Out and About with QRP

Craig Behrens—NM4T   craigb44@msn.com

Evolution: From Radio Go Bag to Bug-Out Bag

As I write this (March 3rd) it's just above freezing outside with a 15 MPH+ wind that bites with the sleet it carries. The freeze line is precariously close to Huntsville, Alabama. Nashville, just north of us, struggles with icing issues as their day sets in. It's been a tough winter! Oh Spring time, where art thou?

Hopefully, now that you have received this Spring *QQ*, pleasant weather has set-in where you live. And I hope that your outdoor adventures are already in full swing.

So, this time, let's focus on how we can improve and (therefore) better exploit our QRP portable activities. There are endless ways to engage in such adventures—we'll only be able to take a look at a few, but we'll pick some real gems and include some valuable tips (lessons learned) for you to add to your hard earned collection.

First, let's talk about "missed opportunities." If you're like me, you've had too many times where you could have participated in portable radio adventures, but life got in the way. You're been so preoccupied with (so-called) "high-priority must do now" items that the opportunity came and left. You respond with a (somewhat) pathetic "Oh, rats… That was last Saturday!"

Ok, I'm guilty too, so no lecture here, just the reminder that this is the only life we get….

On the other hand, too many of us project manage our outings to aerospace standards only to find that our operational execution is abysmal. And most of us already have some kind of equipment "Go Bag" set-up for short, casual, daytime operations. Or, we simply throw a bunch of stuff in our car, hoping that we didn't forget anything, prior to heading out to play radio.

So now, let's explore what can be done to extend our portable operational capabilities while gaining more utility from our investment. We can use some of my Go Bag configurations as examples that can be examined for further improvement.

The low end of the Go Bag spectrum is simple to assemble. Examples (Figures 1 and 2) include what you might use for casual operation from your favorite park in Parks on the Air (POTA), or for Summits on the Air (SOTA) radio operation. This approach focuses on keeping weight and mass to a minimum. Extreme sport backpacking and SOTA operators literally count in ounces vs. pounds. This type of Go Bag will (usually) include only what you need to operate on a single or a small number of radio frequencies and modes for a very limited amount of time. And, it is great when everything you brought works, but could it it could become a disaster if anything fails. Even so, this will be all that is needed for SOTA or casual operations where you simply want to get outdoors and have some fun.

My classic ICOM 703+ with ICOM backpack and rechargeable battery is a good example of a Go Bag that stores just enough equipment to get on the air for a few hours. It barely has enough room for the items you would need to carry. This design does, however, have the ability to use the display a short distance from the main transceiver unit to facilitate pedestrian portable operation and it allows a small vertical antenna to be attached.

The Oriole fanny pack is lighter than the ICOM backpack and it has almost the same amount of storage space. Equipment is placed inside the various compartments and then the tensioning straps are tightened to protect its contents while traveling. One important feature that these two bags share is that they both have built-in rain covers that can be deployed when needed to better protect your gear.

So far nothing's changed, but things will start to get interesting when we adopt a few Rapid Deployment Amateur Radio (RaDAR) and some survivalist "Bug-Out Bag" principles. Our Go Bag configurations morphs into something quite different and our operational activities expand with new purpose as we pursue these.

I'm not suggesting that we all become die-hard "Preppers," but wouldn't it be great to have a portable operations bag that actually includes everything you will need. And, better yet-wouldn't it be wonderful to have it ready and waiting to be grabbed to address emergency situations, as well as fun portable radio outings?

I am suggesting that you take a significant step to add some additional communication capabilities, computing functionality and navigational abilities to your Go Bag. Or should I say "System in a Sack (SiaS)," as Eddie Leighton, ZS6BNE, creator of the RaDAR group refers to such bags.

Figure 1—ICOM-703+ with ICOM backpack setup.

Figure 2—K1 or Rebel with Kelty Oriole fanny pack setup.

Figure 3—LowePro 170AW (All Weather) camera bag.

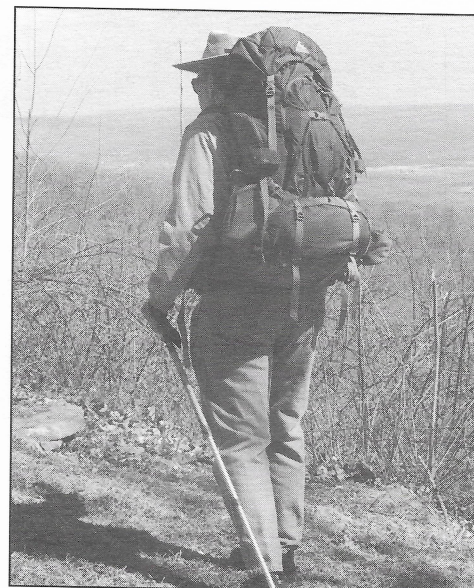Figure 4—Camelback Fourteener backpack (with LowePro as insert).

Figure 5—NM4T's Gregory Baltoro-65 "Bug-Out" backpack.

As low-end examples, I have two Go Bag configurations we can use as typical RaDAR SiaS Go Bags for short outings. The first is a LowePro 170AW (all weather) camera bag that can be used stand-alone or as an insert that goes inside a more comprehensive Go Bag set-up (Figure 3). This bag contains everything needed to get my KX3 (with built-in tuner and internal batteries) on the air. It has earphones, compact headphones/MIC, hand MIC, Palm CW key and an EndFedz 10/20/40 QRP antenna, as well as cables, adaptors, etc. This bag can be carried via the shoulder strap or belt mounted.

Also notice that my iPhone and handy talkie are integral parts of this configuration. I also show documentation, but that could be stored in the iPhone to make room in the bag for something else of value.

My second RaDAR SiaS example for day trips employs a Camelback Fourteener Backpack (Figure 4). It's amazing how much "stuff" you can get into this small bag! If you look closely, you can see that it contains a hydration system, complete with a drinking tube and an internal water bladder. This is strategically located between you back and the load you are carrying for added comfort. This small backpack allows me to carry rain gear, a change of clothes, a first aide kit, snacks/food, etc. Further, I can carry my LowePro 17AW radio equipment bag separately, or I can insert it into the bottom of the Fourteener bag for travel when I require fewer travel support items.

This example moves us closer to a Prepper's Bug-Out bag kind of capability

that assures that his Bug-Out pack can provide everything required getting him from his home to a "safe" destination within 24 to 48 hours.

Before we move to my camping (longer term) backpack SiaS, let's discuss RaDAR for a moment to further differentiate it from casual radio operations.

First, as stated in the Google+ RaDAR Community's blog [Ref. 1], RaDAR is multi disciplined—it promotes the use of all methods of communications available to radio amateurs (including the use of satellite communications and cell phones) and it promotes the use of basic survival techniques that help operators gain experience with self sufficiency.

Second, RaDAR contact exchanges differ from other forms of radio operations by creating field operation opportunities that practice the communication of accurate positional information that is useful for navigation as well as for informing others of your precise position.

For example, my Maidenhead grid location is EM64. But having this information will only get a rescue helicopter to a general area. If someone is trying join me, or I am trying to navigate to a particular location-this resolution of positional information has limited value—especially if a life is at stake.

So RaDAR operators also gain experience for accessing and communicating grid locators to the 10-character accuracy (or even finer latitude/longitude detail) such situations.

And third, the thing that makes RaDAR operation most different to other amateur

radio activities is the ability that RaDAR operators gain to move quickly. A typical RaDAR field operation activity, for example, would involve setting-up your station, doing 5 QSO's, and then moving a kilometer (or more) and then repeat the process at the new locations.

If you examine a RaDAR operator's SiaS more closely—you'll notice other significant differences. For example, you'll notice that a cellphone (or similar device) often become a key, multifunctional component of their SiaS. So, even if you don't have cell coverage where you're going-you can exploit your cell phone's computing power, its information storage capability as well as the convergent technologies it offers. This helps you extend your operational capabilities to log contacts, to access GPS, to serve as an additional communication mode when needed, to record audio (QSOs, verbal or written notes), etc. It's also a great place to have important info stored and readily available (such as maps, etc.). You'll also notice that RaDAR operators bring their handy-talkie radios, not just for QSOs, but also to serve as another form of communications.

Getting back to Go Bag configurations-I exploit the sophisticated design of my Gregory Baltoro-65 backpack to achieve my most Prepper-like configuration (Figure 5). At this point, we're getting close to my physical load bearing limitations by assembling a Go Bag that includes as much gear as I can personally manage.

Figure 6—High Sierra suitcase with removable backpack.

Figure 7—AlexLoop and backpack solar charging setup.

As you would expect-tough trade-offs must be implemented vs. how much radio equipment, camping gear, personal items and food/water, etc. comprise such a configuration.

I have this bag ready for emergencies, and I store it in our tornado shelter when we have bad weather approaching. It includes a 3-person tent, a sleeping bag, a larger hydration system larger first aid kit, lights, stove, cooking gear, food (plus trail snacks) and more. Its contents will evolve as I gain more experience using it.

Before we end this short discussion about Go Bags, I'd like to share a new discovery I made that might serve you well with air travel as it did for me on my Buddies in the Caribbean Suitcase DXpedition to St. Lucia. As I packed my gear for this trip, I discovered that the suitcases I had were either too big or too small. After looking around in several stores, I came upon a great deal for a High Sierra suitcase that had a detachable backpack (Figure 6). Since I'm usually on small commuter planes to and from Huntsville, carry-on luggage is usually a problem—they want to check most carry-on bags into the belly of the plane. This is not a good place to put my (precious) radio gear.

The great thing about this suitcase is that I can detach the backpack to place it in the small overhead compartments and then place the remaining part completely under the seat in front of me-problem solved!

Speaking of obstacles, one of the biggest obstacles to overcome with portable operations—where A/C electricity sources are not available—is that of recharging batteries. Ok, you can use a car's system to do this, but what can you do when no cars are available?

I been experimenting with some solar charging equipment (Figure 7) and I have developed a new appreciation for the challenges that this approach presents. Batteries that discharge via radio operation in a few hours can take more than a day to recharge via portable solar panels. Worse yet, you can't depend on getting acceptable sunlight when needed, especially in weather emergency situations.

If you decide to get a solar charging set-up, be sure that it's one that can be hooked-up and charging your battery while you is on the air. This will provide you with more operating time and it can often reduce the amount of charging you battery may require.

In addition, your cell phone, computing equipment and such all will also require an answer to this dilemma. On my last outing, I discovered that laptop computers deplete their battery charge faster than radios in high-usage situations (such as meeting the processing demands of JT65).

Obviously, there is a lot more to be said, but let's just transition to this quarter's challenge instead:

As you may have surmised, my challenge for you this quarter is twofold: First, invest in making improvements to your Go Bag to extend its intrinsic value, and second, invest in your ability to gain valuable experience with the aforementioned techniques in your next outings.

Now that we have briefly discussed a few Go Bag examples, it would be wise to take a sharper and more holistic look at our portable operation bags. We should assess how well our Go Bags address "The Ten Essential Systems," as defined in the book *Mountaineering: The Freedom of the Hills* (The Mountaineers Books, 2003).

How well are you equipped and trained to address the following items?

1. Navigation Systems (map, compass, GPS etc.)
2. Sun Protection (clothing, hats, sunglasses, skin protection creams)
3. Insulation (extra clothing)
4. Illumination (headlamps, LED flashlights, batteries, solar panels)
5. First-aid supplies
6. Fire (matches, fire starters)
7. Repair kit and tools
8. Nutrition (extra food)
9. Hydration (extra water, purification capability)
10. Emergency shelter and signaling devices (mirrors, radios, SPOT devices)

Of course, A.R.E.S., storm-spotting and other activities would also become more effective, perhaps even empower hams to save lives, by how prepared they are to address these.

Hopefully, this short article has provided you with some new improvement ideas and it has stirred you into action to refine your portable operation capabilities. (I'd love to get hear about your bag configuration and improvements via email and/or in person at FDIM.) I trust that the improvements you make will serve you well, not just for casual radio operations, but also for those unplanned emergencies that could (and do) happen to us along the way.

In closing, I'm reminded of the TV ad that asks, "What do you have in your wallet?" Instead, I'll suggest that we Hams should be asking our peers "What do you have in your Go Bag?"

—72, Craig, NM4T

Reference

1. RaDAR Community: https://plus.google.com/u/0/communities/109283065808971118728?cfem=1