

K1N Navassa -- February 2015

Mission Impossible or Mission Possible???

So close, yet so far

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History of Navassa

Before 1997, getting permission to activate Navassa was relatively easy. Just get a letter from the U.S. Coast Guard (easy) and arrange to get a boat to take you to the infamous “ladder.” Every few years someone activated Navassa. When the USCG deactivated the lighthouse in 1997, administration of Navassa was transferred to the United States Department of the Interior’s Fish and Wildlife Service (FWS) and the ladder was removed. FWS declared Navassa to be a “closed” refuge for the protection of several unique and rare species of plants and animals. Any request for permission to activate Navassa was declined and for many years, only rare visits were made by FWS biologists. Navassa is in the Jamaican Channel, 90 miles east of Jamaica, 40 miles west of Haiti, and 100 miles due south of Guantanamo Bay, Cuba.

Columbus visited Navassa on his 3rd and 4th visits to the New World, but noted great difficulty getting onto the island and that no fresh water was to be found.

The Guano Act of 1856 set the stage for activity on Navassa. In 1857 Peter Duncan claimed Navassa for the United States and started mining phosphate. The ownership/management changed hands several times, but from 1857 until 1901, over one million tons of phosphate was strip-mined and exported, primarily to the United States. In 1901 the workers (literally slaves) revolted because of abusive conditions and killed several of the supervisors. Three men were put on trial in Boston, convicted and given death sentences, which were later commuted by President Harrison.

Navassa lay dormant until the Panama Canal opened in 1914. Navassa Island was in the middle of the shipping lanes to the Canal. In 1917 the Navy built a 165-foot tall lighthouse and a light keeper’s house. A light keeper and two assistants tended the lighthouse until 1929 when the lighthouse was automated.

The very first amateur operation from Navassa was in 1929 by the very last lighthouse keeper, Russel Dunaja, K4NI. He was 24 years old at the time. He was initially licensed as 3ADY in 1921. His last callsign was W3BBF. He passed away in 1989.

The next recorded activity was 25 years later in 1954. This was KC4AB, a four-day operation by Don Miller, W4VZQ (not THE Don Miller), Bob Eshleman, now W4DR, and Carl Shenk, WN4HBC. The last accredited operation was W5IJU/KP1 in 1993. Between these operations, every couple of years or so, some individual or group obtained permission and Navassa was “irregularly” on the air. Navassa has been silent until February of 2015, a period of 22 years.

Navassa is claimed by seven countries (United States, Haiti, Jamaica, Cuba, Mexico, Venezuela, Columbia and the Dominican Republic), but most of the world accepts U.S. control because of the IARU, economic, navigational and refuge management activities and oversight. In 1981, a group of Haitian amateurs led by HH2JR operated as HHØN, but this operation was not counted for DXCC because appropriate permission was not given. To say that the HHØN operations caused a rift with Haitian hams and the DXCC administration, would be an understatement. Regardless, if Navassa was in fact Haitian territory, it would not count for DXCC because of the proximity rule. I could ignore the “sour grapes” of HHØN, and not even bring it to anyone’s attention, but, as we will see, this played a crucial role in the K1N operation, almost leaving the team and FWS personnel stranded indefinitely without food and water.

Several individuals and groups were seeking permission from FWS to activate Navassa beginning in 1998 or so. In 2002 we combined forces and formed the KP1-5 Project with the express purpose to activate the closed refuges of Desecheo and Navassa and at the same time assist FWS in their logistics and management of these refuges.



To make a very long complex story short, the KP1-5 Project participated in two Congressional hearings, helped draft a bill in Congress that would allow periodic access to the refuges (but this bill died between legislative sessions), attended several appeal hearings for denied Special Use Permit (SUP) requests, etc. Eventually in 2008, permission was granted for an operation from Desecheo. After sifting through many applying groups, USFWS selected the KP1-5 Project proposal. The K5D operation (117,000 Q's) in February 2009 is history. At that time, we had a very good relationship with USFWS and we all believed that after K5D, Navassa would happen within the next 18-24 months. We stored all of our infrastructure gear and equipment in Puerto Rico in anticipation of Navassa.

However, because of retirements, jobs assignment changes and other factors, we basically had to start over with mostly new personnel at USFWS. An application for several SUP requests were denied. Following USFWS regulations, we formally appealed in-person at the district level, which was denied. Regulations allowed an additional in-person appeal at the regional level, and after presenting some regulatory "loop holes" in their own USFWS regulations, we were elated when our appeal was approved in May 2014!

We had subsequent meetings with USFWS to discuss what it would take to make Navassa successful. We felt that if we could make 100,000 contacts, we could be successful. This could be done with a team of 30 in five days or a team of five in 30 days. We felt the best compromise would be 15 people for 15 days.

It was very difficult to keep this quiet, as it took USFWS several months to draft the specific requirements they would need to issue an SUP. On August 31, 2014, the USFWS opened the SUP for "bids," just as they had done for Desecheo. Six weeks later the KP1-5 Project was notified that we had been selected. Up to this point, it is impossible to estimate the thousands of man-hours, personal dollars spent, and airline miles flown since 1998.

The specifics of the SUP required an operation in the January-February time frame, as that was the time of the least bird nesting on Navassa, particularly the endangered Red-footed Booby (*Sula sula*). This time frame is also the worst time of year for sea conditions, as the winter storms on the North American continent burn out in the Caribbean. The choice was ours of January 2015 or January 2016. With the decline of an already weak sunspot cycle, our choice was to proceed sooner than later, particularly since we had permission in hand...and things can change with time. It was also required, like on Desecheo, that three USFWS Law Enforcement officers accompany us not just to protect us from any possible threats (illegal aliens, drug traffickers, etc) but to insure we abide by all of the specifics in the

SUP. We were allowed 15 people for 14 days total. Besides requiring helicopter landing (for safety) we were also required to supply a stand-by support vessel for any possible emergency or evacuation. USFWS would also have three biologists on the island doing survey work. Also, in writing, it was made very clear that USFWS would not consider another SUP application for "at least" ten more years. This made the opportunity a once in a 32-year period opportunity. We had to be successful!



Full Steam Ahead

During the summer and early fall, we had explored all possibilities of transportation and logistics. The Gulf oil support companies could help but at incredible prices. We found a large private vessel with a helicopter hanger on board. This would be ideal in non-January seas, but the price just for this was far above the most expensive southern ocean DXpedition ever. No helicopter company or U.S. contractor in Jamaica would agree to fly. Through a friend of a ham friend of a ham friend, who was in the tower business in the Caribbean, we learned of the Helidosa Helicopter Company in the Dominican Republic. They are the premier helicopter company in the Caribbean and Latin America. They focus on air ambulance and cargo and have an impeccable safety record. One of their helicopters is a Bell 212 (a "Vietnam Huey") with an easy 1000 kg payload capability when loaded with fuel and pilots. They had operated out of Ian Fleming International Airport (IFIA) near Boscobel, Jamaica, on the NE coast before and knew the people and logistics issues. Mission: Possible.

In early November, Bob K4UEE and myself traveled to the DR and met with Helidosa and while there put together the requirement for a contract. We discussed our logistics for equipment, food, water, etc and came up with a plan. We would "buy" a total of 50 hours of

flight time package (which included 10 hours of ferry time) for a fixed price that would include “everything” so there would be no additional surprise charges, including standing by in Jamaica for any emergencies. Helidosa administration, their agents, pilots and crew were extremely professional, helpful and ready to give helpful suggestions. The round trip flight from IFIA to Navassa with no wind was at the very limits of endurance (fuel) for the Bell 212. Helidosa fitted the helicopter with auxiliary fuel tanks to safely make the round trip, but this reduced the cargo capacity to 700 kg. (At the same time, it increased the cargo capacity on the return trip to Jamaica.) The maximum number of flights possible would be three per day. The only issue.....50% of the estimated \$197,000 was due 30 days before departure and the balance due at departure. Mission: Impossible.

Another important issue came up, which complicated the Helidosa “issue.” New USFWS regulations require that SUP activities be at “no cost to the taxpayer.” What this means is that the “price” of a Special Use Permit for any refuge in the Caribbean or Pacific areas be cost neutral to the government. If Law Enforcement (LE) accompanies us, we must pay their salary and transportation, as additional help will need to be hired to take their place when away from home base. The regulations also require that LE must leave and return to U.S. soil, not from any other country. Transportation, whether by sea or air, must be on a Dept. of Interior approved vessel. Helidosa had every certification and accreditation known to man, except for DOI certification, which could not be issued to a “foreign” carrier. (The SUP fee did not include the cost of the biologists and their transportation while on the island.) The SUP specified that the KP1-5 Project would provide food and water for all FWS personnel on the island. The only issue....\$104,000 to be paid 30 days in advance. Mission: Impossible.

In summary, we had over \$300,000 due and payable BEFORE we could go to Navassa and make the first QSO. Our team came up with half of the cost. An urgent plea to the amateur community to donate before the DXpedition even started was overwhelming! We literally had exactly the right amount at the right time. It was that close. To thank those who came to bat before we came on the air, we have already uploaded LOTW QSLs for nearly 3000 generous donors! As I write this, less than a week after leaving Navassa, we now have all of our “regular” DXpedition expenses to meet, so please be generous when you QSL. Mission: Possible!

After putting together a logistics “package” together for 15 (really 21) people, we downsized from an estimated 14,000 kg we had on Desecheo to 9,000 kg for Navassa. Add 15 people and baggage and we’re up to another

2000+ kg. Water alone, at 2.5 gallons/person/day was about 750 gallons or 150 5-gallon containers, about 3000 kg total, and this was non-negotiable! The cost of water delivered to Navassa ended up to be about \$50/gallon or 11 Euro/liter! Add in fuel (250 gallons – 1500+ kg).....and food..... Adding up the weight and volume, we discovered that we would be flying in the last of the supplies as the first departure flight was to leave. This would not work. The issue: impossible logistics! Mission: Impossible.

Enter MVC

We had hard choices to make. We totally revised our plans to a Minimum Viable Configuration (MVC): the minimum logistics to be successful with 15 (21) people. We planned, re-planned, and revised plans. We were down to 7-8 full flights in and 5-6 flights out. In the middle, we would have 1-2 supply flights with water and fuel. We decided to use 7-8 stations (K-3’s with KPA-500’s), Honda 2000 watt generators, MRE’s for food (no other kitchen equipment, save for a tiny microwave and icemaker) and water. We would use rudimentary shelters with cots. Each person was strictly limited to 20 kg of any baggage. We had additional materiel on the Electra, our support vessel, should off-loading be possible. Nothing on the Electra would be critical for the mission. The issue.....realistic logistics. It’s coming together. Mission: maybe possible!



We had just a few short weeks to put our gear into a container and get it shipped to IFIA. Helidosa has used IFIA for cargo operations and with the help of U.S. shipping agents, our container was listed for “trans-shipment,” meaning, passing through Jamaica from U.S. territory to U.S. territory. Everything was arranged to have the container stored in a rented hanger, with a custom’s seal in place until we would transfer everything to the helicopter. But because we had to OPEN the container and transfer the contents to the helicopter, almost every conceivable department and administration in Jamaica became involved in our container contents. “No, IFIA cannot be used for cargo.” “No, you cannot pass electronics through Jamaica.”

“No, you cannot ship medical equipment through Jamaica.” “No, you cannot pass MRE’s through Jamaica.” No, you cannot do this, no, you cannot do that. We’d never be able to get our gear staged on time for our window of permission! The issue.....impossible logistics! Mission: Impossible!

Enter JARA

We can NOT give enough thanks to the members of the Jamaica Amateur Radio Association!!! They came to our rescue and after “discussing” our situation with authorities at all levels, helping them to understand the purpose and mission of our endeavor, we were back to Plan A.....our container would be taken to IFIA, locked and sealed, until we were ready to stage. However, all items would be inspected. We were not shady characters on a drug running mission after all!

Bob K4UEE and I selected the team members sometime in October and November. We wanted compatible team members that were tri-lingual (speaking CW, SSB and RTTY). It was not hard to find a team willing to activate #1 or #2 Most Wanted! USFWS preferred U.S. citizens. George AA7JV was part of the KP1-5 Project during our hearings. Tomi, HA7RY, and George were partners on several previous DXpeditions. We convinced USFWS that Tomi’s experience would fit in nicely with our plan. Other team members were Ralph KØIR, John K6MM, Craig K9CT, Lou N2TU, George N4GRN, Mike N6MZ, Mike NA5U, Jeff NM1Y, John W2GD, Gregg W6IZT and Jerry WB9Z. Everyone was assigned specific responsibilities. Everyone pitched in and filled any gaps. There were no conflicts of any kind at any time. A great compatible team, focused on operating until we dropped! Mission: Possible!



We all met in Boscobel, Jamaica, 2-3 days before our expected date of departure. Many watching us felt that we were holding back on our starting date, but we did not know exactly our start date either, until literally the

last minute. It was all dependent upon USFWS transportation arrangements and the weather. To pass the time, we met with Customs agents and representatives from various departments and agencies in Jamaica. They literally went through everything, and I mean everything, with a fine tooth comb.

We had a shopping list of needed supplies to purchase in Jamaica, including gasoline containers, some tools and other equipment. During that shopping spree, two candy bars were added onto the receipt, as a couple guys were hungry. We could not account for the candy bars at the time of inspection. We passed inspection, except for two missing candy bars, which surprisingly almost caused us to not pass inspection! Mission: possible!

As the container was totally unpacked, we carefully weighed and sorted everything for priority and needs for each helicopter load. We ended up with seven loads. Extra water and fuel would come halfway through the operation. We were ready and excited! Mission: Possible!

The plan that finally developed with USFWS, was that they would leave at dawn on Saturday, January 31. It would take an hour to fly to Navassa. They would clear the island and make sure it was safe, then give us a call to proceed. We were up for breakfast at 5 am and waiting with a loaded helicopter before dawn. One hour after sunrise. No call. Two hours. No call. We tried calling the LE satellite phones, no response. Three hours. No word.....

It was absolutely mandatory that we could not fly and land on Navassa until cleared and given permission by USFWS. By noon we were getting very worried that something serious must have happened to the USFWS crew. By 1 pm we were convinced that either their satellite phone was not working or they were in trouble. Our pilots gave us a 2 pm drop-dead time for leaving for one trip for the day. Knowing that USFWS was relying on us to supply much needed water and food, we decided that at 2 pm we would fly so we could at least deliver food and water. Just before 2 pm, as we were boarding the helicopter, the satellite phone rang that USFWS had landed and they wanted us to arrive as soon as we could, as they had a second helicopter due to arrive later and they did not want congested airspace with limited landing spots. With only a few hours of daylight remaining, George N4GRN, Jerry WB9Z and myself lifted off for Navassa. The delay, was in some part due to satellite phone difficulties, but mostly because the Gitmo airspace was closed until early afternoon because of a visiting Congressional delegation. FWS was as disappointed as we were in the late start. We’re off!!! Mission: Proceeding!

Within minutes we were airborne. As we approached Navassa over an hour later, it was surreal to me. All of the pictures I had seen and studied over the years were coming to life! Upon landing, we were greeted by USFWS LE officers, our old friends from Desecheo! Before our helicopter departed, the second USFWS helicopter flight landed with the rest of the FWS personnel and gear.

With only an hour or so of daylight remaining, our first goal was to set up a shelter. The recent recon photos provided to us by the U.S. Coast Guard showed what appeared to be large grassy areas around the lighthouse and keeper's house. Yes, they were grassy with knee high grass, but the terrain underneath was anything but smooth. Very uneven and rocky. There were many "invisible" holes and in an instant you could find yourself in a hole up to the middle of one's thigh. Extremely difficult for walking, much less setting up a shelter! Mission.....impossible!



The old acetylene gas house next to the lighthouse was intact. We cleaned up the floor and established this as our shelter for the first night. The lighthouse was open but horribly dirty inside with several inches of debris of all kinds on the floor.....a real mess. By the time we made a quick survey and protected our gear from rain, it was dark and we were exhausted. We all retired early. That was the last night of good sleep for the next two weeks.

We were up before the sun on Sunday and set to work cleaning out the lighthouse. It was extremely hot and extremely dirty and dusty. The gas house and lighthouse cleaned up quite nicely and we decided these sturdy structures would be best for the radio operations, being protected from the elements. Mission: Possible!

USFWS LEs had cleaned up a corner inside the keeper's house for their tents. Other areas of the keeper's house had brush growing up from every crack. Debris and rubble covered all of the floors. After removing the brush and cleaning up these areas, we had a nice level floor with walls to protect us some from the winds, but no roof to protect us from rain. By the end

of the second day, two of the FWS tents had been shredded by the wind, even though they were within the walls of the keeper's house. Our team back in Jamaica quickly went shopping for new tents, which arrived later. We assembled our shelters in the rooms of the keeper's house. When it rained, we would not get wet from above, but the floors turned into lakes. Survivable. Mission.....possible, home sweet home!

On Sunday, after we had finished cleaning up the buildings, the first of two flights that day arrived, having to wait out ceilings too low to fly out of Jamaica. Three people arrived with more water, food, antennas, tables and chairs. Three tables fit perfectly into large "slots" in the lighthouse. Four tables easily fit into the gas house. Perfect for seven stations. Mission.....possible!

We were fortunate to have unrestricted access to the lighthouse. The stairs are getting quite rusty, but still structurally sound. After running several lengths of coax up the lighthouse, we installed a full-size 160M dipole and a full-size 80M dipole at the 165-foot level. We had better low band antennas than 99% of our audience!

At the last minute before leaving home, I packed a 40M dipole. We put that up at the 100+ foot level. It really worked well on both 40M and 15M! Ralph brought a 20M dipole that was put up below the 40M dipole.

By the time the second (and last) helicopter flight arrived on Sunday with three more people and the radios, we were ready for action. Before dark, we had five stations on the air. Mission.....possible! Life IS good!!! The world is happy! It took 22 years to get to this point!



On Monday (day 3) there were again some delays in leaving Jamaica and only two flights arrived, but with the last of the team and with the SteppIR beams and masts. These were quickly erected and put on the air. The last of the seven stations were put on the air and remained fully manned until just before departure. The lighthouse stations were a nice cool place to operate. The gas house stations were a little warm in the afternoon sun, but shading and a fan made things quite

tolerable. Mission....possible! Life is good, REAL good! The world is happy!

We built the MEG (meeting, eating, greeting) tent at the base of the lighthouse, mostly on a corner of concrete. This is where we ate our meals, made coffee, and strategized. Our 6M rig was in the MEG tent set to beacon mode. Whenever someone would break the beacon, anyone could respond. Many contacts were made with meteor scatter that lasted literally seconds. We worked many North and South American stations and a few lucky people in Europe and Oceania! Mission.....possible!



On Tuesday (day 4) the last two cargo-only flights arrived with mostly water, fuel and MREs. One last supply flight for the last of the water, food and fuel was scheduled for Friday.

We got down to business in the DXpedition mode with assigned 3 or 6 hour shifts, with hopefully at least one 6 hour break sometime during a 24 hour period. Signals were strong from everywhere. The pileups were some of the most intense I've ever experienced. On SSB, there could be an entire 20 kHz of a totally unintelligible din, unable to hear even one letter of one callsign. We tried to keep our spreads as narrow as we could. Working by the numbers is painful for everyone, and always someone feels cheated no matter how hard one tries to balance the numbers. We did very little of this and concentrated on working the pileups down as quickly as possible. Mission.....possible! We were having way too much fun.



On Friday morning we were expecting our final supply of run of water and fuel, both of which we were going through quickly. By noon there was no helicopter. We called the pilots who reported that Jamaica air traffic control would not permit them to fly because Haiti air traffic control contacted them telling to refuse permission to fly as landing permission had not been granted by Haiti. The Jamaica Civil Aviation Authority had all kinds of documentation from the U.S., USFWS and from Helidosa. But, still Jamaica air traffic control was not going to let our helicopter land on Navassa until the international dispute was over. After 160 years, this was obviously not going to be resolved overnight, much less the weekend. Our supplies were dwindling. Someone in Haiti did not want us on Navassa and was determined to get us off of the air and off of the island. Late Friday afternoon, all government offices were closed for the weekend. We found it impossible to have a telephone answered in any office anywhere! Jamaica air traffic advised that permission would not be granted for any flights from Guantanamo Bay either, as Navassa was inside Jamaica airspace control. On all of the aviation maps, Navassa is properly identified as U.S. territory. The only way off of the island would be by off-loading onto the Electra, our support vessel. Mission.....impossible!

Rescue!

Again, we owe the members of JARA credit for the success of our mission! Several members knew various ministers and authorities. After explaining the situation to them, all were in agreement that everything was in order for all flights to resume as scheduled, regardless of whomever stirred up trouble in Haiti. Mission.....possible!



Our support vessel, the 94-foot Electra, equipped with advanced stabilization devices, found it difficult to remain near Lulu Bay at times. The Electra was available only about 40% of the time, as the rest of the time it was on the lee side of the island hiding from the wind and heavy seas. There was one good day early in the first week that we were able to off-load some needed

supplies and extra gear. Several of us made many trips carrying items the ½-mile from Lulu Bay to the light-house. About 250 yards of the trail is very narrow and VERY steep. It was a very good daily workout to move supplies! Mission....possible!

With our focus on operating with such intense and varied schedules, we didn't get a chance to use the AM-SAT supplied satellite equipment (FT-817 & Arrow antenna) until the last week. We were able to make 29 hams VERY happy with a very rare DX entity!!! Mission.....possible!



Our MREs (Meals Ready to Eat) were actually quite good! I think a couple of us actually gained a little weight! These were not the military MREs, but a civilian version. In the MEG tent we had a small ice maker to help cool us off and a small microwave to heat up water for coffee and tea. Life was good!



Because Navassa was so highly needed, particularly in Europe and Asia, we focused a lot of attention to the openings to these areas on the various bands throughout the day and night. Our pilots were very good at giving us hints and audience feedback for best times and frequencies for various parts of the world. We know we have several antipodal stations in the logs on many bands and modes. We cannot thank the North American stations enough for patiently standing by while we worked our "windows" of opportunity to propagationally challenged areas.

t's over!

It seemed like we were just getting into the groove when we found ourselves discussing our departure plan. It is absolutely amazing how the days fly by when on the DXpedition end of things. Our SUP stated that we had to be off of the island with all of our gear by the morning of Sunday, February 15th. Knowing that we were never able to get the three planned helicopter flights in on any day, because of weather or administrative delay, we had our first two team members leave late Friday afternoon of February 13 with some infrastructure gear and trash. All stations were fully operational until Saturday morning when the SteppIR's and other beams came down. These antennas and a couple stations left with team members on the first flight....with more trash. Five stations were left on the air. After the last flight on Saturday left, only Jerry WB9Z, Craig K9CT and myself were left with three stations and all of the wire antennas still up. The plan was to continue to operate until sunrise, when we had to QRT. Saturday afternoon until Sunday morning was THE best opening into Asia that we had during the entire trip. The three of us put nearly 9000 contacts into the log, the majority of which were Asia and Oceania. One of the hardest things I've done in my life was to turn the last radio off at sunrise on Sunday morning with a huge Asian pileup on 80 meters. I was not ready to go QRT and could have stayed another week or two.....but please don't tell my wife or employer! Mission: SUCCESS!!!

Feeling good!

Every few days, a small group of Haitian fishermen would come up the trail to the keeper's house to get "fresh" water from the cistern in the keeper's house. These poor souls live an extremely dangerous life, trying to eke out an existence just to survive. They were barefoot with rare exception and wore tattered clothes. When we were leaving, we distributed our extra shoes and clothing to them. We gave them what we had left of our clean water, MREs, gasoline, shelters....anything we didn't want. Even with the language barrier, they were "in heaven" and could not thank us enough. I will never forget the look of the faces when they put their feet into shoes. They all but had tears in their eyes, as did I. I gave one man the shirt I was wearing. He handled it like something precious. Jerry gave one man his coffee mug, who immediately found a scrap of rope and hung the mug from his neck. He had the proudest look of anyone! To me personally, this was far more gratifying than sitting for hours at a radio making contacts for a hobby. To these fishermen, life itself is so very harsh. Our "trash" was treasure in their eyes! We complain that we missed this band or that band, this mode or that mode. To improve or brighten the life of

someone on the edge of life is worth more than any radio contact.... ever. Mission: OUTSTANDING SUCCESS!



Feedback and Lessons

I learn a lot from every DXpedition I've ever been on. I've put together a summary of my two weeks of operation from Navassa. I'm sure all of my team mates will concur with what I've observed and learned.

European stations complained a lot for the "short time" we worked Europe. **QUITE THE CONTRARY!!!!** This is a MOST interesting point of discussion! If you look at the times in our logs, we spent MORE time working Europe than working North America. Our ClubLog statistics, however, show that North America had 58% of the contacts, Europe 32% and Asia 6%. WHY, then, if MORE time was spent working Europe, was Europe about half the number of North American contacts???

Simple answer: RATE. Period.

When you listened to us working North America, we could cruise right along at 300-350 Q's/hour or more! I have seen the "rate meter" hanging around 500-600 Q's/hour for some times. (I heard that someone on the team was clocked at 1200 Q/hour.....on 160M!!!!)

When working Europe, we would be extremely lucky to see rates of 100 Q's/hour. European signals are as strong, if not stronger than North American signals, in the Caribbean. The west coast U.S. is much harder to work than Europe. South American signals were among the strongest!

Here is a note I received after I returned home. It is from a well-known DXer in Europe:

"I listened to XXX working US pile-up on 80m. Fantastic, at least 10 QSO's minute and when he turned to listen for Europe, the rate was only 10 % of that. Same on the other bands and modes."

The problem is THROUGHPUT. Rate. Efficiency. Cooperation. Whatever you want to call it.

For the time we spent working Europe, we should have MORE contacts than with North America, but that did not happen. It COULD have happened!

No one more than me would like to have seen the European Q's outnumber North American Q's. For the "next one" I have some helpful suggestions to help DXers, including myself, and particularly DXers in Europe, to be more successful.

Here is what I see are the issues:

1. Not listening to the DX operator
2. LISTEN to and LEARN the rate and rhythm of the operator
3. LISTEN to WHERE the operator is listening and his PATTERN of moving his VFO. You MUST KNOW where he will listen next if you expect him to hear you! How simple is that? It is part of the hunt...and the fun of DXing....and getting rewarded!
4. Learn to use your radio (split/simplex, etc)
5. Do NOT jump to and call on the frequency of the last station worked. The DX station will NOT hear you because the din is total unintelligible chaos. Move UP or DOWN from that frequency, as we on our end were continuously tuning up or down after each Q, so if one jumps onto the last-worked frequency, we will not hear you, even if you were the only one there, as we have already tuned off that frequency.
6. TURN OFF ALL SPEECH PROCESSORS AND COMPRESSION! Do NOT overdrive ALC. There is a night and day difference in listening to NA/AS and EU pileups. The horrible distortion makes it impossible to copy many, if not most European callsigns. I don't know what it is, but I would bet that mike gain and compression controls are "firewall forward," all the way clockwise. There were MANY loud stations that we did not work, COULD NOT WORK, simply because we could NOT understand their terribly distorted

- callsign. Have you ever listened to yourself in a pileup? We gave many stations a "19" signal report. Very loud, but extremely unintelligible! You want to have INTELLIGIBILITY, not distortion!
7. Give your callsign ONCE and ONLY ONCE! DO NOT KEEP CALLING! Call. Listen. Call again if needed. Listen. Listen. We would tune on by those who did not stop calling. We are looking for RATE and getting stations into the log. You should be, too!!!
 8. If the DX station comes back with your callsign, DO NOT REPEAT YOUR CALLSIGN, AS WE ALREADY KNOW IT or we would not have answered you. Many stations (in all modes) would repeat their callsign two, three and even four times or more! This was so frustrating at times that we would just move on to the next station. We ONLY want to hear "5NN" or "59" from you. Anything else is a total waste of time. Let me repeat, if we come back with YOUR callsign, DO NOT REPEAT it back to us! (Did I repeat myself?.....forgive me!) It CHEATS others out of a chance to get into the log. Only repeat your callsign if it needs correction, and then let us know it is a correction. Anything else is cheating others out of a contact. Others are cheating YOU out of a contact! Our propagation windows and time on the island are limited and we need to maximize the opportunity for everyone. SPEED and EFFICIENCY ARE OF UTMOST IMPORTANCE!
 9. LISTEN to the DX station come back to someone. IF THERE IS NOTHING CLOSE TO OR RESEMBLING YOUR CALLSIGN...SHUT UP! SHUT UP!!!! This needless interference slows things up and lessens YOUR chance of getting into the log! We are focused on the callsign we heard and do not hear you, only your QRM'
 10. Take some time to listen to the next DXpedition working North America and listen to the rate and rhythm of the operator. It is fast, quick and efficient, and more people get into the log! Then listen to him work Europe. The wise operator will catch on quickly to what it takes to get into the log!
 11. SPREAD OUT! Our highest rates (for any continent) were working the center and far edges of the pileup where there was less QRM. Weak stations were much easier to work than loud stations in the middle of the pileup. If we say, "Listening 200 – 210," 70% of the pileup sits exactly on 200 in an unintelligible din, 25% of the pileup sits on 210 and is almost as bad. 5% of the pileup will be spread out somewhere between 201 and 209, making them very quickly put into the log. S P R E A D O U T!!!! Dare to be different! Dare to be heard!
 12. LOUD is NOT better! MORE AUDIO/COMPRESSION is NOT better! Finding the spot to be HEARD is the MOST important thing you can do to get into the log. My biggest thrill (and I'm sure on both ends) is finding the lone weak station and getting him into the log quickly.
 13. LISTEN to the DX operator INSTRUCTIONS! As we would constantly tune our VFO, if we find a clear spot, we would often say, "33" (meaning for YOU to transmit on 14033, 28433, etc). A few would listen and get into the log very quickly. You cannot hear these hints if you keep calling calling calling..... Many times I would say, "listening 200-210" and after a while would say, "listening 240-250". Often 30-45 minutes, even and HOUR later, I would find MANY still calling on the original "200-210".....of course, they would never show up in our log, as I was not listening there. LISTEN, LISTEN, LISTEN and LISTEN SOME MORE. The less you transmit, the better chance you have of getting into the log. You must know where I am listening if you really want to get into the log.
 14. LISTEN to the "good" guys to make it into the log. Study how they do it! It is not easy to find the "good" guys, as they are quick and efficient and are in the log and gone, long before anyone can find them. They don't transmit much. They are listening.
 15. LISTEN to the "bad" guys. It won't take you long to find them. They keep calling and calling. They aren't listening to find out where to transmit or they wouldn't be calling. How simple is that? Being LOUD helps, but not if the DX is not hearing you!
 16. If you don't want to get into the DX log, just ignore the above suggestions, and keep calling, calling, calling..... I wish you the best of luck. You'll need it.

Antennas

We had queries asking why we didn't put up "better" antennas. What is simple and what is EFFECTIVE? A high dipole is far more effective than a low beam (of any size). A dipole is +2.1 (or so) dBi over a vertical and can be up to +15 dBi at height.

We had a full-size 160M sloper at 165 feet. We had a full-size 80M dipole at 163 feet, broadside to EU. We had a 40M dipole at 100 feet and other dipoles handing out almost every window on both sides of the lighthouse. We found these as effective (or better) as the 2-el SteppIR's at 18 feet high. We had no verticals. We did have them in the container, should we not have access to the lighthouse or if we were unable to get up very high. For the low bands, we had better antennas

than 99% of our audience! Beverages reduced our ambient noise from about S9 to S2, making for very workable conditions on the low bands. In the mornings we pointed the SteppIR to Europe. In the afternoon we pointed them to Asia. Mission: success!



Pilots

Bob N2OO, chief pilot; Nodir EY8MM, Central Asia; Jorge HK1R, South America; Toshi JA1ELY and Yuki JH1NBN, Japan and Asia; Tony K2SG, North America; Col MMØNDX, Europe; Andre V51B, Africa; Lee ZL2AL, Oceania; Val NV9L, social media; and Brandon KF5NYQ, youth pilot.

A great deal of the success of our operation goes to the off-island pilot team. These individuals probably worked MORE hours and had MORE headaches than any of us on the island. Each of the pilots received input/suggestions/criticisms from their area of the world, condensed and summarized the issues and needs and forwarded these to N2OO, who further distilled and summarized the needs and suggestions. Bob N2OO sent numerous daily emails to me on the island. We learned which transmit frequencies to avoid on the low bands, which rare long or short path openings were available, etc. This information was posted daily (or more often as needed) on the white board in the MEG tent for everyone to see. Every DXer owes these individuals a lot of thanks for their endless hours in making our operations successful. Mission: Success!

ClubLog and our Website: www.navassadx.com

Chaz W4GKF, a 1974 veteran of Navassa, is our webmaster. Almost daily I would summarize the activities, challenges and plans and upload them to Chaz. The DX world and news outlets grabbed and distributed this information daily. George N4GRN uploaded pictures to Chaz daily so the world could see our side of the action.

We had a LAN network to each station computer. A Raspberry Pi computer was fed every contact from each

station. Every five minutes the Raspberry Pi would see if an internet connection was available and if so, upload the logs to a server. From our end, when the BGAN terminal was operational, the log uploads were near real time. On the server end, sometimes it would be a few hours before logs would be merged and uploaded to ClubLog.

Scheduling

Ralph KØIR was in charge of our lives on the island. We lived, breathed, ate, operated and died (maybe “dropped dead” is a better term) at the whim of Ralph. His responsibility was daunting. He took the propagation forecast data from Stu K6TU, our pilot reports, our personal abilities and desires for various modes and bands, the number of stations and antennas and manipulated the data in a Scheduling Spreadsheet created by Bob KØRC, back home in Minnesota. This amazing spreadsheet program coordinates each station, each antenna, each operator and propagation into a workable plan. Shifts were three hours long. Some were six hours. Some breaks were for three hours, some for six hours. The program insured that no one would be scheduled more than six hours without appropriate breaks and also give everyone one six hour break each 24 hours. The program also considered our output power and predicted our fuel consumption. Each person was given their personal daily schedule to plan their activities, including naps and breaks. Most of us operated a minimum of 12 hours each day, some more, some less. The program also knew the previous day’s schedule so that there would be no more than two consecutive shifts when starting the next day’s schedule. It really helped Ralph to have most of us on the team be tri-lingual. Mission: Success!

Finances

I would like to comment on DXpedition funding. Even though Navassa is in the “back yard” of North America, the extreme difficulty in access to the island requires a helicopter as the only predictable and safe way to access the island. The nature of the helicopter business requires money up front and complete payment before completion of a project. Also, the USFWS regulations now require anyone accessing refuges in the Caribbean and Pacific areas, to pay IN ADVANCE, the costs of accompanying personnel and their transportation as the basis of the SUP fee. In this case, these total costs UP FRONT were in excess of \$300,000 before we left our homes! This does not include any DXpedition equipment or infrastructure. Our team members contributed half of this cost. We now have all of our “usual”

DXpedition expenses to recover, so please be generous when QSLing by whatever means.

To those who donated BEFORE the DXpedition started, your LOTW contacts have already been uploaded. These donors will also get the first of the QSL cards when they go out. This is our way of saying thanks for helping make this DXpedition possible. We did not advertise this. Mission: Success!

So next time a DXpedition needs support....hint, hint....if you want a quick QSL/LOTW, please help them out BEFORE they leave. There are several very expensive southern ocean and Pacific DXpeditions in the works for the next year who would all be grateful for your support. These DXpeditions have huge deposits and fees to pay up front before they even begin their journey or set foot on the ground.

Summary

Band/Mode breakdown

Band	CW	PH	RTTY	Total	Total %
160	5442	0	0	5442	3.9%
80	6536	3774	0	10310	7.4%
60	0	412	0	412	0.3%
40	9676	5042	350	15068	10.8%
30	6752	0	2528	9280	6.6%
20	14752	17157	2498	34407	24.6%
17	5929	3404	2421	11754	8.4%
15	8061	13245	1935	23241	16.6%
12	10538	0	1423	11961	8.5%
10	4897	12049	956	17902	12.8%
6	231	1	0	232	0.2%
Totals	72814	55084	12111	140009	

We have reviewed the fascinating history of Navassa along with all of the political intrigue associated with getting permission, the international hurdles and operational logistics involved with getting to a U.S. possession that WAS at the top of The Most Needed List. Navassa is so near, yet so far, politically and physically.

More man-hours of planning, appeals, hearings and paperwork have gone into the K1N operation than any DXpedition in history, bar none!

Of all of the DXpeditions I have been involved with, without question, this has been THE most dynamic operation ever, with rules, logistic challenges, and political intrigue, not just within the United States, but within Jamaica and Haiti, changing on a daily and even on an hourly basis. There was unprecedented harassment from someone in the region focused on discrediting our

operation and trying to strand us without food and water. In stark contrast, we can never give adequate thanks to the members of the Jamaica Amateur Radio Association for their time and efforts to make K1N such a huge success. THAT was the true spirit of amateur radio, helping each other to succeed! We learned that planning and decisions needed to be flexible for the "Challenge de Jour."

Fifteen dedicated men managed over 140,000 Q's in a 14 day period, becoming the #9 ranking DXpedition on the Mega-DXpedition Honor Roll. An amazing 35,649 unique callsigns were worked, many of which were all time new country contacts. Truly, a team effort, for teams both on and off of the island!

Lastly, we cannot thank enough the 3000+ contributors who put their trust in us before we even set foot on the ground to meet our financial challenge. We thank everyone who worked us and who contributed to the DXpedition. The foundations like NCDXF and IN-DEXA and many, many clubs, organizations and individuals boosted our morale with contributions and put the onus on us to perform. Our sponsors were extremely generous and helpful. Without the dedicated Helidosa Helicopter pilots, crew and administration, we would still be waiting for a ride to the island. The Electra and it's crew were of invaluable support and help. And we have a very special thanks to the dedicated men and women of the U.S. Fish & Wildlife Service who helped make this DXpedition possible and worked side by side with us. We can't wait to do it again!

Mission: Possible!!! Mission: COMPLETE!

73 and THANKS for your support and THANKS for working us at K1N, Navassa Island!!!

Glenn WØGJ
(12 Mar 15 0030Z)



Edited for GDXF by Prof. Dr. Uwe Jaeger, DJ9HX