Flying Pigs QRP Club – BBQ

Bacon Bits Quarterly

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FPQRP membership is open to all licensed QRP operators who reside within 12,000 nautical miles of Cincinnati, Ohio.

Finally!! It's April, I didn't think this winter was ever going to end here in the Hoosier Heartland. I think the older I get, the longer winter hangs on.

Ok gang, it's time for a new issue of the BBQ and I think you'll enjoy this one quite a bit. Are you getting ready for Dayton and Four Days in May? I had hoped to be there this year so I can meet more of my Flying Pigs friends and neighbors, but alas, I will be missing. If you can make it, COME.

If you have never been to Four Days in May, you are in for a real treat. The speaker line up this year is exceptional, and once again a first rate build-a-thon will be taking place. You do not have to be a master builder to enjoy the pizza dinner and the building session, so don't be afraid to sign up. This year we'll be building the M-Cubed Semiconductor Analyzer, which could possibly be the coolest tool in the shed if you do a lot of junk part scrounging like I do.

The kit supplied for FDIM builders will include the M-Cubed Semiconductor Kit with backlit LCD, test hooks, drilled enclosure, 9 volt battery, assembly guide and User's Manual. Every builder will leave the build-a-thon with a calibrated and working Semiconductor Analyzer. Depending on the amount of time remaining after assembly, builders will have an opportunity to become familiar with the capabilities of the analyzer and M Cubed representatives will be available to answer questions. I just have to add this to my arsenal of test gadgets, I think you will too!

Four Days in May and build-a-thon sign up information can be gathered from the QRP ARCI website by browsing to http://www.qrparci.org – Many thanks to everyone involved with producing this high quality QRP Extravaganza!

Oh, I understand a local hamfest will be held that same weekend….WHAT A DEAL!

On another note, special congrats go to Rob Matherly, W0JRM, and his new bride Denise. They tied the knot in February and we hear Denise may soon become the newest ham in the family!

Special congrats also go to George Osier, N2JNZ, for taking FIRST PLACE QRP 40M in the 2004 CQ WPX CW contest, as well as FIRST PLACE NON-VE QRP in the Ontario QSO Party. Very nice to see all these Flying Pigs doing so well! Keep up the good efforts, and Rob, just do what she says and everything will be just great!

72 es OO de KB9BVN - Brian Murrey, Co-Editor Flying Pig # -57

Well, it is time for the second BBQ to be unleashed upon the world! Reliable sources tell me that perhaps some of the articles in this issue of BBQ may not be "entirely accurate" but I don't know which ones they are – however my review of the Winkey computer interface is legit! Pretty neat piece of hardware IMHO.

I hope that my fellow swine will enjoy this issue as Brian does a FB job of getting all of this good information out to us all. Well done Brian!

In other news, CQ has come out with a new award the CQ DX Field Award for working 50 fields. They also have an "endorsement" for working 25 fields QRP! So check your cards – especially you FP DX ICONS – to see if you have the required 50 fields. BTW, a special congrats to one of our own for "tying the knot" – way to go Rob! Now, slowly work on Denise to convert her to the "true way" of QRP and Flying Pigdom and get her a ticket!

Winkey Review

by Dennis Ponsness - WB0WAO FP# -347

Back "in the day" when DOS ruled the computer world, some innovative contester figured out that with a few components, they could make their computer key their rig for them. By integrating this with a contesting program, they had the ability to automatically send all the information required for the contest exchange. Now this may not seem like a big deal for a 'test like CQWW but imagine how much easier it was now for a station making 1k + Q's in the ARRL November SS! For several years, this method was used by many big and small 'test stations. But with the advent of Windows, problems started to arise. The way Windows works, it messes with the "timing" of information that was sent to the serial port. As new versions of Windows came out, the problem got worse and worse as most of the major contest programs were still DOS based. There were a few contesting programs that came out in Windows, but there were serious problems with the timing issues again. Another major problem was that the common serial port was going the way of the buggy whip! USB became the "port of choice" and most new computer had at most one serial port – and sometimes none at all! And then another problem arose – users of DOS based contesting programs started having timing problems with the latest versions of Windows - ME, 2000 and XP. However, help was just around the corner that would end the problem.

It was called Winkey and was one of those "why didn't I think of that" type of products. Rather than use the computer as an expensive straight key, it sends text to the Winkey! This is how your computer used to send CW to your rig – the program would toggle on/off one of the lines in your serial port. You made up a simple 1 transistor switching circuit that would then key the rig whenever the specified serial port line went "high". The program would interpret "A" to the proper Morse character and then send that as a signal to the switching circuit in the same manner as you would manually send it with a straight key. Winkey, however, sends the actual text character "A" to the Winkey which uses its onboard microprocessor to then interpret it into the proper Morse character when then keys your rig! All of the speed and other timing issues were controlled by the Winkey chip – NOT the computer. This ended the timing issues that had plagued Windows users and then allowed developers to create and improve Windows based contesting programs.

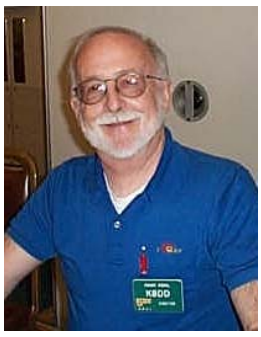
I purchased a Winkey kit a few months ago, and I am very impressed with it. I was developed by K1EL, who has been in the vanguard of developing high quality keyers. Many of you use the K8/K9/K10/K12 series of keyers or the K20/K40 series of Morse keyboard interfaces. The famous

MultiPig+ uses one of his K10+ series chips as the onboard keyer. The Winkey is $28 and a nice pre-punched metal case with all the off board components is $19. The board is very high quality and it is really easy to put together. The Winkey gets its power from the serial port itself, but there is a place on the board to attach a power lead if you want to use it as a keyer when the computer is not on or the Winkey is not hooked up to the computer. It took me about an hour to build and hook up all the appropriate connections. You hook up the Winkey to your computers serial port (or with an adaptor to a USB port), connect a set of paddles (optional) and connect to the key jack on your rig. You can hook up a speed pot to manually set the speed if you want to, but you can leave it off if you will only be using it with your computer (more on that later). If you have a set of paddles connected, you can use the Winkey as a regular keyer as well. Now comes the fun part – interfacing it to a software program.

I tested it with two different programs – WinWarbler (part of the DXLab suite) and N1MM (contesting program). I first tried out WinWarbler and found that it worked great except that there was a problem with one of the keys assigned to one of the prosigns. I emailed the developer of WinWarbler – Dave, AA6YQ, and within a couple of hours he sent me a beta copy of a corrected version of WinWarbler that fixed the problem. According to the K1EL web page, there are numerous software programs that incorporate support for Winkey – and I am sure that there are several others that support it as well. My initial results with N1MM were not very good. I could not get the Winkey to "play" for the life of me! Turns out that there was a software problem that has since been corrected and now the Winkey works FB with N1MM as well. Both programs allow you to set the speed from the computer, so you could get by without the speed pot if you wanted to. I found out that some 'test stations forgo the speed pot and control the speed exclusively from the computer – one less thing at the operating position to mess with!

While the Winkey is "marketed" for the serious contester, the average ham can also use its capabilities as well. Depending on the program, you could have the equivalent of a keyer with "unlimited" memories" – both in number and in message length! Use the Winkey as a basic keyer and have your memories loaded into your computer rather than your keyer. I have pretty much replace my K10 keyer with the Winkey. The memories are quicker and easier to load and I still have the ability to send manually. I have mine interfaced with a Radio Shack USB to serial interface cable, so as to have the serial port connected to my K2 for rig control.

72 es OO de WB0WAO – Dennis Ponsness, Co-Editor Flying Pig # -347



Pigs at the Great Lakes Division Convention Banquet

by Hank, K8DD (FP-281)

March 19, 2005 Toledo, Ohio - Stan AC8W and I were at the Great Lakes Division Banquet this evening and as I moved from the bar with my beer I bumped into (figuratively - not literally) Riley, K4ZDH! I said Flying Pig! He said "Yes!". We talked for about 5 or 10 minutes (time really flies when you're having fun) and several points came out.

1. He loves FDIM and learns a lot from QRP'ers at Dayton.

2. He wishes all hams had the same sense of spirit, and/or exuberance, about ham radio that QRP'ers and contesters exhibit.

3. BPL *can* be done right, but a lot of power companies don't care.

4. Some guy named Ed Hare is pretty neat guy and a *very* valuable resource.

Riley was the main speaker at the banquet and reiterated all of these thoughts in his speech and made a point of saying the time he spends at Dayton with the Flying Pigs and QRP'ers rejuvenate him as well as meeting with a contest group in New England. I think he talked about 45 minutes, but it was a fast 45 minutes and at the end he got a standing ovation.

After the banquet Stan and I walked up to the head table and I asked him if we could get a three-pig picture. He stopped and said "this is an occasion!"

We got the picture. Really cool!

(Ed note: Could this be the REAL "Three Little Pigs"?)

L-R Stan AC8W FP-270, Riley K4ZDH FP-666, Hank K8DD FP-281

72 73 oo Hank K8DD

Hey Booboo! Is Mr. Ranger going to let us put up our antenna?

By Nelson Winter – NE4LS (FP-909)

Some of you may recall last October 2004 that I send out a bunch of emails announcing my impending trip to the Dry Tortugas (IOTA NA-079). For those of you who were wondering how that trip went, or if you just like a story about good gone bad, then please read on….

My dad always told me that it is always best to blame the person who isn't there to defend himself. So I would have to blame Rudy, (callsign omitted) who is a member of our local Boca Raton club. He was the first person to mention Fort Jefferson and the Dry Tortugas to me. He wanted to see if I was interested in taking a trip out to the Fort with the intention of spending the weekend and operating. Being naïve, I said, "Sure, sounds like an adventure." I had no idea what lay ahead of me.

For those of you who are reading along and are wondering what exactly Fort Jefferson and the Dry Tortugas are I'll satisfy that curiosity with some info I have gathered from various Internet pages.

The Dry Tortugas is a small group of tiny islands (keys) located about 70 miles West from Key West Florida in the Gulf of Mexico.

They are consisted of Garden Key, Bush Key, Loggerhead Key, East Key, Hospital Key, Ponce de Leon discovered the Dry Tortugas in 1513 when he and his crew caught (and ate) over 100 sea turtles there. Subsequently the islands were referred to as the "Tortugas" (turtles).

During the 1600's and 1700s pirates used the area around these islands as a base for attacking merchant shipping in the Gulf of Mexico. The word 'Dry' was later added because there is no natural sweet water available on any of the islands.

After the War of 1812, a group of forts from Maine to Texas was envisioned to provide defense for the United States of America from foreign invaders. Fort Jefferson was built to protect the southern coastline of the United States and the lifeline of commerce to and from the Mississippi River. The fort was planned to be the greatest of the group.

Fort Jefferson is a six-sided building constructed of 16 million handmade red bricks. In 1825, a lighthouse was built on Garden Key, one of five islands that made up the Dry Tortugas, to provide warning to sailors about the dangers of reefs and shoals surrounding the Dry Tortugas.

Construction of the fort began in 1846, and in 1847 the islands became a military reservation. In 1850, the officers' quarters were completed and the fort was officially named Fort Jefferson, after our country's third President Thomas Jefferson. The walls reached their final height of 45 feet in 1862.

Construction of the fort dragged on for more than 30 years, and it was never really finished. Construction of the moat was also an engineering challenge and was not completed until 1873. The invention of the rifled cannon during the Civil War rendered the walls of the fort vulnerable to destruction and made the fort itself somewhat obsolete.


FORT JEFFERSON IN 1861.

During and after the Civil War the fort began to be used as a prison for deserters and other criminals, most notably Dr. Samuel Mudd, who was sentenced to life in prison for his part in President Lincoln's assassination. Dr. Mudd, perhaps unknowingly, repaired the broken leg of John Wilkes Booth - the man who assassinated Lincoln. In 1874, the army completely abandoned the fort after several hurricanes and a yellow fever epidemic. It wasn't until 1898 that the military returned, in the form of the navy, which used the facilities during the Spanish-American War. The fort was also

used from 1888 through 1900 as a quarantine station, and was garrisoned again briefly during World War I.

In 1908 the area was designated as a bird reserve and transferred to the Department of Agriculture. On January 4, 1935, it was designated by President Franklin Roosevelt as Fort Jefferson National Monument, the first marine area to be so promoted. On October 26, 1992, the monument was upgraded to national park status in a bill signed by President George H. W. Bush.

So now that you know a bit about the history of the area and the facility I can continue with telling my sordid tale.

After learning about the place I decided that it would be a good place to go and operate QRP for a weekend. Being a bit of a zealot, I started to recruit from the ranks of my local QRP community. When it was all finalized, the trips attendees were to be Bob Patten (N4BP), Tom Lewis (K4THL) and of course, me, your author and storyteller. Yes, Rudy chickened out.

The fort's web page laid out several restrictions and recommendations about what you should and should not bring. The ferry company also has restrictions about what you can bring. In a nutshell, each person was limited to 40lbs of 'stuff', which did not include water – yes we had to bring our own water (remember 'Dry'). Also, the only fuel for cooking you are allowed to use is charcoal briquettes, which had to be factored into your total weight of cargo. Tent, sleeping bag, food, cloths, toiletries, snorkeling gear, rigs, antennas, batteries all combined had to be 40lbs or less – talk about spartan!

As you can tell the logistics were tough. Food, water and charcoal were going to have to be rationed! This trip is getting ugly already!

So Tom called the ferry company to find out exactly how strict they were about the 40lb limit. Apparently, the way it works is that if you decide to bring the kitchen sink, then they enforce the restriction. I think my load ended up being 60lbs.

The reality though was that we had to eat. Bob was going to sustain himself on MREs while Tom and I were devising a plan to eat from cans. Tom came up with an ingenious charcoal stove made from a #10 can. It uses 8 briquettes and will boil water or cook your food very nicely. I'll show a picture later.

Bob was an old hat since this was going to be his 8th trip to Ft. Jefferson. Being newbies, Tom & I had quite a few brain storming sessions about what to bring. We decided that since we were going to be over a near perfect ground, that verticals were the way to go. I had my MFJ 1910 pole and we could make a ¼ wave for 40 or a half wave for 20. I also had an MP-1 which Tom took the liberty to modify into a changeable ¼ wave for 15 or ¼ wave for 20 by swapping segments. It sure is nice to have a friend who it a mechanical engineer!

The date of departure was set for the evening of Thursday November 11th 2004. The plan was to drive

down to Key West and spend the night at Bob's sister's house in Bob's camper. And then board the ferry to the fort the next morning. We would then stay on the island until Monday. Then we would drive home from Key West which would put is at home just after midnight. Well, that was the plan.

I contacted the IOTA group, the Light House group (there are two lighthouses in the Dry Tortugas), QRP-L, FPQRP, and basically everyone and anyone who would be interested in making a Q with us. If I was going to go through all the effort of making the trek, I wanted to have people listening for us.

I rode with Tom and Bob drove solo towing his little camper. We departed from Bob's home in Plantation, Fl. around 3pm. We each had a 2m rig to stay in communications since we weren't going to caravan. The 2m rigs seemed to work great on simplex as long as the cars were within 8 miles of each other.

Our first stop was to eat. I knew that once we passed Marathon that there'd be nothing to eat until we got to Key West. We found an interesting little restaurant that served a lot of the local fish fare. I opted for a hamburger, fries & a beer since my budget wouldn't tolerate a $25.00 meal. I don't remember exactly what Tom ate but I know it was similarly non-fishy. This also gave us an opportunity to wait for the sun to dip beyond the horizon. Driving right into a setting sun can be brutal.

We arrived in Key West and found Bob's sister to be friendly and hospitable. Her husband was equally so. We sat around and shot the bull will about 11 and then crashed in the camper. We were given a key to Bob's sister's house should we need to get into the house for any late night trips to the bathroom.

We all got up around 6am and Bob's sister had coffee brewing and some toast. We blabbed and ate and drank coffee till 7am when we departed for the kiosk where we had to buy our ferry tickets. Upon arriving we discovered we weren't the first ones there. We got all of our gear (Tom & I had twice as much as Bob) positioned at the kiosk and then the cards were deposited into the parking garage.

The lady at the kiosk happily took our $125.00 each and gave us our boarding passes. Plus she directed us to take our gear to the boat and we would be assisted with stowing it. We followed her instructions and all of our gear was stowed at the bow of the boat right next to the captain. Whew – no complaints about the weight of our stuff! So far so good.

The boat is a JetCat and will comfortably haul 120 or so people. The dual hull design really makes for a smoother ride. Once everyone was on board and we departed the dock, a nice breakfast was served including bagels coffee, doughnuts, fresh fruit and juice. The trip took about two and a half hours.

Here's a picture of the three of us right after breakfast. I'm the one with the stupid hat grinning in the back. Bob's in the middle and Tom is on the right.

Finally we could see the fort off in the distance. Passengers took turns coming up to the front of the boat to see the fort in the distance.

When we docked we were instructed to wait at the dock for the ranger since we were camping. After about 15 or so minutes she showed up. She immediately wanted to know what our equipment was for. Each of us took turns trying to

explain what it was all about. She shook her head and told us that we would need to get approval from her supervisor… this wasn't good.

About 30 minutes later another ranger shows up (this one looked more like a policeman than a ranger). We re-explained all of the details of our expedition and that Bob had operated from this exact island 7 times in the past. The officer indicated that he didn't think he could allow us to operate from the island but he would ask his district supervisor.

While we were waiting, we took all of our gear over to the camping area – trying to be optimistic. About 1½ hours later the ranger cop returns and informs us that we need a "Special Use" permit in order to operate from the island – which obviously we didn't have. Now I could go on ad nauseum about the legal aspects and how unfair or how he was justified or whatever…. But at this point I was just plain pissed. Our perfect little trip was ruined. Bob tried at length to change the officer's mind. After two more hours, Bob came back from the Ranger's office shaking his head. We knew we were done.

We had a little pow-wow and decided that we would leave the following day. At least we could enjoy the fort and the water for a little while.

So we set up camp and started to explore the island including the fort and the adjoining Bush key. Admittedly, it was a pretty cool place, though it was hard to drown out my anger over the situation. Several times in the evening I was temped to just set up and operate, but my cohorts pointed out that I should not even try it. I listened to reason and kept the rigs stowed.

There are ton of really cool pictures that Bob took, but I won't bore you with all of them here. If you want a really nice photo tour of the island, please check out this URL:
http://www.terragalleria.com/parks/np.dry-tortugas.all.html

Bob crashed early and Tom and I sat up and listed to his short wave radio and shot the bull with the guy in the next campsite. Eventually we all turned in and ended the first day or our doomed adventure – or so we thought.

The next morning the weather was PERFECT. Not too hot, not too cool. I put Tom's stove to work right away. First order of business – Beans, spam, and coffee – not necessarily in that order. That's me brandishing the fork next to Tom, K4THL. The stove Tom fashioned is the #10 can in the middle with the Spam cooking on the top. Also, take note of the tower just visible in the middle of the top of the picture. You would think that I could put up a lousy 33' telescoping fiberglass pole.

After our sumptuous breakfast I decided to go snorkeling. This turned out to be one of the highlights of my stint there on the island. While the reefs are not large or spectacular, they were fun to explore and there were some large Tarpin to swim amongst. The fan and brain coral were best right at the base of the walls of the fort.

By 10:30AM it was time to secure the campsite to ready ourselves for the return trip. I got the tent broken down, mattresses deflated, sleeping bags rolled up, food stowed…. Everything was finally ready to go.

When we boarded no one in our clan talked much. The wind had picked up a bit so the ride back was a bit rough. Finally Key West came back into view and we hauled our gear off the boat and back to the car. Bob realized that he had left his keys with his sister and she wasn't answering her phone. So we dropped him off at her house to wait for her return and wished Bob farewell.

Tom & I then piled back into his truck and started heading back to Palm Beach county with not even a single Q under our belts. We almost made it too except for this little detour we took to Fiesta Key - which I will tell you about in the next installment of the BBQ. nw

So, what has changed since the world began?

By Joel Denison KE1LA

Again I ask you, what has changed since the beginning of the world…?
What is possible today that was not possible back then?
What new information has come into existence, what did not exist at the very beginning…?
What has changed since ham radio first started?
How have you changed since you were young?
Where has your friend of many years gone?
Who kneauxs ….

It has been suggested that with time comes understanding and with understanding we can increase our understanding of the realities around us…. And so things spiral…. Ever increasing….

So perhaps time is what is most important to us and what have you done with your time… in what area have you increased your understanding… what level of understanding do you need to be happy with yourself… in what area of life is understanding most desireable…In what areas do you lack adequate understanding…

Why when you are angry, you are most likely to say "but I just don't understand"…
If u kneaux the answer to these questions , write to me as I haven't a clue… and I'm getting a headache just thinking them up…

Kinda like what happened the other night…. Me and a few other guys got fascinated with these little lights what was sealed in epoxy glue and blinked and blinked…. So we took them apart and looked at what made them tick… simple circuit… so we got an idea….

After making about fifty of these things we figured we done wasted enough money and it was time for action…. Course we fancied them up a bit with a hole at the bottom to stuff baking soda and a small opening for water to got inside to the baking soda…. Yea , so they would move underwater…. Clever huh..?

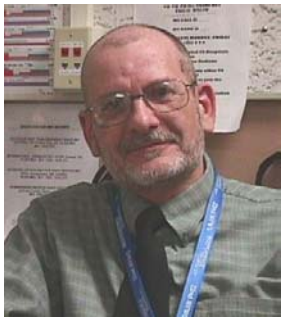
Next we waited for a meterior shower and that night we went dug a hole in the ice and let them little critters fall in the deepest part of the lake…. Clear water lake… u can see a penny on the bottom at thirty feet…. And here we was at 150 foots…

Man them little lights sure blinked and made an eerie glow … especially as some of them come floatin up due to the baking soda…. Than we gone call the attention of some ice fisherman what was passing the night fishing and sippin…

Sure nuff one of them guys had a cell phone and heah come the sirens … they done got 911 all excited…. And that was our clue to clear the territory…as they had folks from the nearby college coming in with all kinds of radiation testing machines and the tv stations even sent some people to film what was happening…

Well that was three days ago and they still an't figured out what that is down thair… and we an't telling… U might say we been heah long enough to increase our understanding to the point whare we kneaux we ought to keep quiet…

KE1LA JOEL
IN MAINE
FREEZIN AND WAITING FOR "THE THAW"



An Introduction To: Receivers

By Dennis Doran WB8WTU (FP-138)

This article is written as a simple guide to receiver evaluation. It is general in nature and aimed primarily at the new QRP/CW operator who may be unfamiliar with receiver operation and some of the terms that apply. It should be noted that technical evaluations of receivers does require expensive test equipment which few of us have. The best source for technical reviews would be one of the major Amateur Radio publications, such as QST magazine.

We will look at the following receiver parameters, define what they are and what they mean: Sensitivity, Selectivity, Filters and Bandwidth. Generally speaking, most commercially produced receivers and transceivers manufactured in the past 20 years are adequate with regards to the above parameters. They do not, however, all sound the same.

SENSITIVITY: Sensitivity is the ability of the receiver to hear weak signals. To a large degree, your antenna system will determine how well your receiver can copy weak signals. Therefore, sensitivity is perhaps the hardest parameter to measure or "hear". In this case, we have to rely on the published sensitivity specifications provided by the manufacturer.

Sensitivity is expressed by the unit called micro volts (uv) at 10db signal to noise ratio (10db S/N). The 10db S/N is merely a baseline reference point to measure sensitivity. The micro volt (uv) number is the one to look at. An average receiver would have a sensitivity spec of 0.3uv for 10db S/N ratio. The lower the uv number, the more sensitive the receiver is. Better receivers have a sensitivity spec of 0.25uv or lower. A sensitivity spec of 1uv for 10db S/N would not be very sensitive at all. Generally, most amateur receivers meet their published sensitivity specs, and in many cases, actually exceed them.

There are several features available that help to improve a receivers sensitivity. These features are available on many, but not all, receivers.

Switchable Pre-amplifiers: A pre-amplifier helps to improve sensitivity at higher frequencies, generally above 10 Mhz. A pre-amplifier is used to amplify signals before the first stages of the radio receiver. Why are pre-amplifiers used above 10 Mhz and not below? The reason is that there is less noise present on ham bands above 10 Mhz. They are "quieter" than ham bands below 10 Mhz, such as 40, 80 and 160 meters. A pre-amplifier will amplify everything it hears, including noise as well as weak signals. Therefore it is used on bands that are less noisy. On these bands, weak signals can be amplified making them louder and easier to hear. On 40, 80 and 160 meters, the noise level is often as loud as the signals you want to hear. Using a pre-amplifier on these bands only makes the noise even LOUDER.

On some receivers, the pre-amplifier is turned on and off automatically depending on which band is selected. On others, the pre-amplifier is manually selected depending on operator preference. What is not common, is the name that manufacturers call this feature. Icom and
Ten Tec call their pre-amplifiers "Pre-amplifier". Kenwood calls their pre-amp function "AIP" (Advanced Intercept Point) on some models. Yaesu calls their pre-amp function "IPO" (Intercept Point Optimization). With both AIP and IPO, it will take several readings of the operating manual to figure out when the pre-amp is on or off.

RF Gain Control: Where as a pre-amplifier will increase the strength of a weak signal, a RF Gain control will decrease the strength of a strong signal. Very strong signals tend to overload a receiver causing distortion and masking of weaker signals. Just turning down the volume control (reducing audio gain) will not solve the problem caused by very strong signals. A RF gain control is like a volume control for your antenna by turning down the gain at the first stages of your receiver which reduces receiver overload.

Attenuator: Performs the same function as a RF Gain control, but it is not variable. An attenuator control selects one of several "steps" of gain reduction.

Selectable AGC: AGC stands for "Automatic Gain Control". This feature automatically reduces receiver gain when strong signals are present. AGC functions like an invisible hand, turning the gain control up or down depending on signal strength. For SSB signals, we want that hand to turn down the gain slowly so that the voice does not sound choppy. For CW signals, we want that hand to turn down the gain fast so that we can hear between the dashes and dots. In both cases, we want our receiver to be sensitive enough to hear weak signals, but to back-off the gain when a strong signal comes along. Some operators prefer to have the AGC turned off, so that the receiver has maximum gain at all times, which is good when listening for very weak signals. Selectable AGC allows that flexibility, while non-selectable AGC is automatically set slow for SSB and fast for CW.

SELECTIVITY: Now this is a receiver parameter that is easy to hear. There are many signals present on the ham bands, and ideally we only want to hear the one we are listening to. The ability of a receiver to "select" one signal from all the others is called selectivity. The selectivity of our receiver is determined by a thing called bandwidth. If we tune to a frequency on a receiver, that frequency - as indicated by the VFO dial or digital display - is our "center" frequency. How far up and how far down from that center frequency that we can still hear signals, is called bandwidth. A wide bandwidth will allow us to hear signals several Khz up or down. A narrow bandwidth will allow us to hear signals only slightly up or down from our center frequency.

It is important to note that each operating mode - SSB, CW, AM - are all received at different bandwidths so that they "sound good":

AM is generally 6 Khz bandwidth
SSB/CW is generally 2.4 Khz bandwidth
Narrow CW is generally 500 Hz bandwidth

Receiver selectivity is determined by bandwidth, and bandwidth is determined by filters internal to the receiver. Generally, all receivers and transceivers come from the factory with internal filters installed for SSB reception. Filters for AM and narrow CW are usually options to be purchased separately. These optional filters either narrow the bandwidth or widen the bandwidth depending on operator preference. A receiver with standard SSB filters has a bandwidth of around 2.4 Khz. This is too narrow for good AM reception as it makes the signal sound muddy with reduced clarity. For CW, the 2.4 Khz bandwidth is ok, however, many CW signals can be heard in that bandwidth and many CW operators prefer to narrow the bandwidth to 500 Hz to reduce the number of signals heard. This reduces interference.

At this point of our discussion of selectivity, bandwidth and filtering, it is important to understand the major difference between SSB and CW signals. Single sideband (SSB) signals only transmit one sideband, either upper sideband (USB) or lower sideband (LSB). The other guys transmitter eliminates the "not used" sideband before their signal is transmitted. Our receiver only needs to receive their signal on the same sideband as it was transmitted to be understood.

CW signals are transmitted with both sidebands, upper and lower, and our receiver has to eliminate one of them. Why ? Well, if there were 5 CW signals in our receiver bandwidth, and it did not eliminate one of the two sidebands transmitted, what we would hear is 10 CW signals - 5 at USB and 5 at LSB. These signals would overlap each other and cause double the interference. By eliminating one of the sidebands, we only hear just 5 CW signals. The ability of our receiver to filter out the unwanted CW sideband is called opposite sideband rejection. This is what it sounds like: Tune in a CW signal. As you tune towards "zero beat", the tone of the CW note will get lower and lower. At zero beat, the tone will disappear. Now, continue tuning in the same direction past zero beat, and listen. What you should hear is nothing, but what you might hear is the tone again, this time increasing in pitch as you continue to tune slowly. This second tone, on the other side of zero beat, is the opposite sideband "leaking" through your filter.

Ideally, we want to hear very little, if any, signal on the opposite sideband. Opposite sideband rejection is seldom listed in the receiver specs, and it varies greatly between receivers. Some receivers have very little, and some have a lot. The better quality filter that the receiver has and the better isolation, the better the opposite sideband rejection is. The term filter blow-by is sometimes used to describe this leakage around the filter.

Selectivity does vary between different radios. Generally, the better the receiver, the better the selectivity. On a crowded band, with many signals close to one another, selectivity becomes an important parameter to consider.

One final receiver parameter to mention is called noise floor. Noise floor is basically how quiet the receiver sounds without an antenna connected. A simple test is to tune your receiver to a frequency which is quiet, like 10 meters for example. Then, while listening, disconnect to antenna from the radio. The receiver should get very quiet. You might hear a slight "rushing" sound, but without any "hiss" or "squeals". Reconnecting the antenna should cause the background noise to jump-up in volume. Ideally, there should be a marked difference in volume between antenna on and antenna off conditions. The electronics in the receiver generates a certain amount of internal noise. This is the noise you hear with the antenna disconnected. The less noise the better, as this internal noise will only

be added to the background noise when the antenna is connected. A slight difference in antenna on/off conditions could indicate a "noisy" receiver.

Picking a receiver that "sounds good" is an individual choice. Still, basic performance can be checked using the above guidelines. Many hams that are new to QRP/CW operating use commercial radios with the power output turned down to 5 watts. Hopefully, this article has provided some ideas of how to evaluate a receiver for picking out those sometimes weak QRP signals.

73 and o-o,
dennis
WB8WTU FP#-138

Milliwatt Contesting

By George Osier N2JNZ – FP # -344

Contesting is often thought as a 1000 watt adventure, but hearty souls often do very well as QRP amassing rather large scores! With the advent of superb receivers and DSP filtering a NEW frontier has opened for the low power operator.

Contesting under 1 Watt!

It may seem like huge a problem with 500 mw or whatever power under 1 watt you choose but with a bit of thinking and planning you can be very successful!

Equipment

What is most important is an accurate way to measure power. My station has an Oak Hills WM-1 power meter which can measure down to 1 mw. This way you can be totally sure you are under the magic 1 watt. My rig is a Ten Tec Argo 509, which by turning DOWN the drive control, you can get it down to 5 mw easily on all bands. Next for CW ops is a Timewave DSP-9 which helps with the VERY crowded conditions during the contests. I also have a K1EL keyer for my keyboard which is great for playing back exchanges at the push if a function key!

Contests

Certain contests are better to enter than others. You would think the large tests like CQ WW , CQ WPX , ARRL DX INT would be poor to enter because of the bands being so busy and each DX station being so popular, but this thinking is wrong. In these major tests only the best ops and very best equipment is used! The best receivers and tons of aluminum in the air makes the contacts easier for the big guns and the DX has a much better chance of hearing you just fine! In smaller tests the odds are even better, for example, in the ONTARIO QSO PARTY I could actually hold a frequency and keep it for quite a while!

How to score BIG

First things first, PROPAGATION! Knowing what band is good and what band is busy. It means the difference between making one or two contacts versus making 100! During the cycle when 10 meters is on, the milliwatting is INCREDIBLE. The band is top dog when things are good. 15 meters is great when the sunspot count is high also. 20 meters is great but usually this is where the HUGE crowds are

situated, but it is still VERY workable! 40 and 80 meters can also be used but you have to account for noise.

CW is very much the major way of working under 1 watt. The pileups can seem very scary at first but with PATIENCE and PERSISTANCE it can pay off with a great DX contact. Generally you must work "search and pounce" which is tuning up and down the band for stations then trying to work them.

Work the LOUD stations first then as you gather steam try the less strong stations as you go. A trick to remember (which is against most CW operating creeds) is to work "slightly" off frequency of the pileup. Only do this if you really want the station concerned. Sometimes stations will notice the change in tone from the rest of the pileup and pick you up. (Usually only at most 1 KC from zero beat either up or down) Speed is also a BIG factor in making contacts! Match the speed as close as you can but sometimes "blasting" away at high speed will get similar results. Timing your call is also VERY critical. You would like to be the first in, and with your power you must be. Some stations have a rhythm how they take a calling station. Some take the first call they hear and some wait for the loud buzzing of the pileup to subside a bit. Just remember to LISTEN, LISTEN AND LISTEN MORE!

Once you get wise to his way of listening for calls, the chances of you getting him is MUCH greater! If you are going for a BIG score you shouldn't stay too long trying to get a station, but if its a new one for you, by all means make the effort. Examples of stations under 1 watt during a contest here are :

C53M , 700 mw
4U1ITU , 700 mw
D44TD , 700 mw
LT5F , 700 mw
RA0FN , 700 mw
JA8RWU , 700 mw
D68C , 500 mw
ZD8Z , 700 mw

In the 2001 ARRL 10 METER TEST, as an example, I had 170 Qs at 700 mw.

Newbies

Those of you new to contests have no fear! The exchanges are usually very simple from maybe just "599 NY" or 599 with a serial number starting with 001. Often with milliwatting a station will call you back for info not gotten by him and he will ask for the bits he needs. He will usually thank you with a "TU" and call "QRZ" looking for his next victim. Just remember that YOU are valuable to him for points in the tests and he WANTS to get the exchange complete for it to count! Tests are a great way to learn fast and efficient operation and a even greater way to get better listening skills. Not all big contest stations are just running high speed CW, they will often slow to the speed of the station calling and give their reply at the slower calling station speed.

Preparation

While paper logging is still fine as a entry in most contests, the computer logging programs are the fastest and most efficient way to go. I use N3FJP software on an old Compaq laptop and it works fine. Most logging programs are Windows based now but there are still some DOS contest programs still running well. These programs keep a running score as you go and tabulate a final claimed score when the whole thing is thru. They will also print out a contest summary and a Cabrillo file to send by snail or E-mail to the contest director.

Final comments

Contests are king as far as getting DX or new milliwatt states for awards! It amazes me to what means the DX stations will go to get a powerful signal out! My friend, Rasto, OM3BH was working at OK2RZ during the 2000 ARRL 10 METER TEST and heard my 4 mw signal and got it on the first call! Once I heard what he was using as a antenna I could see why! He was using 3- 6 element 10 meter beams in phase at 100 ft which I think he could have heard me with even less if I would have been brave enough to try. Most DX contest stations are VERY serious about contesting and enjoy the challenge of making over a thousand contacts. Milliwatting is not as tough as it sounds. Just get in and make some contacts and you will be amazed at what you can do and what some people can hear!

72 es OO de N2JNZ

Firmware Mods for the ATS-2 and ATS-3 radio

By Michael Harnage/W1MT FP-629

Steve Weber, KD1JV, has put out some great kits and the ATS series is one of them. In fact, the ATS-3 is destined to become a classic. I had read about the original ATS radio and wanted to get one, but Steve had stopped kitting them by the time I got a round to it. About two years ago Steve introduced the ATS-2 radio. A radio designed to be used in the field. It is a small, lightweight, back packable rig with tremendous capabilities. I bought one and was hooked. Then word began to leak out about a newer rig that was even smaller and lighter, the ATS-3. I sent Steve my money right away and waited for the eventual release. When it arrived, I had the day off from work, and built it in about 7 hours, including interruptions. This one had every bit the performance of the ATS-2. About this time I finally completed my MP+. I had added dual VFO's and incorporated split capability and really enjoyed using it for Foxhunting and working DX in split mode. I began to wonder if something like this could be done with the ATS-3.

I started "pestering" Steve with questions about the ATS-3 rig in November of 2004. By the time mid December came Steve had graciously sent me the code for both the ATS-3 and the ATS-2. (Side note: with out Steve's support I could not have begun or finished this little project. He has answered every question I had, and receptive of many of my ideas, no matter how far out they were.) Thus began my journey into the programming world for the MSP430 MPU device. It took a few weeks of pouring over Steve's code, asking him questions, pouring over the TI chip documentation and the DDS chip documentation to figure out just what was going on. I created a wish list of things that I would like to do and at the top of the list was dual VFO's and split mode. The other big thing was upgrading the keyer memory capabilities. Along the way I met a couple of other folks interested in what I was doing and contributed to the idea pool, thanks John/W1RT and Karl/K5DI. It took several months to get the code to a point where I was ready for others to try it. Along the way several minor bugs were found and fixed. All the while I was doing this work I was in constant contact with Steve. Letting him know what I was doing and what I was finding out. He has incorporated all the bug fixes that I found and I have incorporated all the bug fixes that he found. Steve's firmware now includes xit along with rit and the memory capability that I developed. My firmware includes the dual vfo and split mode with the memory mods along with multiple frequency stepping capability. For the Spartan Sprints Steve's firmware with the rit is great. For Dxing and Foxhunting the dual VFO's and split mode come in handy.

Dual VFO's is implemented from the user's perspective on the second button (Steve calls this the rit button, I call it the VFO button.) Hold the VFO button and you will hear and "A" or "B" depending with VFO is currently active. Release it at this point and a "B" or "A" will sound letting you know that the current active VFO has changed. If you hold the VFO button through the A/B you will hear a "Y". Release here and the other VFO will be set equal to the current VFO, an A=B function. If you hold the VFO button through the "Y" menu, you will hear and "N" or "S". This is the select VFO mode function. Releasing now will sound and "S" or "N" signaling that the VFO mode has changed from normal to split or vice versa. The next menu function if you keep holding the VFO button is "SS" (6 dits). Release here and you get to choose the frequency step size that you want. Click the vfo button for 1MHz, tune down button for 50Hz and tune up 10Hz. Click the menu button to exit SS mode. If you hold the VFO button through the "SS" you reach the end of the menu and will hear an "X".

The memory functions are access with the VFO button. A quick click of the VFO button will play memory slot 1. If you click the tune down or tune up button within 1/3 of a second of clicking the VFO button you will play memory slot 2 and memory slot 3 respectively. To store memory use the "M" option on the main button menu. You now have 124 characters to share between the three memory slots. To enter the memories you enter them at the same time separating the slots with a special character (7 dashes). You can enter 1, 2 or 3 memories this way. (One can actually enter more than that but there is no way to play more than the first three.)

Another easily seen item that is in this firmware that was requested by multiple users is the ability to change the command speed and save it to memory so that it comes back upon the next power up. This is accessed via the "C" option on the main button menu. It works just the same as the "S" function. It should, it is the same code doing the work.

Here is the cheatsheet for my firmware:

Menu button

F Freq 's' if split mode, 'a'/'b' active vfo, then 100KHz 1st, 10Hz last if not 0, 'r' before 100Hz

S Transmit speed, tune up increases / tune down decreases
E Direct Frequency Entry (paddle), menu to exit
T Tune, dash on / dot off, menu to exit
M Keyer memory, menu to review, vfo to re-enter, menu to store *
W Wide band reception toggle on / off
C Command speed, tune up increases / tune down decreases
P User preferences Tune up toggles iambic A / B, menu to store
X end of options

* key in 7 dashes to insert memory marker. 124 bytes of memory can divide into 3 different keyer memories

VFO button

K Play keyer mem 1, quick press tune down play memory 2, or quick press tune up play memory 3
A/B Sel active vfo. Announces current active vfo and then announces new vfo (A=vfo A B=vfo B)
Y Synchronize vfo's. Set other vfo to same freq as active vfo
N/S Select vfo mode. Announces current mode, then announces new mode (n=normal s=split)

SS Step size, vfo 1MHz 'm', tune down 50Hz '5', tune up 10Hz '1', menu to exit
X end of options

Notes: The F and the K (first options in each list) are NOT announced.
Fast tune mode uses the current step size to fast tune.
Beacon mode can be entered with the menu button while a message is playing. Only memory 1 is repeated during beacon mode.

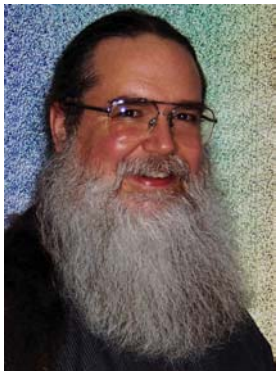
The ATS-3 and the ATS-2 are similar in design but not exact as their use of MPU ports is different. So the software is not 100% compatible. But by adding a software switch one can use the same source code on either rig. All that needs to be done is to comment out one line near the beginning of the code to allow it to work in the ATS-2. I did this because I had an ATS-2 and wanted to put my ATS-3 modifications on it, but did not want to repeat the modifications and have two different versions of code to track. It was easy enough to isolate the differences and put ifdef's around them so that the same code will run on either machine. Slick. Oh, you will not get wide mode on the ATS-2, it is not in the hardware.

You can program your ATS-2 or ATS-3 rig with a minimal dollar investment. If you have a PC computer that has a parallel port I recommend the Olimex Jtag cable ($15 or so). With this cable you can cobble together the hardware to reprogram their own ATS-3 or ATS-2. Download the IAR Kickstart software development suite from TI at the following site, <http://www-s.ti.com/sc/techzip/slac050.zip>. Set the IAR software up and download to your rig by following the instructions at my site <http://w1mt.qrpradio.com/IAR_setup.txt>. Help in connecting the hardware can be found at <http://w1mt.qrpradio.com/olimexInfo.html>. Thanks to Bruce/N1RX for the great instructions to connect the Olimex cable. I used the TI Fet board (more expensive than the Olimex) which is documented on the main page of my website, http://w1mt.qrpradio.com

I must also give thanks to Cecil/KD5NWA who has allowed me to post all this information on a website that he owns. Thanks Cecil.

I am glad to assist via email and phone if necessary anyone who would like to download the firmware and reprogram their rig. Will also do it if you want to ship it, but it really does not cost much to do it yourself!

73 de w1mt
Mike



Fun with Minimalist Radio

By Jim Glover WB5UDE FP # 1036

I'll start with the conclusion. Minimalism is fun! If you remember my introductory column in the last issue, you'll recall that my focus will be ways to have fun with radio. Many hams find a minimalist approach an effective tool for having fun.

At the least, minimalism will maximize the areas you can explore within the last realm of radio by limiting the resources required to investigate each particular area. For many hams, accomplishing significant (or even routine) communications with minimal resources is fascinating in its own right.

As members of a QRP club, Flying Pigs should be familiar with one of the most popular forms of minimalism in ham radio. QRP by definition is minimalist in terms of output power, but also embodies many other aspects of minimalism. QRP can minimalist in terms of energy consumed, weight of and/or space required for a station, ease of deployment, effort and/or knowledge required to build and/or understand equipment, cost, and quite possibly, something else that is near and dear to our heart, which I have neglected to mention!

It has been my experience that learning is an important part of putting and keeping the fun in radio, and minimalism can be an important tool for learning. Minimalist approaches often boil technical complexities down to their essentials. The builder of a small, simple transceiver from a kit or magazine article is much more likely to understand exactly how each piece contributes to its design and operation than someone who tackles something more complicated. Learning from a small scale project leaves more money and time for moving on to the next step. Keeping it simple makes it more practical to experiment and customize, activities which support excellence in learning.

There are those who have never earned a ham license, or hold a ham license but remain inactive, because they believe that they can't afford to be active hams. There is a perception of amateur radio that it involves significant expense to participate. In truth, huge sums can be spent on any hobby, and even as practiced by the mainstream, ham radio is not among the most expensive. Nevertheless, a typical ham station involves the investment of hundreds or thousands of dollars, and anyone who asks around is likely to be told that it takes that kind of financial commitment to make a go of it on the air. Conventional wisdom is that while some may find it fun to play with minimalist "toys" it requires a more serious investment to succeed as a ham. The truth is that some serious fun can be had with a minimal investment.

It's not necessary to approach the capabilities of a full-featured HF rig to have reasonable success contacting people from hundreds and possibly thousands of miles away. Kids, students, single parents, retirees and others with limited financial means, as well as those who simply aren't willing to make a lot of room in the family budget for radio can have a blast learning and playing with minimalist "toys." OK, yes, let's go ahead and concede that point. They are toys--but perhaps more so because they are fun, than because of the limits of their capabilities. Don't expect to establish a highly reliable intercontinental point-to-point link or make the high score in The Big Contest using your "toy," but do expect to have a lot of fun! After all, if you can, for example, work all 50 US states, a accomplishment which many US hams have achieved with various minimalist stations, isn't that good enough to be worthwhile?

My favorite minimalist toy is my Pixie 2 CW transceiver. The Pixie is a clever circuit that comes in lots of variations. The one I built came as a $9.95 kit from Halted Specialties, with two 2N2222 transistors and an LM-386 audio amp. One of the 2N2222's is a crystal oscillator. The other transistor (here comes the clever part) serves double duty as a final amp delivering about 200 milliwatts, give or take, for transmitting, and as a mixer for the direct conversion receiver. Here's a link to the web page advertising the kit I purchased:

http://tinyurl.com/67bp6

An Internet search will turn up more information about all the many variations on the Pixie than you'll probably ever find time to read. You can try googling "pixie qrp" (without the quotes), which produces about 6,480 hits. You'll find circuit diagrams and construction hints, ideas about what kind of enclosure to put it in, operating tips, and more. I can confirm that the Pixie on 40 meters, an inverted V up about 10 meters (33 feet) at the apex, greyline propagation, and a little patience will net you some very enjoyable CW contacts.

The author built this Pixie in a cookie tin, which can serve double duty holding various accessories. With some connectors and hardware from the junkbox, the total expense was about $20.

Another minimalist contraption that many folks find interesting and rewarding is the crystal receiver. Lots of hams remember building one of these as a kid. Perhaps you do, too. If you do, and you remember picking up only a few strong local stations, you may be surprised by what these things can be made to do with a little more effort... er, I mean, fun! By winding a few extra coils, some of varying size or with multiple taps, and by adding a few more variable capacitors, you can significantly improve a crystal set's performance. Throw in a transistor or two, and you can really start to cook. The possibilities for tinkering are almost endless. A good start, complete with several crystal sets, plus one/two transistor circuits, regenerative circuits, shortwave receivers, antennas and other accessories, all designed to be easy for anyone, including kids, can be found here:

http://www.thebest.net/wuggy/default.htm

Crystal sets and other minimalist receivers are a good tool for getting kids interested in radio, and for helping kids (or anyone else) find ways to enjoy experimenting with radio on a shoestring budget. Mostly, the parts are inexpensive and readily available, with air variable capacitors being a notable exception. However, the polyfilm variable capacitors available in junk radios for a buck at garage sales and thrift stores will do just fine for the MW broadcast band. The 1N34 type diodes take a little digging to find these days, but are still available, and inexpensive once you find them.

Most hams believe that while crystal sets and similar minimalist toys may be fun to play with, they're useless for amateur radio purposes. One ham who knew better was KC6WDK (now SK) who left behind this fascinating web site:

http://tinyurl.com/3pwah

The KC6WDK pages describe an entire QRP multi-band HF station built on a shoestring. If he could do it, so can others!

For those who'd appreciate the challenge or cost savings of a minimalist approach, but who'd rather not have to build their own gear, there is the option of buying new or used minimalist toys that come ready to operate. If you don't find what you're looking for on E-Bay or in "for sale" posts to e-mail groups, try posting a WTB ("want to buy") message yourself. If you'd rather have new things, some

manufacturers, such as MFJ, offer minimalist gear either in kit form, or assembled. Here's a link to a 2.5 watt crystal controlled 40 Meter CW transmitter for only $20:

http://www.qth.com/dwm/peanut-whistle.htm

You can buy crystals for popular QRP frequencies from Norcal for $3 each, including shipping:

http://www.norcalqrp.org/norcalcrystals.htm

I hope all this talk of having so much fun with so little has left you eager to go try some minimalist building or operating of your own. Better yet, why not find someone who might be interested in a simple start in a radio hobby, and have fun helping them have fun? Either way, I'm sure you'll be pleased with the results.

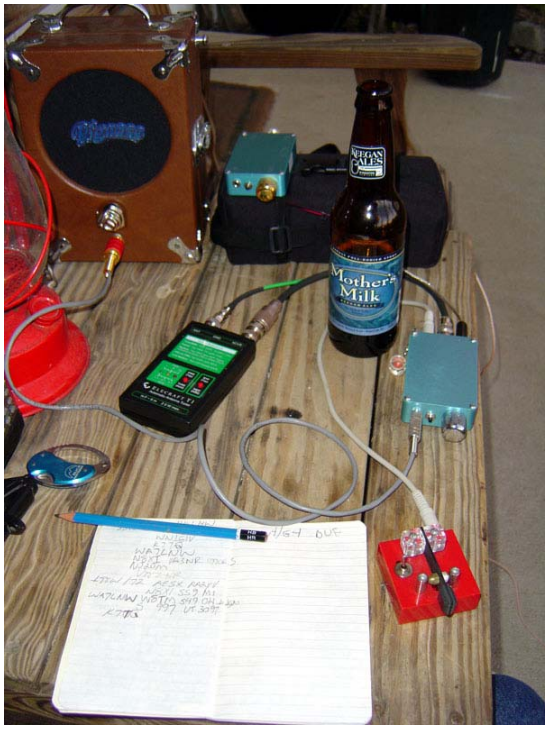
73,
Jim WB5UDE

Working the Wire in Wyoming

After a family revolt, N2XE is resigned to bringing a minimalist rig on the family ski trip.

By John Ceccherelli, N2XE – Flying Pig #392

I'm no stranger to temporary radio station set-ups. Just about any decent weekend (weather-wise), you can find me operating from my front porch. Usually with battery power, QRP rig and portable Fly Rod Vertical antenna. I am so familiar with this set-up and have it fine tuned to the point that I can scare up a QSO at will. Even with my stable of RockMites (I have five) running under a half watt, I've never had to beg for a QSO.



This is a photo of the typical N2XE front porch station set-up complete with a Pignose audio amplifier and freshly opened bottle of beer.

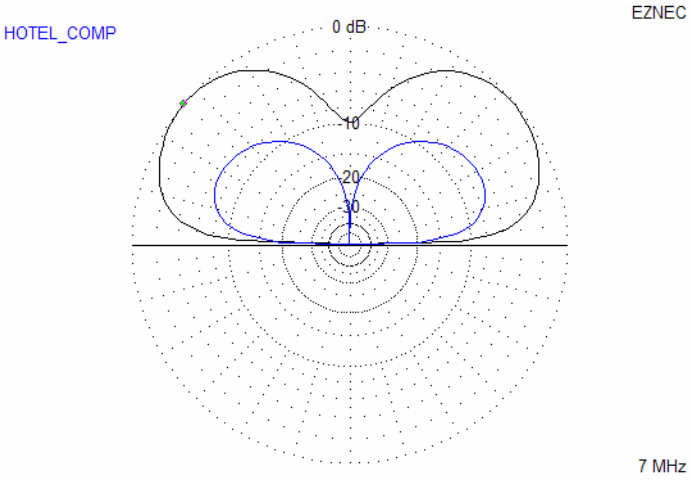
The Family Revolts

My family had decided to shun the east and head to Jackson Hole, Wyoming for our annual ski trip. Because we were going to haul our skis, boots, winter clothing and other paraphernalia, they insisted I not bring the Fly Rod Vertical. I'll admit that it has held me up at airport security in the past. I'm not exactly sure why but its striking resemblance to a pipe bomb and collection of wires, rods, ropes and sharp steaks inside probably contributes. All my ham gear would have to fit in my small backpack.

With these severe restrictions, I really had only one logical choice—the Elecraft KX1 and a 40 foot wire antenna.

This is the business end of the Fly Rod Vertical. All the wires, whips, radials, guy lines, ground steaks and feed line stuff into the 26-inch long, 2.5-inch diameter Fly Rod tube (the part with the red diagonal stripe).

The KX1, with three bands internal battery and tuner, is just about the perfect rig for the ham on-the-go. Many people rave about the rig's performance with a 40 to 50 foot wire but I've never been impressed. Don't misunderstand; the KX1 is a great and capable rig. The random wire is where I've always run into trouble. I'm not exactly sure why either. Simulations show a 45 foot wire should work great—even with a marginal ground system. Then again, simulations show the Fly Rod Vertical to be a pretty poor performer but in practice, it rocks. With the vertical voted off the island (so to speak), the random wire would have to suffice.



This is the EZNEC comparison of a 45 foot random wire (black) slung over the balcony of a typical condo in Jackson Hole, WY vs. the Fly Rod Vertical (blue) on 40 meters.

Working the Wire in Wyoming

We arrived in Jackson at sundown so after a quick dinner, I had plenty of time to assemble my temporary station. The spacious balcony was well above ground level and armed with glowing EZNEC data, I was looking forward to a few rag-chews. After assembling what I figured was the optimal layout for the wire, I fired up the KX1 and scanned the bands for activity. There was precious little. Hearing nobody calling CQ, I through out a few hundred calls myself—nothing. Maybe propagation was really bad or maybe folks out west don't use 40 meters. Dejected, I turned in for the night.

After a day of skiing, the time had come to get on-the-air and put the KX1 through its paces. Things just weren't working well and conditions seemed identical to the night before. I noticed the volume was turned down to about 1/4. This is unusual; I usually run the volume almost full blast on the KX1. The noise level was extraordinary. Putting my analytical skills to the test, I soon determined that using the condo AC electrical system for my antenna ground was a very bad idea.

Mrs. N2XE hitting the slopes in Wyoming. The Radio activity wasn't working out but the skiing was the best we've ever experienced.

Grounds and Counterpoise

My wire needed a good, quiet, counterpoise and there wasn't one to be found. And this is my complaint with random wire antennas. They're really only half an antenna—counterpoise is merely a code word for "the other half of your antenna." For some odd reason, Hams have been chasing half antennas since Marconi was a pup. We are attracted to verticals with no radials and half dipoles which we call "random wires."

After searching for another two days, I finally discovered that the heating duct system made an effective and low noise counterpoise. The airwaves sprang to life and, after four days of futile effort, I got to chew the rag with John, K7FD. At last, the KX1 was performing as EZNEC said it should.

Next trip, I'm bringing the other half of the antenna.

The Flying Pigs BBQ MP3 Audio Project IT ROCKS!!

By Brian Murrey KB9BVN (FP-57)

N7MFB - Bill Todd

We, the Flying Pigs QRP Club International, are very fortunate to have William Todd N7MFB (FP-419) among our ranks. Bill is responsible for taking the printed BBQ and reading it into MP3 files so our fellow vision impaired amateurs may enjoy it. The January issue was our first attempt at doing this. I personally mailed out about 30 CD's to hams all over the place. The positive feedback for this service was widespread. Bill can be reached via email wptodd@techline.com

G8IFF Nigel Gunn

In searching for a web server willing to handle the online distribution task, another fine fellow Flying Pig stepped up to the plate. Nigel Gunn G8IFF/ KC8NHF (FP-385) has very generously made available his website for the downloading of the MP3 edition of the BBQ. The last I had heard, Nigel and his wonderful website, had successfully served up the January BBQ in MP3 format no less than 40 times. Nigel can be reached via email nigel@ngunn.net

The BBQ rendered in MP3 format can always be downloaded from: http://www.ngunn.net/fpqrp/ Typically the MP3 version of the BBQ can be found on the above website about 30 days after the print version is released to the public.

One last thing, as US Memorial Day draws near, let us not forget the men and women of our military that have faced and endured hardships, sacrificed their lives, and lived away from their loved ones so we can continue to enjoy the freedoms we have today. To my son, I say SEMPER FI and THANK YOU. – KB9BVN

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OUR MISSION:
1: Have Fun.
2: No rules.
3: Have a group of Friendly Hams who enjoy Amateur Radio, and sharing their skills with their fellow Hams.

CLUB EMAIL POLICY:
These are not rules, just common sense.
Club email is not moderated, as we are not a stuffy group. You can send off topic messages about most subjects, but please keep it clean and in good taste. We do like good-natured ribbing and joking with each other, but we will not tolerate flaming other members or spamming the group.
We will remove offenders who abuse our open policy. The word eBay is allowed.

CLUB WEB PAGE:
The club web page is our forum for sharing projects, and information about us. You are encouraged to submit your ideas and projects to be added to the web page.

http://www.fpqrp.com

OUR MONTHLY CONTEST – RUN FOR THE BACON SPRINT:
This event is held on the 3rd Sunday Night (EST) of the month. For full details on how to participate, see the website address of: http://www.fpqrp.com/fpqrprun.html

PROBLEM REPORTING:
If you are having problems with email, the web pages, or a fellow club member, please report this to either:

Diz, W8DIZ at w8diz@cinci.rr.com
Jim, W0EB at W0EB@cox.net
Rick, WB6JBM at ripowell@mpna.com
Dan, N8IE at n8ie@who.rr.com