



Mercury

Northwest Newsletter

Serving the Emergency Radio Operators of the Pacific Northwest
and those they strive to Help.



**Why is our
organization
named after
a pagan
Roman
God?**

Competition vs Cooperation

by Mel Martin, N7BCY
Mercury Northwest President

The world of ham radio in emergency situations has changed a great deal in the post 9/11 world. We have always lived in a world with a finite spectrum resource; but under the direction of Homeland Security (and with the money they have spent on infrastructure development) the available spectrum has become even more restricted should a significant disaster occur in our communities today.

Prior to 9/11 in most areas of the country ARES and/or RACES were viable organizations. In addition, other independent groups of amateur radio operators had organized to provide emergency communications should the need arise. It was fairly easy for these organizations to identify frequencies that were not designated for use in local ARES / RACES band plans.

If you live in a large metropolitan area, that may no longer be the case. Many ARES / RACES plans designate a separate VHF simplex frequency for a net in the area of each firehouse and some schools. **It may be difficult, if not impossible, to find a frequency that is not designated for use by AREA / RACES** within the coverage area of some operators of an independent emergency services net.

Since 1980 Mercury Northwest has designated 147.58 as our primary simplex frequency. We have always understood that its use was dependent on 147.58 not being utilized by others at the time and place we hoped to use it. Those

who participate in VHF repeater nets realize other groups use the repeater at different times and our net does not have control of the frequency except during net times. Because we run a net on 3.965 at 2100 Monday nights does not mean others do not use this frequency throughout the week. It would be highly egotistical on our part to assume any of these frequencies would be available for our exclusive use during an emergency.

Sometimes, though, we forget we do not own frequencies and look upon a frequency as ours. On the HF bands, as well as VHF, courteous hams will most often move off frequency to make way for a scheduled net; but during emergency conditions the situation changes. First, the law allows ARES to take control of frequencies they require. Second, groups or individuals using a frequency on a regular basis may attempt to use the frequency for their purpose. **Take a week of spectrum usage and condense it into the present and you can have chaos.**

How are we then to communicate effectively should the need arise? What is the answer? Controlling chaos is a discussion for yet another article; this discussion assumes there is no chaos and you (and others like you) have traffic to pass.

In my opinion there are five options: We can try to compete with organizations who have a legal preference for the frequency. We can hope to find a frequency that is not being utilized by others. We can join the competition. We can use their system to complete our mission. We can choose a mission that complements and does not compete.

Some may choose to compete with others who might be on a frequency. After all it is true that

whoever has the strongest signal will be heard or in the case of repeaters will capture the repeater. The brute force approach may work. But you're sure not going to win friends and be a positive influence with others on the bands. And you could get thrown in jail!

You might get lucky and find an open frequency. If you are looking for an open VHF or UHF frequency, obtain a copy of the ARES / RACES band plan for your area and look for a frequency they have not allocated to a net in the area you hope to cover. In less populated areas this may be fairly easy; but in larger metropolitan areas this could be a challenge. On the HF bands the reality is there will be no open frequencies unless you are willing and able to control a frequency 100% of the time with a constant strong signal.

You might decide to join them. ARES / RACES are always looking for good people and the service you provide could be invaluable. But they are looking for a fairly large time commitment (often on Sundays) and you will probably not have the freedom to pass the type of traffic you may have initially gotten into amateur radio to handle.

You might decide to use the networks others will be operating to pass your traffic. There will be opportunities for you to pass traffic; but it will be on the terms of those controlling the frequencies. This will require patience on your part and a willingness to learn. The best counsel I can provide is to shut up and listen! Listen to the procedures being utilized on the net. Listen for the accepted method to break into the net. Listen for the accepted format for traffic.

Don't assume you know what to do. Even though you know the accepted ARRL / NTS message format and feel

the format should be used does not mean it will; odds are it won't. Listen for the format being utilized and put your traffic in that format. Listen for the appropriate frequency to pass your type of traffic and move there.

You should never have to break a net to ask a question about procedures. If you listen carefully, you will soon have all your questions answered. If you hope to break the net with more than one piece of traffic, you had best learn to conform to the system being utilized and be efficient in passing your traffic.

With the focus of this article being on voice communications, I have not addressed digital modes at all. I am a fan of digital emergency communications and believe there are still opportunities for other organizations to develop digital networks. But that's a topic for a more detailed discussion at another time.

If you have read the final draft of the Mercury Northwest Bylaws, you will realize **our mission has changed**. We have chosen to complement the existing emergency communications organizations and not attempt to compete with them. The mission of MNW is to provide training, a common meeting ground, and infrastructure resources primarily for the LDS amateur radio community. MNW will not activate it's radio networks during an emergency unless requested to do so by an authorized official of a relief organization. In other words, our nets will not be activated unless an individual, with proper authority, from a legitimate relief organization makes a formal request.

We believe Mercury Northwest can be of great benefit to the amateur radio community at large and, specifically, to LDS hams. As outlined

in the previous paragraph, there are many things MNW can do to complement ERC, ARES / RACES, or other emergency communications organizations. We do not want to compete with others. We want to cooperate with and complement what others are doing.

If one of your primary reasons for being a ham is to provide emergency communications, you need training, experience and most of all practice. If you hope to be of value in an emergency situation you need to do more than participate in a local VHF Sunday night net. You need to learn as much as you can about communications processes, procedures, techniques, and equipment. You need to participate in activities that give you practice in formal tightly controlled net operations. You need practice formatting and passing traffic. Local amateur radio clubs, ARES / RACES groups, repeater groups, etc. can help you through the process. But it takes time, which most of us in the Church do not have an abundance of.

The approach which Mercury Northwest offers is to maximize the benefit to you while minimizing your time commitment. And all of this within an LDS centered environment.

The local Chapters, as well as, Mercury Northwest need a few dedicated individuals with the time to organize training exercises, project build nights, public service events, informational meetings, etc. **All these activities have one purpose: To make you a more effective communicator.** If you're available to take an active role in a Chapter, please let us know. If not, please take advantage of what we have to offer as often as you can. We are here to help you become more proficient amateur radio operators. However, this will only happen if you choose to take advantage of training programs we and

others like us provide. Hope to see you at the next Mercury Northwest event in your area!

A Letter from the Editor

by R.B. Sturtevant AD7IL

So, Mercury Northwest has decided to have a Newsletter and they picked me to be the editor. Why do we need a Newsletter? Well, Newsletters are kind of like magazines with very small circulations and covering very specific subject matter that won't show up in QST, CQ or whatever other radio publication you read. Your local club newsletter will tell you everything the club is doing but won't have much to say about other clubs nearby or farther away unless it impacts your own home club. There are thousands of Amateur Radio Clubs around the world and most of what gets into their Newsletters isn't of the slightest interest to folks who aren't actually in that club.

But the Mercury Northwest isn't a local organization. We've got active members in two countries and over half a dozen states. There aren't many of us in any one area but we want to grow the numbers and increase the activity level in all of our vast area. Not everyone makes every net so announcements over the air won't have the coverage we need.

There is also the "pass along" factor that we want to encourage. There is also the "pick up later and reread" factor that can't be done on the radio nets. Someone who isn't a member but may want to become one should have a reliable place to find out what we are all about. This will keep people who aren't ready or really interested in the work we

are doing from clogging up the membership rolls with folks that really aren't interested or don't have the time.

Why did I get picked to do the editorial work. Simply because I said yes when they ask. I had a little experience so that may be why they ask in the first place but the job came to me because I said yes.

As things go along you will notice that only a few folks seem to be running things. That is your fault. Some subjects which you would like to see covered are being missed. That also is your fault. If you think that your point of view is not being represented or that a subject near and dear to your heart isn't being dealt with; even if you don't like the way things are being done get in touch with Mel Martin at mmartin@majesticwa.com and give him your ideas. Mel is head of the organization and is getting this Newsletter, and a lot of other stuff, going. Tell him you want to write a rebuttal to something you've read. Tell him you want to do a regular column on something that isn't getting any space but should. Heck, tell him you think you'd make a better editor. I might even agree with you.

This newsletter is for your organization and should reflect the things that you want to see in it. But we can't do that if we don't hear from you. We're doing the best we can. Hearing from you, getting your input will make it better. If we don't get it whose fault will it be? Feel like writing a letter to the editor to tell your side of the story, your comments of just tell me off? Great my e-mail address is mandbsturte@wildblue.net. I'll try and get anything that doesn't cause legal action into the next issue.

Bylaws

As this newsletter is going to publication, the final draft of the Bylaws is being ratified by those who paid dues during the calendar year or registered to vote on the Bylaws.

Following input from the general membership, a few changes to the Bylaws were made. Assuming they are ratified by the Voting Members, the Bylaws will be placed on the website www.MercuryNorthWest.org within the next few weeks for you to view and download.

Thanks to all those who provided comment and helped in the writing. As a result, the foundation of the organization, the Bylaws, will provide direction and stability to Mercury Northwest for years to come.

So, Why Mercury?

by R.B. Sturtevant AD7IL

Like many of you I didn't give much thought to the name of our Organization. When I found what it was about and what it was suppose to be doing I figured that it was a good idea and started checking into the nets. In the back of my mind, where all the trouble usually starts, I started to wonder why a Christian Church, or at least the members there of would choose to name an Amateur Radio Association designed to assist that Christian Church would put the name of a Roman God, whose Greek name was Hermes, on their Organization. Well, Mercury was

suppose to be the messenger of the Gods and pretty fast at getting the news around. Maybe that was the story. Some newspapers name themselves The Mercury, so maybe that was the story.

But with so many people thinking that we weren't really Christians and had a bunch of secret practices that we were suppose to be keeping out of sight this didn't seem to be something that "the Brethren" would be encouraging. There must be another reason. And, after a lot of looking I found out what it was.

During the time of Brigham Young the Leadership of the Church organized the Deseret Telegraph System. It was set up as a regular commercial telegraph system but ran mostly north and south from northern Idaho to the rim of the Grand Canyon. It handled regular "Aunt Sadie is feeling better" and "Please send 100 bushels of wheat to my store's account" and messages like that. But the real and most serious reason for the Deseret Telegraph System was for the leadership of the Church to stay in touch with the various Church Units spread across the ever increasing area of the Intermountain West that was being filled by the immigrants coming to Zion.

Have you ever seen the movie *The Windows of Heaven*? Did you notice that President Snow was getting daily reports from the Stake President in Saint George? Those daily messages were coming over the Deseret Telegraph. There was a telegraph station in the Church President's suite of offices from which he could reach every unit of the Church. This created something of a problem for those who addressed the outgoing traffic. Who was the Bishop of the Provo Ninth Ward or the President of Boise Stake or any other unit. Someone got set apart or released

about every week. The Church Traffic had to go to the right person for reasons of confidentiality. The solution to this quandary was to have some messages marked MERCURY. A Mercury message would go to the highest Church Leadership at the addressed unit. Mercury - Helper Ward or Mercury - Bear Valley Stake would get the traffic to the right recipient, and you can bet that the receiving operator would know who his or her Stake President or Bishop was, even if it changed that last Sunday.

We are the indirect descendants of those of those long ago Telegraph Operators. We should be proud to name our organization not after a pagan deity but in honor of that priority traffic passed in the service of Church Leadership so long ago. We are carrying on the tradition of those operators who sent those Mercury messages that kept Leadership informed in times of need and trouble.

Sometime in your Church experience you have probably heard the expression "The Army of the Lord." It usually means the Church members working together in some noble work.

A Civil War General said "The President can make you a General but it takes the Signal Corps to make you a Commander."

We are the Signal Corps of "the Lords Army". We don't command or direct but we communicate for "His" Leadership.

Mercury Memos.

By John Swapp K7CXJ

This column is about the basic ideas of being on the ham bands. I've never been technically inclined, but I have been

licensed since 1958 and I do have an idea of the way things ought to be in the operating realm. We'll be talking about such basic topics as why we have nets, how to check in to a net, ham radio lingo, effective communications, and we will also solicit your ideas on topics. You can also ask a specific question about fundamentals of ham radio.

I've been thinking about some of these subjects even before being asked to be a "columnist". So here goes...and not in any particular order or precedence.

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Q Signals. Since many of you are new hams, I'll start with reviewing some of the more common Q signals, which are also known as operating abbreviations. These operating signals were created to use on Morse Code (CW) as a sort of "short hand" to pass specific information more quickly. On CW, it is more efficient to send "QRM" than to send, "You are being interfered with...". So here is an introductory list of Q signals:

QRM? I am being interfered with by another station.

QTH? What is your location? My location is....

QSB: Your signal is fading

QSL: Can you acknowledge receipt? I am acknowledging receipt.

QSO: Can you communicate with...direct or through relay? I can communicate with...

(QSO is also commonly used today to mean "radio contact or conversation".)

For a better list go to this URL on the Internet and scroll down to International Q Signals:

<http://www.arrl.org/FandES/field/forms/fsd218.html>

It is emphasized that it is not considered good operating practice to use Q Signals on voice transmissions, (even though many hams do it).

You doubled. Have you ever been told by someone on the frequency that you were trying to transmitting at the same time as another station? A third ham will say, "You doubled". Since we are not using a full duplex mode, we can't talk and listen at the same time, so we are QRMing each other. Doubling is less likely to happen on a two meter QSO because we can hear the repeater "squelch tail" go "kerchunk" when the other operator releases the push-to-talk button and goes to the receive mode. It's a different story on HF SSB. Many operators, especially on a round table conversation on HF, don't give an "invitation to transmit" that means they are finished transmitting and are now ready to receive. An example of an invitation to transmit is "over" or "go ahead". If all stations ended their transmission with "over" or "go ahead" or something similar, the doubling wouldn't happen. When two stations "double", it causes disruption and confusion to a QSO or to a net.

I had been thinking about the common occurrence of "doubling" for several months now and then Rich Stiebel, W6APZ, had been thinking the same thing. See his letter in Correspondence in the December 2007 QST, page 24. The letter is entitled, "Double Down".

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Relay. You're on a net with seven, or eight, or more stations and the Net Control Station (NCS) can't hear a station very well and asks for a relay. Three other stations say, "Relay". NCS says, "Go ahead, relay". So now three stations are transmitting at the same time. There we are again...doubling. This time it could be called, "tripling". More chaos. More confusion. Here's an idea by Dave AA7L. If you want to prevent confusion when relaying, say to the NCS, "Relay, CXJ" using the suffix of your call letters. That way the NCS will call on only one station to relay the information. Of course you should use your full call when you relay the information.

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In the next issue. "A Loop and Hook Skyhook". This is a simple and safe means of deploying a temporary or emergency VHF antenna. Designed by WQ7Q.

If you have any questions or comments, send an email to: k7cxj@comcast.net.

Thanks and Best Regards,

John Swapp K7CXJ

A Step-by-Step How-To for a Proper LID

By Ignatius J. Riley

It is five or ten minutes before the HF net start time. Some "regulars" are

already on frequency exchanging "howdy do's" and speculating who the NCS will be. You're a bit shy, and reluctant to interject your call between their exchanges and join them; but you are feeling anxious. You feel you just have to do something. Your mind races, and you start doubting. Will you be heard when it is your turn during the roll call? Your confidence continues to wane. What do you do? This is the perfect time for a good old-fashioned LID (Locally Induced Disturbance).

You are fortunate if you have older equipment, especially something with tubes. A vintage transceiver has at least four controls (pre-select, drive, plate tune, and load). If you have an amplifier, there are at least two more controls to tweak. A manual antenna tuner adds two capacitors and an inductor that may need setting. And, your power/SWR meter brings probably two more switches and a calibration control to the mix. That's more controls than I have fingers to count them.

First tune to the proper frequency. This is 300 – 700 Hz below the reference frequency if operating LSB (lower sideband) or above, if USB. Being dead on the reference frequency does not produce an audible carrier and greatly reduces the effect. Next switch to "Tune" mode and hit the transmit switch and start carefully going through each of these controls. After getting through one round, increase the drive and do it all over again. At the end, don't forget to adjust the microphone gain by whistling. Just tones, no tunes, since the latter would constitute music, a definite FCC no-no.

If you are late for the net, and are feeling antsy during bulletins or announcements or even during the roll call, it isn't too late for a LID.

Here are the advantages of a proper LID:

You avoid the expense of a dummy load and the added complexity of being able to conveniently switch it in and out. Also you will probably get feedback from net members as they comment on how strong your carrier was at each respective QTH. It is fun to keep other net members (and maybe even the FCC) guessing, so be sure not to identify with your call sign. It saves wear and tear on your tuning control as well as the time to find a clear spot or a shortwave station frequency to turn up on. You will also save considerable time by not tuning up your equipment when the band is dead and making a chart listing the setting for each of your controls for your favorite frequencies. And, it gives you confidence that when it is your turn, you will be heard. (Don't forget to take your transmitter out of tune mode and do remember to tune exactly to the frequency of the NCS, else you may let the proverbial cat out of the bag.

Establishing an Emergency Power Supply

by **R.B. Sturtevant AD7IL**

As an Amateur Radio Operator, some people call us Hams, I have done a lot of thinking about how to handle Emergency situations and how to use radios of various kinds to "come to the rescue". If you have an CB, NOAA Weather or Ham radio that you want to use in case of an emergency we need to decide what is "an Emergency" first. I would suggest that having no lights and

telephones, for whatever reason, you may or may not be in an Emergency but you are getting pretty close.

Waiting until you get to that point may not be the best plan. Running around the backyard with an extension cord looking for a current bush won't work either. I've done it and you can take my word for it.

Now, before you run out and buy a megawatt generator and scades of solar panels, we also want it to be fairly cheap. Handling an emergency at your home should not create one in you bank account. So lets build our power supply out of a battery. What you need is a 12 volt battery like those in cars, boats and RVs. A boat-RV battery is best because they are designed for heavier and longer term use. A car battery will work just as well but not for as long.

Of course if your car battery runs out of power in the middle of an emergency just put it back into the car and run the engine for a half an hour. That length of time will completely recharge your car battery. With two car batteries, changed back and forth, you can go as long as you've got gas or until the power comes back on. A new battery is better than used one, but if a used one is what you've got we have to do what we can with what we've got. Just remember, if the battery isn't working well in your car it won't work any better for your radio.

The most important thing you need to know before you start handling batteries of the size that we are talking about is that if you touch both of the posts on the top of the battery or wires coming from those posts you will get a nasty shock. **THEY WILL BITE YOU.** I am cutting a lot of science theory but you can believe it. It won't happen just once in a while and not only if you mean

to touch the wires together but you'll get a shock every time. **THEY WILL BITE YOU EVERY TIME.** Here again, trust me on this because I've done it and found out. No need for you to re-make my stupid mistakes.

One of the nice things about the RV-boat batteries is that they usually have two charging points and two points to take power out of the battery. Car batteries only have two posts on the top but we can get around that. Take a small drill and drill a hole in the center of the charging post. Then put a small screw into the hole. Your radio will have two wires coming out of the back. One is red and the other is black. The battery has two posts, one marked + and one marked -. Red goes to + while Black goes to -, hooking them up any other way will ruin your radio, your battery and probably your day. Put the power cord from your radio on top of the correct colored or marked post on your battery and use the screw you've put on the post to keep them in place. When the battery is charged the current will flow from the battery into your radio and keep you on the air.

Now we've got a way to get the power out of your battery how do you get it in? That is simple too. Go to the hardware or auto parts store and get a 12 volt battery charger. It will plug into the wall socket on one side and has two clamps on the other side. One of the clamps is on a Red wire and the other is on a Black one, sound familiar? Again you attach one of the clamps on the Red + side of your battery. You also attach the Black - side of your battery. Do it slowly after rereading the part about **THEY WILL BITE YOU.** I am cutting a lot of science theory but you can believe it. It won't happen just once in a while and not only if you mean to touch

the wires together but you'll get a shock every time. **THEY WILL BITE YOU EVERY TIME.** Here again, trust me on this because I've done it and found out. No need for you to re-make my stupid mistakes.

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socket. When the battery is fully charged the charger will let you know, usually with a colored light coming on or a dial pointing to CHARGED. Now you can run the radio off the battery until the battery is empty. Keeping the battery charger in place all the time and plugged in will keep the battery charging all the time and you can run your radio practically forever, or until the lights come back on.

We hope you have enjoyed our Newsletter

Let us know what you think and how you think we could improve it. We'd also like to hear from our readers. Our next issue is already in the planning stage and we think you'll like it. Maybe you'd even like to be in it.

Mercury Northwest and it's Newsletter are going places and we'd like to you come along. Take a look at the form below. Fill it out and we'll be seeing you four times a year with the best of LDS Amateur Radio.

Your Editor

Registration
Mercury Northwest

Amateur Radio Club

Mail Registration To:

Mercury Northwest
 PO Box 154
 Startup, Washington 98293

There are two ways you can register with MNW: As a Participating Member or as a Voting Member. All who participate in MNW nets or activities are considered Participating Members. There is no cost to participate; but we would like to have your contact information. Voting Members support MNW by paying dues and are able to hold MNW office and vote on MNW matters. Dues are \$12.00 per calendar year (January to January) for an individual or \$18.00 per year for a family. If you register partway through the year you may choose to pay dues of \$1.00 (individual) or \$1.50 (family) for each month remaining in the year. A family is entitled to two votes on MNW matters. Registered Canadian members cannot pay dues to MNW and are thus registered as Affiliate Members (although voluntary contributions can be accepted).

	Name	Callsign	Primary Email Address
Member 1	_____	_____	_____
Member 2	_____	_____	_____
Member 3	_____	_____	_____
Member 4	_____	_____	_____

Member 1 & 2 will be Voting Members if dues are paid.

Family Info: Address 1 _____

Address 2 _____

City _____ State/Prov _____ Code _____

Phone Number(s) _____

Net Affiliation(s) _____

Registration

- Participating Member(s)
- Voting Member(s)
- Affiliate Member(s) (No dues required. Voting through affiliate organization – see Bylaws)
 - CARS (Portland area)
 - Canadian Net or Affiliated Club _____

Date Registered: _____ Dues Amount Enclosed: _____