to a HF digital network and then ultimately be delivered on a public safety radio circuit at the end of its journey. An operator in the field may be using a low-power portable CW transceiver to originate message traffic, which will ultimately be routed through NTSD or WinLink2000 radio e-mail networks. It is therefore necessary to accommodate network management tasks in addition to providing just the minimum accountability data required by IC-213.

The good news is that radiogram format meets and exceeds the minimum requirements of IC-213. All that is necessary at the customer end is a hybrid IC-213 form, which includes a location for the radiogram service data. Some ARES groups have already designed forms that accommodate this interoperability function. A few samples can be seen in prior issues of *QNI-The NTS Newsletter* (find all back issues at www.k6jt.com).

Procedures for converting IC-213 to radiogram format and vice versa have already been addressed in the NTS Methods and Practices Guidelines. Likewise, this publication has published two articles covering similar procedures. Nonetheless, the ARRL Programs and Services Committee has tasked NTS with the development of improved procedures and methods for ensuring that IC-213 messages can be supported. *Therefore, we are seeking examples of what one might call "hybrid" IC-213 message forms, which facilitate both IC-213 and radiogram data.*

If your ARES or EMA organization has already developed such a form, please send a sample copy to the Editor of *QNI.* These samples will then be forwarded to a working committee, which will select the best version representing "best practices." These best practices will then be incorporated in a set of revised, updated procedures designed to better facilitate interoperability between the message formats.

Samples of local IC-213/radiogram form solutions may be sent via e-mail to:

James Wades, WB8SIW,
Editor, QNI-The NTS Newsletter
jameswades@gmail.com

Thank you for your assistance as we work hard to build bridges between ARES and NTS so that the Amateur Radio Service can take FULL advantage of all volunteer resources and communications capabilities at its disposal when called upon in time of emergency.

-30-

NTS Emergency Communications Response Teams

By James Wades, WB8SIW

Some years ago, an ARRL Section Manager told the author that "ARES types are different than NTS types." Perhaps he had a point. Individuals are attracted to different operating activities because their personalities are different. Those with a competitive nature might be drawn to contesting. Those who are attracted to public service might be drawn to ARES activities that place them in the field, working beside the local community. Those who enjoy the art and skill of radio communications might be attracted to NTS with its emphasis on operating skill and network management. Fortunately, these areas do overlap and if such interests are properly managed, an outstanding capacity for effective emergency communications response can be developed.

During a recent discussion with a senior NTS official who is also very active in ARES at the Section level, talk turned to the possible creation of a prototype "NTS Emergency Communications Response Team (NECRT)." The concept would effectively treat NTS members as specialized volunteers within the ARES structure in much the same manner that the fire service builds hazardous materials response teams around specially trained firefighters, or law enforcement builds a SWAT team around specially trained officers. Many such public safety teams serve more than one department in order to leverage the maximum value from those with a specialized skill set.

The job of a NECRT would be to support local ARES response by providing a specialized communications capability centered on the rapid deployment of one or more "message centers" to any needed location in the field. These message centers could serve any one of several functions depending on requirements:

- Health and welfare messaging functions for the general public.
- Local, regional or even long-haul messaging service to support an Incident Command or NIMS function.
- Additional staffing for local emergency operations centers where the ability to format, transcribe and properly transmit/receive and administer the flow of record message traffic would prove of considerable value.

The idea would be to develop a program, which would leverage the skill set already inherent in NTS volunteers in such a manner that it would benefit ARES and a local community. In areas that lack a viable ARES program due to low population densities (e.g. rural areas), one or more NECRT teams could be deployed to supplement an ARES program with a limited volunteer base. This would free-up local ARES volunteers for tactical communications purposes while simultaneously providing a stable message center staffed by experienced operators at a central location, such as a command post or EOC. In the latter case, the volunteers would operate under the direction of the local ARRL emergency coordinator or his/her designee.

Direct Community Service:

Examine recent disasters and one will find that commercial common carrier infrastructure is now restored very rapidly, often within 24 to 48 hours after the initial disaster strikes. Unfortunately, in many large-scale disasters, Amateur Radio operators are held back during this critical early period. Yet, this is the very time in which the average citizen often lacks reliable communications services. One might envision a partnership between emergency management, ARES, NTS along with local radio and television stations that could do much to serve the local community. Consider this scenario:

> Immediately after a large earthquake, one or more "message centers" are established in the disaster area. These message centers are equipped to establish communications using WL2K, NTSD, voice, CW and perhaps local data modes. Once the message centers are operational, the locations could be announced via a press release to local radio and television news. Those without cellular or internet service could visit the message center to originate a welfare message to relatives, request emergency services or, provided communications traffic was light, the communications capabilities could be used to research and obtain information about local social services, shelter and service center locations and the like. As with any emergency communications operation, message traffic would be prioritized, with local first responders and government officials served first, followed by the needs of business and the general public.

A similar scenario exists during a 911-outage. These events are quite common place and they often occur when a fiber optic cable is accidentally severed by a construction crew. In these situations, a message center could be established in a local community to allow local residents to request emergency services or originate messages to those outside the area if needed.

Having additional, specialized communications resources might also serve as an excellent supplement for ARES during wild fire events, floods, tornadoes and the like. For example, during a recent forest fire incident, ARES personnel proved incapable of establishing communications via VHF within a mountainous area, with mission failure being the result. Imagine being able to call upon a team already equipped for NVIS High Frequency radio to solve such a problem.

Again, it is important to stress that such a program would operate in concert with ARES. The idea would be to create one or more regional ("district") teams within a section, which could support any one of several counties in their areas. By leveraging the specialized skills already present amongst NTS volunteers, a local EC could free up additional staff for use in the field where they would be interfacing with individuals and agencies with which they already have a solid working relationship.

Some recommended capabilities for a NECRT might include:

- WL2K radio e-mail capability.
- NTSD interface.
- HF voice and CW.
- VHF and UHF FM for local communications.
- VHF-SSB, D-Star or another local voice mode intended to provide a degree of security from media/scanner intercept.

The team would also have all of the necessary equipment and materials needed to operate for an extended period of time, including such items as paper message forms, computers and printers, generator and sufficient fuel, food and water, etc.

Smaller "satellite" teams might even be developed to quickly deploy VHF data links or low-power HF links using battery power and renewable energy sources such as solar power.

As discussed in another article in this issue of "QNI," such teams could be periodically exercised using field deployment exercises. This would be a fun way to ensure operational readiness and build camaraderie amongst team members and their ARES partners. Such a program might also serve as a way to recruit additional younger, enthusiastic radio amateurs to NTS.

At this point, such an idea is only in the concept stage, but at least one ARRL section has expressed an interest in developing a prototype of this concept. Steps may be taken to develop several prototype teams and, if the concept proves effective, it could be adopted nationally as a model for ARES and NTS cooperation throughout North America.

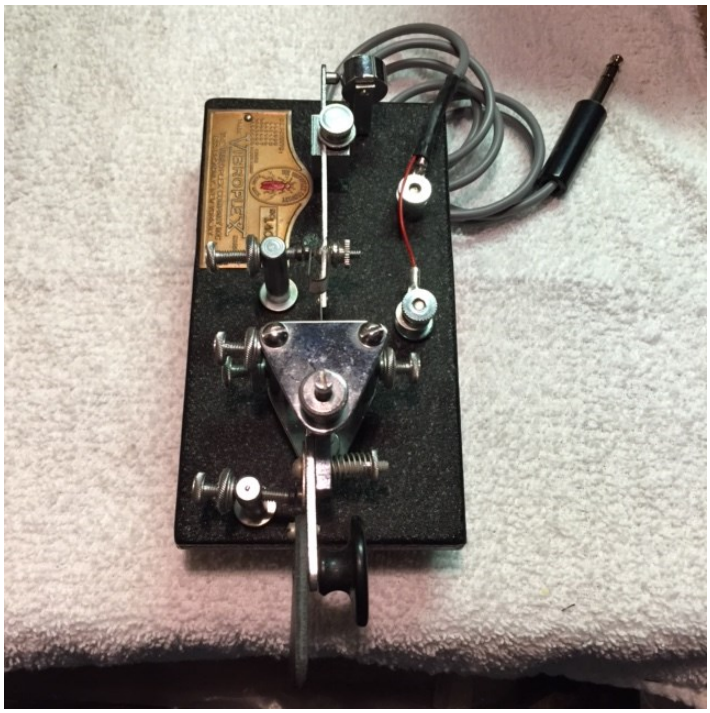
Mounting a Key for Mobile CW

By James Wades, WB8SIW

CW offers significant advantages for mobile high frequency communications. This is particularly true for emergency communications situations in which the narrow-bandwidth of a CW signal allows one to radiate a "traffic quality" signal from a compromise mobile arrangement.

While one could run a narrow bandwidth digital mode, the use of a computer in a vehicle can be difficult or dangerous, but a competent CW operator can treat International Morse as a natural language and manipulate a key while driving as easily as the voice operator manipulates a microphone. Typing on a computer keyboard while navigating traffic is just a bit problematic.

The photos below offer one idea for mounting a key in one's vehicle. The goal was to solve a problem without spending



money and by utilizing common items found around the house.

In my case, the key selected was an old Vibroplex Champion bug. However, one can apply the same technique to electronic keyer paddles.

It should be noted that this design of bug, with the heavy, flat pendulum and heavy spring is more suitable to mobile operation than the "original standard" bug with a lightweight round pendulum and lighter spring. The heavier design is less susceptible to the bumps and pot holes on our nation's crumbling roads.

Materials required for the project include such common items as:

- A used, plastic "Jiffy" peanut butter jar.
- Duct Tape
- PVC electrical tape
- Black spray paint
- Polyurethane spray
- A short length of wire.

Total assembly time is less than an hour with the exception of allowing time for the paint and polyurethane to dry.

First, the diameter of the auto cup holder was measured as well as the approximate height from the bottom of the cup holder to the top of the center console of the vehicle. The diameter of the jar was expanded outward first using several layers of that miracle, space-age material called "duct tape." Then, a second layer of PVC tape was added so that the top of the second layer fell at approximately the same height as the center console when the jar was placed in the cup holder. Likewise, the outer diameter of the tape layer was wound to the same diameter as the cup holder.

The entire arrangement then received several layers of black paint followed by two layers of polyurethane coating. This made the arrangement more attractive and ensured the paint would not flake off easily.

Once the paint was dry, the bug was mounted to the lid (top) of the jar. I chose not to paint it simply in the interest of visibility in the photographs. In reality, the entire assembly might look nicer if one painted the lid.

Holes were drilled to match existing hardware locations on the bottom of the bug. No new hardware was required. The screws for the dot contact and its associated screw terminal were simply removed and matching holes were drilled in the lid. The screws were then threaded through the lid into the dot contact and the associated terminal. This holds the bug securely to the lid.

A short piece of wire was needed to provide electrical continuity between the dot contact and its associated terminal. This is normally provided through the head of the screw, but in this case, the plastic lid acts as an insulator, making the short length of wire necessary.

Using a Dremel tool, a small piece of the lid was removed to accommodate one of the feet on the bug. One could also remove the feet, but I wanted the bug to remain as intact as possible. This notch in the lid was closed with silicon to keep moisture out of the jar.

A bag of old hardware was then placed in the jar to provide some weight for stability. I had a large quantity of old "AAR" terminal hardware used for railroad signaling laying around so a handful was placed in a zip-lock bag and placed in the bottom of the jar followed by a layer of bubble wrap. This weight at the bottom of the jar balances the weight of the bug at the top, allowing for a stable arrangement. In reality, one could use a bag of sand or similar material for the same purpose.

The bug and lid was then screwed onto the top of the jar and the assembly is now ready for use.

Becoming a NTS "Wildest Dream" Section Manager

Kate Hutton, K6HTN, LAX STM
David Greenhut, N6HD, LAX SM

The authors recently had an opportunity to discuss how Section Managers could nurture, or not, the National Traffic System in their sections. The subject came up because other Section Managers had observed an active NTS community in our section, and had been asking the SM about it. Here is what we came up with.

Appoint enthusiastic STM, who is NTS active.

Admittedly, it may be hard to find such a person. Many traffic handlers prefer to just handle traffic, and eschew administration. But the level of commitment of a STM can be pretty much what he/she makes it. At minimum, the STM is a gatherer of statistics, and the main task is wheedle net and SAR reports out of people, compile them and send in a regular report.

Beyond just collecting statistics, an active STM may also:

- Be active on existing nets.
- Establish nets, if there aren't any.
- Establish NTSD nodes and WL2K stations.
- Originate traffic and delivering incoming traffic.

These additional tasks do not take very much time and effort.

Ideally, however, the STM should be a very active participant, net control, liaison, NTSD station operator, or some of the above. He/she should also be a cheerleader and a trainer, to the extent possible. Bribery, flattery, and coercion may help a SM recruit a STM who has some or all of these characteristics.

You say you don't have any traffic handlers in your Section? Are you sure? Ask around! You may discover individuals who are active at the region and area net level or the NTSD. You may just not have any traffic handlers for local traffic.

If you strike out on that, ask new hams. Chances are that at least some of them know what a radiogram is, because they received a congratulatory message after they got their ticket. Maybe you will find someone who is interested in learning from scratch. A neighboring STM may be able to help with educating them.

Encourage your SEC to interface with NTS.

The Section Emergency Coordinator should realize that, at the very least, NTS provides excellent training and practice for accurately passing messages of any type. This is true even if all your actual emergency traffic is of a tactical nature. If a SEC looks for the operators in his drills who are excellent net control ops, who can keep track of what goes on, and who can pass a verbal message accurately without any extraneous chatter, he may find that they are either dispatch operators by profession, or they are traffic handlers.

It remains to be seen what will happen to commercial communications "WTSHTF" (you figure it out), but the NTS operators and even the NTS itself may turn out to be of great value.

Include NTS in ARES drills.

Including NTS in routine ARES drills may be somewhat of a challenge, especially if all radio traffic is tactical or digital. It never hurts to throw in a few ersatz Welfare messages, however. Or even "PSE SEND DONUTS AND COFFEE" would work.

In the LAX Section, we try to bring up an NTS net on a different frequency than the ARES net(s), with a liaison who periodically announces that fact on the ARES nets, thus taking up a minimum of net time. We have worked out a simple procedure for extracting a message quickly from someone who has never before originated a radiogram.

Publicly encourage participation in NTS.

At ARES meetings, give the STM five minutes to make announcements about nets, training, etc. Encourage NTS to join with ARES at community disaster preparedness events. Convince hams and members of the public to send a radiogram with a text like "ARL FIFTY THIS IS ONE WAY I MIGHT CONTACT YOU AFTER A MAJOR EARTHQUAKE" to an out-of-town friend or relative.

In our section, the STM is encouraged to check into the Southwest Division Section Managers' Net (HF) and report on what has been happening.

Field Day is another excellent venue for getting the word

out. NTS should staff special nets and also monitor WL2K for bonus point Field Day traffic. Prior to Field Day, NTS ops should present "basic training" at ARES and other club meetings, if possible. The SM should make it publicly clear that he wants his 100-point radiograms from all the Field Day stations. In our section, the SM has asked the STM to help "make the rounds" during Field Day and advise the stations on formatting and sending their radiograms.

Provide venues for NTS training, especially, but not limited to, ARES operators.

Our section has used various venues and sponsors for our 3-hour long "TFC School" training course. Most have been after or in lieu of regular ARES meetings. A shorter class suitable for radio club meetings and hamfests is also useful. This short class may not teach the details of formatting a radiogram, but it should give a good background on how NTS and NTSD function, and how they utilize radio email.

Request NTS liaison on routine ARES nets.

In our section, each district has a weekly ARES net, the format of which is limited to basically: check everyone in; announcements; and check everyone out. There should be a "NTS liaison" checking into each one of those to accept traffic, and maybe even deliver it to ops likely to check in.

Designate people to originate occasional traffic for NTS on routine ARES nets.

Being a NTS liaison can become tedious if there is never any traffic, so the STM, DEC, or SEC might designate someone to originate and bring a radiogram to the net. Hopefully, this radiogram can be passed during the net (as opposed to off-frequency, or after the net), so that other members can hear how it's done.

Check into NTS nets occasionally.

It is always nice to have the SM check into a net. Inform him/her beforehand that stations without any traffic might be excused from the net right away. This does not mean they are unwelcome, just that they are free to go to other nets (or continue listening).

Encourage WL2K gateway stations (HF and packet).

Since nobody has a fully-staffed complement of NTS nets any more, WL2K (WinLink2000) radio email has become a useful tool for NTS. It allows us to enter traffic into the NTSD system, via the Region MBO station. It also allows us to shuttle traffic between local traffic handlers, thus "positioning" it to be offered on the next VHF or UHF net.

Encourage Broadband Hamnet use & interface with WL2K gateways.

Truthfully, this effort is only beginning in our section, but it may be a large component of future efforts.

Recognize high PSHR scores.

It is nice if the SM encourages NTS and ARES stations to submit their monthly SAR and PSHR statistics. Not only does this encourage some friendly local competition, but it also is appreciated by ARRL Headquarters and ultimately helps justify our use of the frequencies. It helps the section be noticed by the active NTS members in other parts of the country. More than once, I have heard the comment, that "6" used to not be represented at all in the PSHR and Brass Pounders League listings, whereas now it is prominent.

Locally, it always nice to generate a certificate for a newly designated ORS or DRS, and arrange for it to be presented to them at an ARES meeting. Other contributions can be recognized in the same way.

We would enjoy hearing about other ideas and activities (such as the NTS Response teams described elsewhere in this QNI issue) that you may be including in your own NTS operations.

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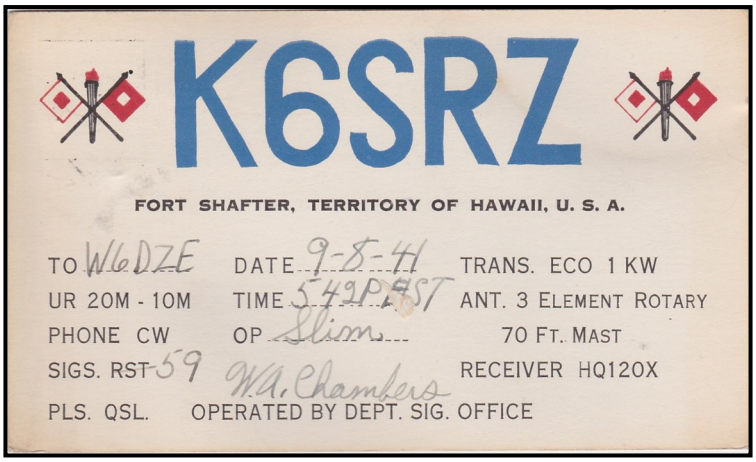

A QSL card from Fort Shafter in Hawaii that acknowledges a QSO that occurred just two months before the attack on Pearl Harbor. Note that the Amateur Radio Station was operated by the Signal Corps. Did W. A. Chambers survive the war?

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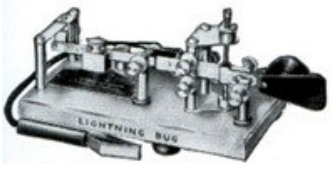

What does the Rialto Theater in Beeville, Texas have to do with Amateur Radio? Turn to page one of this month's issue of "QNI to find out! (Photo courtesy www.cinematreasures.org)

USING THE RST REPORT TO YOUR ADVANTAGE

How many times have you reported that someone's signal is RST 599 (or 59 in the case of voice communications) only to have them repeat basic information two or three times?

When dealing with a beginner, repeating basic data several times probably makes sense. After all, a novice operator is probably struggling with the code and he is more likely to miss a letter or word due to poor CW skills than band conditions. However, when dealing with more experienced operators, is such repetition necessary?

When one reports readability of "R-5", he is indicating that he is copying your signal 100-percent. There is no reason to repeat data unnecessarily unless, perhaps, you live in a town like Poughkeepsie and you're concerned that he just won't understand your QTH.

The same rule applies to first names, states, equipment specs and antennas. An experienced operator who reports R-5 should recognize words such as "dipole," "vertical," "random wire" "Icom" or "Yaesu." Such common information need not be repeated.

Remember that "readability" is a different measure than signal strength ("S"). The "R" value tells the other operator how well you are copying him, whereas the "S" provides a subjective indication of his signal strength. For example, one may often work QRP operators under quiet band conditions in which signal strength is quite low, but readability is excellent. Therefore, a RST of 539 may indicate a fairly weak signal, but it still indicates 100-percent readability.

In traffic work, one might transmit "QRK 5," which is the same as the "R-5" in the RST system. This likewise tells the operator transmitting the radiogram that significant repetition is not required.

Let's pay attention to the meaning of RST and get on with the fine art of conversation.