K9YA Telegraph

Robert F. Heytow Memorial Radio Club

Volume 3, Issue 10, October 2006

Arachnid's Song

The W5JH Black Widow Paddle Kit

Philip Cala-Lazar, K9PL

There's an indefinable quality that goes into the creation of a great paddle. It's some combination of design, materials, workmanship and genius, that certain something that makes it a pleasure to use while enhancing preexisting skills.

Paddles and keys—outwardly they appear such simple devices, but apply fingers to them and they come alive—some designs more alive than others. Instruments like these are available from a number of sources. Recently, I came upon a new design I believe is bound to earn a place in the pantheon of great paddles.

"…that certain something…"

It was on eHam where a handful of reviewers agreed; the W5JH Black Widow paddle kit is a super product. A click on the link and I was visiting Jerry's Web site, downloading the documentation and, liking what I saw, ordering a kit.

I did not choose lightly, a Bencher BY-1 has been my paddle of choice for nearly 30 years. During those years I've used, often for extended periods, many other paddles—foreign and domestic—but always returned to the Bencher. Purchased from long gone ham radio retailer, LaRue Electronics, mine is one of the original, "fly-apart" or "exploding," versions, i.e., anything but a sure transverse movement on the finger pieces and the thing flies apart—shocking in mid-QSO—but an enjoyable instrument nonetheless.

Magnetic Motivation

The W5JH Black Widow paddle employs two magnets and a spring to motivate its arms. The arms are positioned and suspended on four ball bearings with provision for adjusting tension to your operating preference. After receiving the securely packed kit and inventorying the parts I found three 3/16-inch chrome ball bearings missing; an e-mail to Jerry; a quick response; and the parts were soon in hand.

Finishing and a Hint

As expected, finishing the brass components took the tarantula's share of time in getting the Black Widow prettied up and keying. Wanting to achieve a fine finish, I started with 220 and 400 grit papers as Jerry suggests, but then carried on with 600, 800 and 1000 grit wet or dry sandpaper. The wet or dry paper was used under a trickle of water at the sink; the paper laid flat on a rigid plastic cutting board. Following the 1000 grit I applied MAAS metal polish, this is also suggested in the very complete kit documentation (on CD), to finish up. I spent about eight hours getting a finish that pleased

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Philip Cala-Lazar, K9PL
Editor

Mike Dinelli, N9BOR
Layout

Dick Sylvan, W9CBT
Staff Cartoonist

Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

Antennas and "Vertigo Paralyzation"

The Story of an Elevation Challenged Chicken

Rick Hiller, W5RH

Rick, W5RH

You've heard of an antenna's vertical polarization characteristic, but probably not of antennas causing "Vertigo Paralyzation."

So, there I was, just a measly 25 feet up from the ground, hanging off Frosty's (K5LBU) tower. I made it up that far by forcing the issue with my inner self. But hanging there, thinking that going up even further, onto the top of the tower to affix his Tennadyne log periodic to the extended mast, was a feat beyond my physical and, more importantly, mental means.

Freefalling

I'm not quite sure exactly why I had this feeling just then. It might have been the thought and on the fly calculation of hurtling toward the earth and smashing into the ground at a still accelerating velocity of just over 45 feet per second or maybe it was the constant gut wrenching pain of "whatever" that was shooting through my inner soul or, just maybe, it was that I did not trust my safety belt. I had tested it fully, many times, at two feet off the ground just the day before. Pick any of the above excuses and you would be correct, as ALL of them, and more, were in play while I froze, paralyzed with acrophobia induced vertigo, on the tower, that clear and cool Sunday morning.

"…standing on 'terra roofa.'"

I do climb my own tower to 25 feet in order to work on the mast extending from my Hazer elevator platform. All the while, my son will be laughing at me because I am hanging on for dear life (and trying to not let it show). He's laughing because he climbs that tower like a monkey, with no fear, as a monkey should and as proper tower climbers should—my hat's off to him and them.

Contradiction?

Go figure. I spent a few years living and working in Western Australia and in my free time enjoyed jumping out of perfectly good airplanes from 10,000 feet. No problem there, I could sit in the door of the Cessna 182 with my feet hanging out, from take-off to exit at jump height, but put me 20 feet off the ground on a ladder or a tower and you might as well rip out my heart—it would be less painful, honestly.

I have heard that hypnosis can correct the fear of water, spiders, snakes, flying and even heights, but I have yet to submit to that treatment. So, I simply build all of my antennas and masts with the capability to access them from the ground or, at highest, my roof. Be it a push-up mast, a tilt-over tower, a tree branch or a Rohn 25-mounted Hazer system, I've done them all. Hey, why do you think I like vertically polarized, corner-fed delta loops? It's because, not only do they generate low angle radiation for DX chasing, but the triangle shape means they can hang from a single high point on, say, a push-up mast and the corner feed allows me to tune them at roof level. I did build a three-element 20-meter Yagi once, but I also homebrewed a 50-foot tilt-over tower to allow me to work on the Yagi and rotator while standing on "terra-roofa."

Anyway, back to my dilemma—there I am at 25 feet above Frosty's house and he is below, patiently shouldering the rather large log periodic, waiting for me to take it from him. I asked for a minute or two to get acclimated, after which I said that I was coming down. Who was I fooling? I just could not do it. Then, finally, reluctantly, I excused myself from the task. The antenna "party" (hardly the proper word when there is height involved) would have to wait for another time and another person.

Uncle Potty

I apologized to K5LBU profusely and admitted I had been defeated by a fault that had been with me since

Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

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I was a child climbing up the fire tower on top of Mount Penn in W3-land. I had this fear back then, even though that tower was built by Potteiger Construction Company whose owner was my self-appointed "Uncle Potty," Harry to everyone else, the man who lived across the alley from us. So, if I could not do it for my Uncle Potty then, I certainly could not do it for Frosty now (sorry, Charlie).

After talking with Frosty for a bit and hearing about his seismic crew escapades (I was a "doodlebugger," too, for 20 years), I put on my helmet and rode my motorcycle home. Now, some may think this oxymoronical, succumbing to the fear of heights and then riding a two-wheeled, death-wish home, but

I like riding "scooters" and I like spiders and snakes and flying. I like antennas too, but only from the groundup, without the "Vertigo Paralyzation."

1-800-CHEETAH

So, in the future, if you need ground crew or antenna project support, please, give me a call. However, if you need someone to climb your tower, you'd be better off calling the local zoo. That's where the monkeys live.

Rick's Ham Radio Bio

I started out as an SWL in the early 60's and held the *Popular Electronics* magazine SWL "callsign" of WPE-3HRZ. With the help of Hal, K3ATO, my seventh grade math teacher, I was able to obtain my Novice license in 1970. I was a one-year Novice, WN3OCV, operating with a Hammarlund HQ-180 and a Heathkit HA-11 transmitter with two crystals for 40- and 15-, feeding a 40-meter dipole above our two-story row home. Of course, being in very close proximity to neighborhood TV antenna farms, TVI was prevalent, as was interference to neighbors' telephones. This made operation in the late night and early morning the operating norm.

My Novice license eventually expired due to other interests. After college, I got a job in the seismic exploration "doodlebugging" industry, as a computer hardware engineer on Raytheon 16-bit mini-computers at various locations around the world. This was the perfect DX-peditioning environment, but my main interests were, unfortunately, motorcycle riding and skydiving. I had the opportunity to live in the places I listened to as an SWL: Australia, Bulgaria, the USSR and Colombia, to name a few.

I re-licensed as KF5NU in 1986, and W5RH in 1996. Antennas are my main focus within the hobby. I have built, pretty much, every antenna type. My two favorite pieces of ham radio software are EZNEC and TL Details. Delta loops are my preferred antennas, as they seem to be the best DX antenna for my particular physical location. Over the years I have maximized their performance and shortened them. I developed a unique baseline-loaded, corner-fed, apex up, 3/4- size delta loop I call the "W5RH DX Delta." I used this antenna many years for holding weekly 40-meter SSB skeds with VK3CWB, KB5ION and AA2NN.

In summary: My antenna maxim is: "How can a simple piece of wire cause so much confusion, dilemmas, quandaries and questions, and yet, create so much pleasure?" If I had a bit of wisdom to impart about antennas it would be two things: 1) Antennas should always be looked at as a "system" consisting of transmission lines, matching networks and the antennas themselves and 2) A firm grasp of the fundamental principles and characteristics of antennas and transmission lines is absolutely essential for it to all make sense. ■

Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

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You Can Earn W.A.S. Your 1st Year

Jane Tymko, KC2OBS

Jane, KC2OBS
FISTS # 11706

They told me that very few women were hams, and hardly any of them operated CW. It sounded like there was no real place for women in ham radio. Right then, I decided that was my kind of challenge! Little did I know then that bigger challenges were just around the corner—I'd soon be in a race to work all states in my first year on the old Novice bands, something very few newcomers have achieved.

But to start from the beginning, even as a contest logger for Scott, WA2EQF, during a DX contest little more than a year ago, I was already focused on getting my ticket. First I started listening in on code practice sessions between WA2EQF, WB2PJH and WB2EZG. Then WA2EQF lent me a Morse tutoring program so I could learn on my own. I still didn't know a thing about transmitters, receivers, antennas or FCC rules, but I bought the Technician study guide and went through it every chance I got. Within six weeks I was able to copy near 5-wpm and ready to try the Technician exam. But my nerves got to me at the last minute and I didn't make either test by the narrowest of margins.

"…my kind of challenge!"

I was disappointed. But that got me all the more determined. Only a month later, in April, I found myself sitting in a classroom next to two young kids; all of us ready to take the test. This time I was ready. The written exam went well. Then it was time for the CW test. But wait… now I was intimidated and nervous again. At that moment, 5-wpm seemed like 20. I put everything else out of my head and went for it. And I walked out of there with a passing grade—all that studying paid off.

Next, I borrowed one of Scott's 100-watt rigs, we put up a dipole at about 40 feet and I went to tackle the next challenge—finding the courage to get on the air with other ham radio operators. But there was another problem. Most all the hams were sending a lot faster than I could copy. So I figured the best way to contact hams would be to call CQ, at my own speed, instead of trying to answer their CQs. It worked. Most everyone was patient and most of them slowed down their sending for me. I got on almost every night, mostly 40-meters, and made one or two contacts every time. Anytime he didn't hear me, Scott told me to get on the air.

Now I was really into ham radio and enjoying CW. However, I was looking for yet something different to do within the hobby. But what could I do as a Technician? The answer came to me just before Thanksgiving, when WB2EZG noticed I had QSLs from 37 states. "Why don't you try to work all the states within your first year?" he said. "Very, very few starting out in the

How To Work All States From The Novice Bands

- Operate at the lower end of the allocated segment.
- Call CQ often—90 percent of my contacts were made this way.
- Don't miss a night on the air if you can—it took me 350 contacts to work all 50 states.
- Ask hams you work if they can refer other hams from hard-to-get states.
- On bands with broadcast QRM (i.e., 40-meters), be open to split frequency contacts.
- Match your sending speed to the other operator.

Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

Novice bands have ever done it. I don't think even the ARRL has a record of it."

I soon realized it might even be tougher now. Old-time Novices were restricted in transmitter output power and had to be crystal controlled, but today there were hardly any operators in the Novice bands! I had to find a way to get them there. I found out the best way to do it was by using one old tool and one new tool: word of mouth, and the amateur radio callsign database at www.qrz.com.

But again, there was another big problem I hadn't counted on. We were at the low end of the sunspot cycle: The 15- and 10-meter bands were going to be closed for most of the year, and the DX I had figured would show up on these bands was going to have to be worked on the lower HF bands. Nothing was guaranteed. It was a matter of sticking with it every day, and hoping for a little bit of luck.

With most every night came more contacts, but no new states. So I started asking hams I worked in states adjacent to the ones I needed if they knew anyone who might want to get on the 40- or 80-meter Novice segment. Most of the time, that's where the conversation ended. One Saturday just by blind luck I was able to work two new states—how exciting! Then I tried contacting YLs in the remaining states I needed, but the few that did get back to me were inactive, and none operated CW.

Time was running out. Here we were coming into March and I had somehow gathered 44 states. I had counted Alaska, but the station I thought I had worked in my first days as a Technician turned out to be a bootlegger—how disappointing! So I had the usual rough ones left: North and South Dakota, Wyoming, Hawaii and Alaska. Of the presumably easy states, only Oklahoma had escaped me. Thoughts of working all states except Oklahoma were making it tough to sleep at night.

One by one, though, the referrals came through. Oklahoma, Wyoming, South Dakota and finally, North Dakota fell. Then Hawaii came in, following a referral and an e-mail I sent to a ham in Hawaii, AH6RH, he forwarded it to one of the biggest clubs. I ended up with two QSOs from Hawaii. There was one state left, and one week to do it. Then I received a call from NL7QT, who wanted to try. We tried for several days. He could hear me plainly, but I couldn't hear a thing, because all the international broadcast stations were wiping out everything on the band, and noise levels were much higher than usual, perhaps due to solar conditions. We tried every hour from 10 pm to 2 am local time. I never heard a thing. But on the fifth day we succeeded on a noise lull that lasted for several minutes. We tried on 80 but I could not quite copy him, we then went up to 40 and at the 11th hour, so to speak, my one-year quest was done. And all accomplished on 40-meters CW.

Jane, KC2OBS, Displaying Her W.A.S. **Certificate and QSLs**

"See you on the air!"

With that behind me, I know there is a place for women in ham radio, and we can set goals just as meaningful as anyone's. Now onto the next challenges: trying for my General Class, WAC and raising my code speed (now 16-wpm) to a level where I can become a good contest operator.

See you on the air! ■

Maximize Your Operating Fun

- Short CQs work best.
- Don't be afraid to ask the other operator to QRS.
- Master the lost art of ragchewing—don't make hello/goodbye contacts.
- Lose your Novice accent—read ARRL operating procedures carefully.
- Keep practicing: Listen to W1AW code practice regularly.
- Keep learning: Find a mentor and tackle those tough theory questions. Build something.

Robert F. Heytow Memorial Radio Club

www.k9ya.org

telegraph@k9ya.org

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Phil's Rig was Top-Drawer

A New Career for Some Old Veneer

Rod Newkirk, VA3ZBB/W9BRD

Illustration by:
Dick Sylvan, W9CBT

The ruined old bureau, charred and blackened by fire, lay on its side in a Chicago alley. It reeked of smoke and water damage, unfit for scrap or fireplace. But young Bud Nibbe, W9NUF, knew a gem when he saw one. A top drawer was still intact. He yanked it out and took it home.

His mother relegated Bud's newfound treasure to the garage until its acrid aroma lessened. Scrubbing helped. A few days in sunshine and more scrubbings finally qualified it to enter the boy's cellar workshop. The pine, maple and cherrywood inlay would never be the same, but Bud had plans.

Ham construction in the early 1930s often fell under the umbrella term, breadboard. Amateurs found such kitchen items sturdy and easy to work with hand tools. Elaboration could produce a chassis to make a cabinetmaker proud. An abandoned upside-down drawer made a fine foundation. Its depth ensured space for under-mounted variable capacitors and smaller transformers. Hot vacuum tubes and components requiring ready access adorned the top.

W9NUF, at 15, was Elmer to local beginner hams long before the term became fashionable. His newest protégé, 12-year-old Phil Simmons, W9VES, was already on the way to 80-meter WAS with a 2A5 crystal oscillator and a half-wave Zepp. The W9WS receiver, a smooth 3-tube TRF, was a W9NUF hand-me-down built from QST. Now it was time to upgrade Phil's transmitter.

In short order the 2A5 was driving a 20-watt 6L6G final, all parts on the rescued drawer with space to spare. Later, around the time I became W9BRD, Bud and Phil added a slick TZ-40 160-watt amplifier. Now W9VES could really hold his own on 20 CW. That classy chassis was just about full. Then came the war, no hamming for four interminably long years.

After peace returned, Phil joined Bud at the University of Illinois, dragging their precious handiwork with him. The three of us kept 40-meter skeds while I bounced around the country with a homegrown 30-watt portable. Phil's unique box sounded great. That wooden jewel did the Chicago-Urbana run about a dozen times before Phil finished college and joined the CIA in Washington. There he roomed with the aunt of prominent DXer W3JTC. He brought it with him—of course—you knew that.

> *"…unfit for scrap or fireplace."*

Phil's fastidious new landlady was familiar with fanatical radio amateurs but his weird baggage appalled her. If that dusty old thing were to remain in his room, it would have to be thoroughly cleaned. Phil obliged, scraping away at fifteen years of grime. Good thing Bud's wiring was indestructible. Soap and water completed the rehab. Old faithful was set out to dry in the sun. Full circle. It had been sun-dried long ago at the dawn of its wireless odyssey.

W9VES/3 was making good money now. He had his eye on a shiny new Collins 32V-3. Yet the quaint TZ-40 rig had become family, loyal and dependable. Phil intended to fill a few more log pages with DX before retiring the relic gracefully, probably with a ceremonial Potomac Valley Radio Club beer bash. Alas—the end came much sooner than expected with a grinding crunch at the rear of the house. A truck backed over it. An ignominious fate so richly undeserved. Roadkill. ■

Robert F. Heytow
Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

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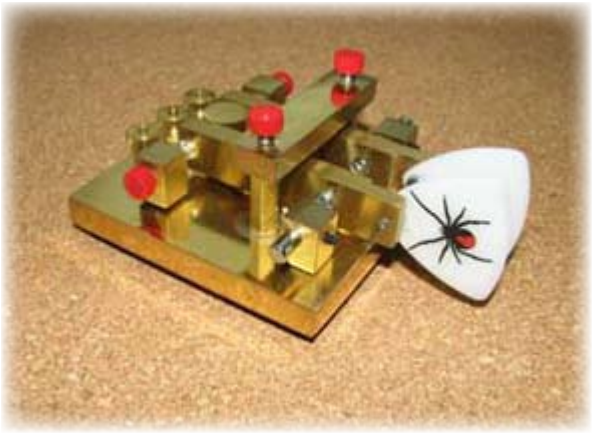
me—for a satin finish expect correspondingly fewer hours being abrasive.

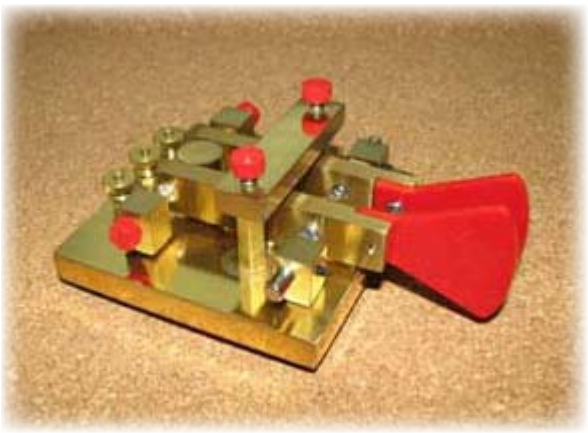


The brass parts were now given seven coats of Minwax spray lacquer, wet sanded between coats and assembled after 24 hours. The paddle's assembly was a trice and the finished product, as you can see, a triumph.

Whereas Jerry suggests soldering the silver-plated wires directly to the arms, I implemented a tip found on the Web to drill small holes at the positions indicated in the instructions and solder the wire into those holes—the direct method requires a heftier soldering iron than I own. I used a 1/16-inch bit chucked into a Dremel drill press to make the holes in the arms. Now, using a 25-watt iron, solder flowed easily into the holes and created smooth joints. In an addendum to his CD-based documentation, Jerry offers an alternative, no-solder, technique to connect the wires.

Several days after completing my paddle Jerry sent me two pairs of laser-cut, Lucite custom finger pieces—round and oblong—to test. As you can see, these red beauties complement the red cap screws and move the look from spider sporty to upscale.

Custom tuning the paddle is simple and secure. The combination of spring and magnets provide excellent feedback and permit you to precisely dial in your preferred "feel." Setscrews secure the paddle contacts and magnet spacing with the included Allen wrench. Connecting to your keyer is simple and convenient with base-mounted terminals and knurled nuts.



The Black Widow is a solid performer, good looker and enhances Morse prowess. It is a smooth player into the 40-wpm range and feels great while doing its job. Tactile feedback is positive and there's no slop leading to errors as operating speeds accelerate. It is unlike some paddles that feel great and "obedient" up to about 25-wpm, above that speed you may find yourself wondering, "Who's making all those errors?"

I enjoy the Black Widow so much I built and dedicated a NØXAS PicoKeyer to it. ■

Ham Quips

DICK SYLVAN, W9CBT

"SUPERHAM" BOUNDS TO THE TOP OF HIS 250 FT. TOWER

K9YA Telegraph

Robert F. Heytow Memorial Radio Club

www.k9ya.org
telegraph@k9ya.org

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