The 100 Pound DXpedition

B. Scott Andersen, NE1RD

Synopsis

Traveling with your radio to some exotic, or at least fun, destination can be one of the most enjoyable activities in the hobby. Mounting DXpeditions need not be left only to large groups with shipping containers and six figure budgets. A successful DXpedition can be mounted with very little expense, and a small set of carefully selected equipment. This paper discusses lightweight DXpeditioning, the planning and execution of a trip, and the joy of operating from the other side of the pile-up.

Two S-units

About a decade ago, three avid DXpeditioners, James Brooks, 9V1YC, Trey Garlough, N5KO, and Declan Craig, EI6FR, had watched the DXpeditions of their time grow in size, effort, and expense. The VK0IR DXpedition helicopter-lifted 34 tons of equipment onto Heard Island, for example. At a time when each succeeding DXpedition was bigger, costlier, and more complicated, these three had an almost heretical idea: mount a DXpedition with only lightweight transceivers, a small contingent of operators, and with a limited budget. There would be no pilots, no advanced publicity, and no amplifiers. In other words, "No more Mr. Kilowatt!"[1] The *Penguin Microlite DXpedition Team* was created in 1999 and that group targeted South Georgia and Southern Thule Island in Antarctica as their first destinations.

Using small radios, low power, small generators, and vertical antennas, the first *Penguin Microlite DXpedition* team put 26,698 contacts into the log from Thule, and over 40,000 more from South Georgia. Just a few of days were all that were necessary to knock these two remote regions of the Earth off the DXCC's top ten "most wanted" list. Though power was limited and antennas were simple, the team made no excuses; they just got it done.

The difference between 1500 watts and 100 watts, the output power used by this innovative DXpedition team, is only a factor of 15, 12 dB, or just 2 S-units. This ratio, 2 S-units, is something any avid QRP enthusiast will quickly dismiss as a mere trifle. The difference between 100 watts and QRP's typical 5 watts is 13 dB, or about 2 S-units. Five watts, a reasonable antenna, and a good operator can work the world. If the *Penguin Microlite DXpedition* team can give up two S-units and have that level of success, a well-organized QRP operation should be able to give up just a couple more S-units and have at least modest results.

The 100 Pound DXpedition

Not long ago, airlines provided each passenger with a baggage allocation of two checked bags, each not to exceed 50 pounds, and with dimensions (length + width + height) not to exceed 62 inches. Two bags at 50 pounds each made a total of 100 pounds. Thus was the genesis of the name and the form of the *100 Pound DXpedition*.

The general idea of the *100 Pound DXpedition* is that one should be able to pack radios, antennas, coax, and other equipment into checked bags and, with only the addition of an airline ticket and passport, travel to some exotic, or at least fun, place in the world to operate. This limit may sound draconian, but, as artists say, "form is freeing." Such limits narrow considerably the types of things eligible for selection. Large, heavy, or bulky items cannot go. Just as the *Penguin Microlite DXpedition Team* returned to the basics, so, too, must the *100 Pound DXpeditioner.*

A typical equipment compliment would include a small radio such as an Icom IC-7000, Yaesu FT-857, or Elecraft K2 or K3. Large rigs popular with contesters and DXers such as Icom IC-756 Pro III, or the Yaesu FT-1000MP, while extremely versatile and feature laden, are simply too large and heavy for this purpose. The key to effective equipment selection is to find the best combination of all equipment that can still survive the weight and size limits imposed by the airlines (or self-imposed by you). It is not enough to choose the best equipment; one must choose the best equipment that can fit into the baggage weight and size budget.

The key to effective micro-DXpeditioning is planning. There is no substitute for it. A well-considered plan is the most effective tool one can have before, during, and after a DXpedition. For many interesting destinations there are long lead-time items, restrictions, and hurdles that only good planning and patience can overcome. Managing trade-offs and effective planning are recurring themes in the following sections, and are key elements to any successful DXpedition large or small.

Picking a Destination

Most of the big ticket DXpeditions travel to places remote or even hostile. While there is certainly demand for those resulting QSLs by those chasing DX and aiming for the top of the DXCC Honor Roll, there is no reason why operating from a popular, comfortable, and relaxing venue should not be considered. For example, the US Virgin Islands or the Hawaiian Islands are not rare, most have them in their log, but they can still be fun to visit, and the pile-ups, especially during contests, can be challenging. For those traveling from the Americas, there are many destinations in the Caribbean that can serve both as a great vacation spot, and as a reasonable DXpedition destination. Consider (in no particular order):

Bahama Isands (C6)	Turks and Caicos (VP5)	Cayman Islands (ZF)	Jamaica (6Y)	British Virgin Islands (VP2V)
Anguilla (VP2E)	Barbuda (V2)	St Kitts (V4)	Montserrat (VP2M)	Antigua (V2)
Guadeloupe (FG)	Dominica (J7)	Martinique (FM)	St. Lucia (J6)	St. Vincent (J8)
Barbados (8P)	Grenada (J3)	Trinidad and Tobago (9Y)	Bermuda (VP9)	Aruba (P4)
Bonaire and Curacao (PJ)	Puerto Rico (KP4)	US Virgin Islands (KP2)	St. Martin (FS, PJ)	Saba (PJ)

All these places are great destinations for a relaxing vacation. They are also fantastic places to operate a ham radio station as they are all surrounded by saltwater. A simple vertical antenna deployed within a wavelength of the sea shore provides a low takeoff angle, very low ground losses because of the highly conductive saltwater, and easy setup and teardown as only two elevated radials parallel to the sea[ii] are necessary to make this simple antenna effective.

The biggest hurdle is licensing. Assuming you are a US amateur radio license holder, there are three basic paths licensing for your destination will take.

1. Your US license is valid for this operation without any extra endorsements or paperwork. If you stay within the confines of the United States by traveling to Puerto Rico, the US Virgin Islands, Hawaii, or other United States territory, then your current license will be valid just as if you were operating from your home. This is by far the easiest path to take. Luckily, there are some very interesting and enjoyable destinations that fall upon this path.

2. Your US license is good for credit towards a license with a non-native call sign. After paperwork, fees, and a good deal of waiting, you will be allowed to operate as XX/your-call-sign. This is the path my visit to the island of St. Kitts had taken.
3. Your US license is good for credit towards a license with a native call sign (e.g., my call sign on Montserrat was VP2MRD). Some countries will issue you a "native" call only on the second or subsequent visit to the country. The island of St. Lucia issues nonnative call licenses (such as J6/NE1RD) for the first application, but may possibly issue a native call license upon a second visit.

Once you have selected your potential destination it is best to research the steps for obtaining a license. There are resources on the ARRL website under *Licensing* and *Reciprocal (International) Licensing*. Follow the link for *US Amateurs Operating Overseas*. Two agreements, CEPT (for Europe) and IARP (for the Americas) provide the legal basis for most of this foreign licensing. Though many countries have become signatories of these agreements, the procedures necessary to achieve license issuance are not uniform. The agreements allow this licensing; it is up to each applicant to make it happen.

In addition to resources on the web describing licensing, there are also books available. *World Licensing and Operating Directory*[III] by Steve Telenius-Lowe provides contact information and other details for over 200 countries and territories. (This book is available from the RSGB website.)

An excellent step to take after researching the issue is to contact someone who has recently gone through the process. Governments and laws change. It is not uncommon for instructions on the web or in books to become out of date. The DX and DXpedition community are very generous with their time and are willing to help. A good place to start is perusing the back issues of the *Daily DX Newsletter*[IV] (email subscription) that lists DXpedition schedules and team members. Find someone that had recently visited your destination and ask how they got their license.

It is best to select your destination far in advance of your departure. Licensing can sometimes take many months. Finding a suitable hotel or villa is easy. Getting airfare or finding that special cruise ship is easy. Licensing is often time-consuming, difficult, and tedious. This brings us to the first rule for the *100 Pound DXpedition*.

> RULE 1: Select your destination and get your license before making further commitments. If licensing becomes a bureaucratic nightmare, select another destination. If you cannot get the license you want, try someplace else.

As it turns out, one of the most inexpensive items on your DXpediton will be the license. Usually the fees associated with obtaining the license from the issuing authority are under $25 US. Even adding on postage and courier fees the cost will usually be well under $100. Select your destination and begin the process for obtaining your license months, or perhaps even a year, before your planned departure. If it appears the exercise will end badly, then select a new destination and try again! The three tales of licensing below may be instructive.

Montserrat 2006-2007. The *Buddipole Users on Montserrat* team (the BUMS) worked in the summer and fall of 2006 to obtain licenses for the planned January 2007 DXpedition. The license itself was only 14.40 Eastern Caribbean Dollars (roughly $5.35 US) but the team was puzzled for quite some time as to where to send it. The island had been devastated by a volcanic eruption a few years prior to our visit (the capital city had been buried under ash) and things were still not

fully up-and-running. Finally, we contacted a local ham on the island that assisted with our licensing. Native calls were issued for two years to each operator.

St. Kitts and Nevis 2007. A license application was made on February 20th, 2007 and $30 cash US was sent Federal Express overnight delivery to a second location for payment processing. Cash was sent because the authorities had warned that a check of any kind would be subject to a six week waiting period! I received my license in the mail in April. It was V4/NE1RD. I was hoping to get a native call like V44RD as I was planning to operate in the CQ WW DX contest in October and I believed that the V4/NE1RD would be very confusing. (It was.) Email inquiries about obtaining a native call received no response. I had violated RULE 1 so I was stuck with the call.

St. Lucia 2010. While on a trip to London I received a message from Mike Greenwood, KC4VG, inviting me on the upcoming *Caribbean Buddies* DXpedition to St. Lucia. Mike had volunteered to handle the licensing and I stepped in to assist. The problems of licensing cited above were not extant. The licensing authority on St. Lucia seemed much more accessible, but made up for it by being extremely officious. As with other licenses, the cost in dollars was low, but the paperwork was horrendous. A customs form was provided where every piece of equipment to be brought into the country had to be itemized, its serial number provided, and its FCC identifier listed. Details of the antennas to be used, maximum gains, and operating locations had to be listed. Our week long DXpedition was subjected to the same scrutiny as the radio infrastructure of a new trucking company or cell phone provider. The pile of paperwork for the ten applications weighed over 6 pounds and cost $129 to ship to the island. The return package Federal Express shipping charge was $81. After all that, we were each issued a call in the form J6/home-call. (Only return visitors are offered the opportunity for a native call.)

These stories are not told to discourage or complain (or, at least, not only to complain). They are meant to instruct. Americans have made a national pastime of complaining about their government. Look upon this as an opportunity to learn about, and complain about, somebody else's government.

It should be pointed out that these other governments are under no obligation to give you a license. There are many stories of hams that had taken cruises and knew that they would be stopping by some island. They applied (probably late) and did not receive the license in time, or were refused a license altogether. The point is simply this: an issuing authority does not need a reason for their refusal.

This is as good a time as any to state this simple fact: when traveling abroad we are guests in the host country. Guests should be polite, deferential, patient, sensitive to cultural and institutional norms, and pleasant. The meme of the *Ugly American* need not be reinforced by DXpeditioners. Just as amateur radio operators are encouraged to consider themselves as ambassadors to the world, so too should we who travel to faraway places. A smile, a kind word, and patience are the best remedies to most any bureaucratic entanglement. It is also helpful to understand that while the United States has pushed for automation of many governmental services such as drivers license renewal, tax form submission, and so on, most places in the world still have power concentrated in a few people in high office. Nothing happens without their approval, and they are often hard to pin down. The clerk handling your request may be just as frustrated as you are since they, too, are powerless in the situation.

Begin the licensing process early. Seek out the advice of those who have recently been licensed. Expect delays but keep up a gentle pressure so things continue to move forward. Finally, if satisfaction cannot be had, select another destination and begin again.

Set Goals

One of the key elements of a successful endeavor is a clear set of goals. Setting crisp goals has two benefits: it helps focus the planning effort, and it provides a means of assessing the relative success of the effort both during and after the event.

The first goal of a *100 Pound DXpedition* is easy: try to keep the weight of your two checked bags under 100 pounds. Of course you can set your own goals. Perhaps you wish to confine your equipment to a single case. Or, perhaps you are happy to increase your weight budget to 150 or even 200 pounds by either paying to check additional bags, or stuffing equipment into the bags of your fellow travelers. It is your trip, so it is your rules. You set the goals. This brings us to rule 2.

> RULE 2: Set realistic goals. You cannot plan well if you do not know what you are planning for! Revisit your goals periodically to see if they are still valid, overambitious, or incomplete. Your goals shape your trip.

Other than weight, there is no larger constraint upon equipment selection than the DXpedition goals. For example, which modes will be used on the DXpedition? If CW will be used then paddles, a keyer, straight key, or other CW accessories will be needed. PSK-31 or other digital modes require a computer, sound card interface, or digital modem such as the NUE-PSK® unit. Selecting the modes to be used is just one dimension of operation. Below is a sample of other criteria that may help shape the goals for your operation.

- What bands will be used? Will this be an all band operation? Or, will only the high bands (which require relatively small antennas) be used?
- Will you be operating portable, away from structures and AC power? Portable operation on hilltops and beaches can be very enjoyable. But, such operations require batteries, solar panels, solar charge controllers, portable antennas, a means of doing logging while portable, a backpack or other means of carrying the equipment, and other accessories.
- Is satellite operation planned? A handheld satellite antenna such as an Arrow II and a suitable radio (even an HT) will be required.
- How intensive will your effort be on this DXpedition? Is this trip "holiday style" where only a modest effort will be made, or are you looking to fill the log? Contesting or other serious efforts require a foot peddle and headset for SSB work, and computer control for CW.

The setting of goals can become an iterative process. For example, if one were to set a goal to build an all band (160m-10m) station that would be competitive in a contest it would become apparent quickly that this goal, and the goal of fitting all equipment into a 100 pound weight budget, were incompatible—or at least difficult to achieve simultaneously. Something will have to give. Either the weight restriction will need to be relaxed, or the operational goals will need to be trimmed. It is not unusual for me to adjust my goals multiple times prior to departure. Most of those adjustments are made when the reality of what will fit in the bags and what will not becomes apparent during the final packing phase.

Venue and Terrain

Selecting a destination enables the start of the licensing process. Where you lay your head at night is something much more specific! There are several approaches to selecting an appropriate venue for your operation. The easiest and least risky approach is to find a property that has been used successfully before. If some other ham has been able to mount an operation from that property, you

will likely be able to as well. Again, as with licensing help, the DX and DXpeditioning community is usually very helpful. Find someone who has been to that destination previously and ask for recommendations.

If you are more adventurous, you can try to find a property yourself. The type of property to seek will depend greatly on the goals for the trip. If you wish to have a very competitive station for a contest, or you hope to put many QSOs in the log on several bands, a balcony operation from a hotel would likely be a poor choice. On the other hand, if you just want to spend an hour or so each day playing on the bands and would be happy to just make a few contacts and rag-chew a bit, the hotel balcony (from a high floor) might be sufficient. My very first DXpedition was to Hawaii in 2005. We stayed in a hotel on the western side of the island in a room facing the ocean high above the shore. An antenna mounted to the balcony railing and a freshly built Elecraft K2 (QRP, 5 watts) worked all over the Pacific—and, somehow, to Namibia. My goals for this first trip were extremely modest: see if I could make this work at all! I did. It gave me the confidence to do more.

The next trip was in 2006. A friend had rented a villa on the island of St. John in the US Virgin Islands. He is not a ham, but he brought back detailed photographs of the property and the surrounding terrain. The large house on the property had an adjacent guesthouse. The guesthouse had a flat roof with ample room to deploy antennas. The only additional research I would have done if this opportunity were explored today would be to examine the topographical data for that area using Google Earth[vi] or other resources.

The trip in 2007 was to Montserrat as part of the *Buddipole Users on Montserrat*. Our villa, Gingerbread Hill[vii], had been used with excellent results by previous DXpeditions. Again, using a property that had been used previously by other DXpedition is not cheating; it is the safest way to ensure a good selection. This leads us to rule 3.

> RULE 3: DXpeditions are like real estate: Location! Location! Location! Research any possible venue thoroughly. Ask for information. Beg for help. A great location can make a DXpedition; a bad one can break it.

Take the time to investigate any potential property before making a commitment. Packing all the right equipment only to discover your operation will be from the bottom of a deep valley still results in a failed project.

Antennas and coax

Antennas and their feed line are a crucial component to any successful DXpedition. My home is in New England where we have very tall trees that can hold long, high wire antennas. A simple dipole can usually be deployed high in a tree with minimal effort. If only I could bring those trees with me to those beautiful island retreats!

One of the harsh realities for a DXpedition to a tropical island is that the tallest thing around your operation might be you. A wire might be an inexpensive, simple, and effective solution in New England, but such an antenna is unworkable in many tropical places. Instead, other antenna designs and strategies will need to be used.

The site survey done as part of the research for your property should also enable the creation of an *antenna plan* for the operation. The antenna planning process is important for two reasons: (1) this plan will help with the selection of workable antenna solutions for the desired bands, and (2) an

estimate for the amount of coax necessary to feed those antennas can be made. We shall begin with a discussion of coax requirements.

Coax is boring. It is the least fun thing to pack because it is heavy, and it is uninteresting. It is the *vegetables* portion of a kid's meal. Because coax is boring there is a strong temptation to not bring enough of it. A 100-foot run of RG-213 will be about 12 pounds. A 100-foot run of RG-8 is about 8 pounds. A 100-foot run of RG-8X is only 4 pounds. (All these weights are estimates. You should weigh the coax, and everything else, as part of your planning activities.) We have before us one of the first trade-offs discussed earlier in the paper. Is it worth eliminating a dB of loss in the coax if we must pay for it with four extra pounds per 100-foot run? My answer is: no. This leads us to rule 4.

> RULE 4: Everything is a trade-off. Make the best of it. Choose and select among all options to create the best combination of things. Do not just optimize along one axis. Think and plan holistically.

I travel with RG-8X coax exclusively in 25-foot, 50-foot, 75-foot, and 100-foot lengths. As a rule of thumb, I will try to bring 200-300 feet of coax for each antenna I plan to deploy. The precise amount I bring on each trip, though, is estimated from the antenna plan. I ensure that I bring enough coax that I can run between my operating position and the anticipated antenna deployment position. The weight of this coax becomes a major component of my total weight budget. Coax might be boring, but if you do not bring enough with you on the trip then you may not be able to deploy your antenna in its best location, thereby reducing the effectiveness of the antenna. When it comes to coax, it is better to have too much than too little. Compromise on coax type if you must, but do not skimp on coax lengths.

For some, any antenna packed in the luggage will be a compromise. Unless you rent a property that caters to hams with towers, Yagis, rotors, feed line provided, you will need to bring the antenna and, probably, a means to erect it. I say "probably" because it may be possible to get local materials at your destination. A painter's pole, wood, or pipe can be used as a mast or support. If such things can be obtained locally then they need not be packed. It is not "cheating" to use local materials! And, though you may have to buy, say, a painter's pole from a local hardware store on the island, it may actually be cheaper to buy it, use it, and leave it behind than to pay for extra luggage charges.

Standard antenna pieces are often 6-foot in length. Antennas cut and shipped like this cannot easily travel in checked bags. (It might be possible to put them in a ski bag, but most likely antenna pieces of this length are more trouble then they are worth.) Antennas built for travel are cut into 4-foot (48" pieces) or smaller.

Airlines often allow a hard-sided golf bag to be substituted for a standard bag. Such bags are physically larger than the 62 linear inches mentioned before, and are allowed to weigh up to 70 pounds. I have such a bag called *The Vault*[viii] that can accommodate antenna pieces up to 48 inches in length. The largest antenna I've traveled with was a Force-12 C3SS tri-band antenna. That antenna was constructed from pieces no longer than 4-feet in length, and it weighed about 30 pounds without mast or mount. I originally purchased it for my St. John trip. I did not use it then, but did use it on Deer Isle, Maine for a special event station. It was a tremendous antenna! If you were very careful with everything else, it would be possible to include even an antenna this large as part of a *100 Pound DXpedition*. The trade-off would be to dispense with weight from many other items (or to increase your weight budget).

Antennas for my DXpeditions fall into two size categories: packed to 48-inch lengths for the golf case, or packed within standard bags. One of the simplest antenna designs I like to use is the *fishing pole vertical* antenna. It is as it sounds: a collapsible fishing pole that is used to hold up the high-end of a vertical antenna. The radial system consists of two or more elevated radials cut to a specific length for that band. The poles are unremarkable crappie poles that extend from 48-inches to 20-feet. That height easily accommodates antennas up to 20m. The poles weigh only about a pound and fit easily into the golf bag.

Lower bands require longer vertical elements. There are three ways to hold up the ends of these vertical antennas: have a longer collapsible pole, mount the pole higher, or both. The roof of the guesthouse on St. John provided an ideal place for deploying vertical antennas. The 20-foot crappie pole mounted on the roof of the guesthouse enabled the deployment of a 33-foot vertical antenna used on 40m and 15m. A longer 33-foot fiberglass mast from DK9SQ[ix] can hold up a 40m/15m antenna mounted on the ground, or an 80m vertical element (66-foot long) off a high roof. Elevated radials are used on all such antennas.

Lately I've preferred to leave the golf bag behind. This means using antennas that can fit into checked bags with that 62 linear inch limitation. I have found that antenna products from Buddipole, Inc. such as the Buddipole Deluxe system and the Mini-Buddipole with the shock-cord mast fit easily in checked bags and are versatile enough to make easily deployable, good performing antennas. I should note that I go far beyond the small handful of components in the stock system; I pack many additional accessories and extra pieces so I can build Yagis, full-sized vertical antennas up to 20m, and vertical antenna arrays. All the pieces in the standard Buddipole systems break down to about 22-inches and fit comfortably in most checked bags. The construction uses aircraft aluminum and high-strength composite parts. I have found these systems to be rugged and a time-saver both during the planning process and deployment.

Keeping Track of the Small Stuff

Since I bring coax in a variety of lengths and then chain them together, I bring barrel connectors (SO-239 to SO-239 connectors) to connect lengths of coax. These connectors are just one of the small parts that must be inventoried and packed. I am careful to count, inventory, and pack all small parts like these since their absence would be disastrous on the trip. I recommend keeping a collection of common small parts like these barrel connectors with your DXpedition-related equipment rather than returning them to your junk box or connector drawer in your shack after a trip. This is important enough for another rule.

> RULE 5: Invest in organization of your gear. Organize small parts and leave them with the DXpedition gear. Collect all the random pieces that go with a radio and put them in a bag specific for that purpose. Don't break up the kit.

I have small bags filled with parts that are only used on DXpeditions. I inventory them both before and after a trip and replace or augment the contents of these bags whenever I see a deficiency. This level of organization has helped reduce the likelihood of leaving something crucial behind. It is also easier to locate pieces within the larger bags if they are organized into smaller, well-marked bags.

The Operating Position

After many pages of observations and recommendations we finally arrive at the point where we should be able to power a radio and make contacts. Note that there was almost no discussion of QRP

to this point. There are two very good reasons for this: all of the preparations discussed have nothing to do with the output power of the radio, and even those things that might have something to do with the radio's output power, we've agreed that 2 S-units is just a trifle. It is hardly worth mentioning on the air; it is certainly not worth obsessing about here.

If possible, find a venue that has a comfortable desk, chair, and other amenities that will help ensure the time spent in front of the radio is enjoyable. This is especially important if one of the goals of your trip is to participate intensely in a contest. Seat time is everything and a comfortable operating position is key.

Logging and QSLing

Computer logging is strongly recommended for a DXpedition for several reasons. First, a properly configured computer and back-up drive can preserve your log and help prevent data loss. Paper logs, while seemingly safer than computer-based logs, can be lost, damaged, or become unreadable. A computer log can be copied to a second device, even an inexpensive USB drive, which can help ensure the log survives even if the computer does not.

Even if you travel to a place that is not rare there will be some who will desperately want the QSO confirmed. A computer log helps ensure you will have an accurate record of your activity. It also provides an opportunity confirm those QSOs electronically using the services Logbook of the World or eQSL. Even if you do not like electronic QSLing, it can be a tremendous time-saver after the trip. Electronic QSLing significantly reduces the demand for paper QSLs, thereby reducing the work-load of your QSL manager (likely you). I believe this is important enough its own rule.

> RULE 6: Use computer logging and computer rig control to capture call sign, band, and time of your contact. Use electronic QSL services to reduce your paper QSLing burden later. Back up your data regularly.

Paper QSLs are still preferred by many. And, while it is possible to have QSL cards printed with just your call sign, consider spending a few extra dollars and have a custom card for your DXpedition. It is good practice to think about what you might want on your card long before your departure. You can then ensure that appropriate photos are taken on the trip that can be used for this effort.

Practice

Everything should be tested prior to the trip. It is a useful exercise to take the complement of equipment, put it in your car, and travel to a friend's house for a practice deployment. If you left something at home, try to do without it (as you would have to do if you were really on your trip!). This activity is very much like every other: practice makes perfect! It also helps to bring the instruction manual for any equipment or antenna system you are taking. If all else fails, you can read the directions.

> RULE 7: Practice before you go. Know your radio. Practice assembling antennas or other equipment. Bring all product manuals and documentation in digital form on your computer.

Family

If the DXpedition coincides with a family vacation, as most of mine do, then understanding the goals and needs of your fellow travelers is also important. (Of course, being an insensitive jerk on any DXpedition is frowned upon!) Sandy is not covetous of the time I spend on the air. She has her own goals for the trip and my goals do not interfere or take away from the planned family time. Ensuring your arrangement is equally secure and mutually satisfying will help make it possible for you to do this again someday.

Final Words

One of the things that I hope has come through all this is the notion that any reasonably well-organized and determined person can mount a successful DXpedition. It is great fun, and I hope everyone who reads these words will try it. See you on the bands!

CEPT European Conference of Postal and Telecommunications Administrations
IARP International Amateur Radio Permit
IOTA Islands on the Air, an awards program run by the RSGB similar to DXCC, only with islands as entities
RSGB Radio Society of Great Britain

---

[i] The quote, "No more Mr. Killowatt!", is from the 2002 DXpedition to South Sandwich and South Georgia Islands – VP8THU/VP8GEO (The Unofficial Video). DVD, as narrated by Bob Allphin, K4UEE.
[ii] Christman, Al. "Verticals By the Sea." *The National Contest Journal* Vol 32 No 4 (2005): pp. 9-12.
[iii] Steve Telenius-Lowe, M6DXX. *World Licensing and Operating Directory*. Bedford, England: Radio Society of Great Britain, 2008.
[iv] *The Daily DX*, and *The Weekly DX* are email subscription newsletters. http://www.thedailydx.com
[v] Details on the NUE-PSK digital modem may be found at http://www.nue-psk.com/
[vi] http://earth.google.com
[vii] http://www.volcano-island.com/
[viii] The Vault is a hard sided golf bag with dimensions 15.0"x14.7"x51". It is available from Amazon.com under part number B0009K5XZI
[ix] Available at Kanga http://www.kangaus.com/