K9YA Telegraph

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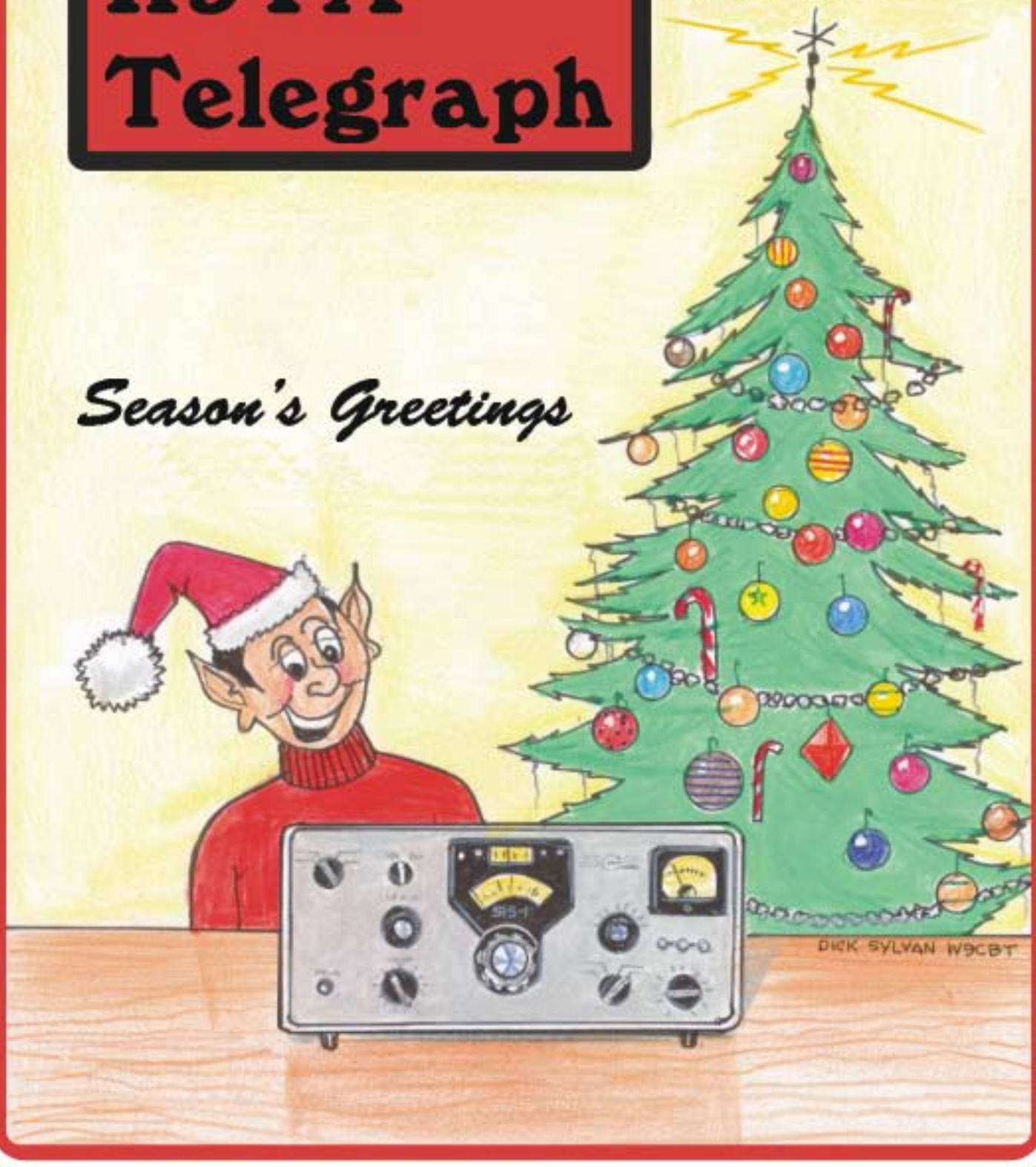

K9YA Telegraph

Robert F. Heytow Memorial Radio Club

Volume 3, Issue 12, December 2006

The Road to Bugdom

Entomology 101

Philip Cala-Lazar, K9PL

Mind the dahs and the dits will mind themselves. Anonymous OT, early 20th century.

Bugs, bugs, bugs… They've haunted me almost from my earliest days as a ham. They tantalized as an exotic telegraphic backwater I could visit only after mastering the mundane ports o' call inhabited by straight keys and paddles. Every time I worked an op using a bug I admired his skill and regretted my ham-career-long delay in jumping on the bug bandwagon.

"…an exotic telegraphic backwater…"

Sure enough, after every bug to paddle QSO there hung the pang of getting my hands on a bug. Finally, the opportunity presented itself—as a jet-black and chrome Speed-X model 114-510, semi-automatic key—and I jumped at it. The bug, purchased from an estate sale, required only a little scrubbing with a soft toothbrush and mild dish detergent to make it glow. Like all of its kind it is pretty fancy, sporting lots of shiny parts and rife with adjustments—best of all, it works.

Where to Start?

The 1941 edition of the ARRL's *The radio amateur's handbook* in the chapter titled "Operating the Station" offers this sage advice: "The standard type telegraph key is best for all-round use. Before any *freak* (emphasis added) keys are used a few months should be spent listening-in and practicing with a buzzer."

I had the "standard type telegraph key" down pat, so armed with WWII-era U.S. Army Signal Corps instructions, information from the Vibroplex Web site, a well-worn copy of the ARRL's *Learning the Radiotelegraph CODE* (copyright 1957), a Hallicrafters HA/18A code practice oscillator and a rather brittle sense of humor, I settled in for my first learning session. First on the syllabus, learning bug nomenclature and adjustments: what screw and what pivot is responsible for what action? The Signal Corps instructions were most helpful, providing a clear parts diagram and some useful starting points and suggestions to make the bug hum.

At first the key was reluctant to provide the requisite "…25 or more dits before stopping" and the dits it did make were pretty raspy sounding. Careful bending of the contact spring into a more regular "U" delivered the dits and flush alignment of the dit contacts nailed the rasp.

Take a Deep Breath and…

It was the first time in many years I'd attempted the horizontal leap to another type of telegraphic instrument. First I learned the straight key, an instrument little changed since Vail's time, then, skipping Morse generations ahead, gained some skills with paddle and keyer. Now I had a bit of archetypal Edwardian ironmongery to complement the Victorian Triumph pattern straight key.

CONTINUED - BUGDOM ON Page 7

Inside This Issue…

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Dateline: O'ahu

Hams Respond When the Hawaiian Islands Hula

Ann S. Shaver, WH2E

O'ahu - 44 mi (71 km) long and 30 mi (48 km) across—the third largest of the Hawaaian Islands.

On October 17, 2006, an earthquake measuring 6.7 on the Richter scale struck the Hawaiian Islands. The quake's epicenter, located off the Kona coast, was caused by tectonic plate movement, not volcanic activity.

It really was a dark and stormy morning, but that isn't our story. And there really were not one, but two serious earthquakes that Sunday morning in Hawaii, but that isn't our story either.

"You have to remember," explained Harold Buckle, KH6HB, "that the situation on O'ahu (where Honolulu and most of the state's population are located) was a prolonged power outage, not earthquake damage." But, of course, that wasn't realized right away.

"My first thought was tsunami. I actually heard the rumble of the earthquake before the vibration began, and I ran for the radio," Connie McCurdy, NH7IE, reported. "I knew ham radio was the fastest way to learn if we'd be facing a locally generated tsunami."

"…a dark and stormy morning…"

Almost before the shaking stopped, David Cabatu, AH7E, organized an emergency net on the 146.88 repeater owned by O'ahu Civil Defense and maintained by the Emergency Amateur Radio Club (EARC). Kevin Bogan, AH6QO, and Ron Hashiro, AH6RH, opened an HF net on 40-meters. At the same time, Ray Moody, AH6LT, RACES coordinator, hurried to the Emergency Operations Center for O'ahu (Honolulu County).

"I knew we'd be losing power right away, and I wanted to find out as much as I could, as quickly as I could," continued Connie. With two emergency generators and a small arsenal of portable radios, televisions and scanners, the McCurdys were not likely to be in the dark, literally or figuratively. Her OM, Tom, NH7OL, got the generators going while Connie assessed the situation. And in fact, commercially generated power began to fail within 10 minutes of the 6.8 magnitude earthquake centered on an island about 150 miles south of O'ahu.

Miles from urban Honolulu, hams on the leeward coast tuned into the KH6JPL repeater. Like Connie, my own first thought was tsunami, after Al, NH2Z, my OM, explained that obviously, this was an earthquake. But unlike Connie, I had no idea earthquakes could be noisy. (Al's from California and knows about such things; me, I thought noise plus vibration must have something to do with a helicopter, perhaps a helicopter crash.) To verify this was, indeed, an earthquake and to learn about the tsunami likelihood, I grabbed an HT and went onto our lanai (balcony) to access the repeater. Reno Gomban, KH6QH, answered my call immediately and informed me that the first quake was measured at about 6.5, but no tsunami was expected. Other hams came on frequency, too, and soon we all began to report the loss of power in our various neighborhoods.

Billy Gomban, KH6JPL, repeater trustee, broke into the exchange of condition reports to verify the autopatch was operative. He asked us to spread the word any way we could that this resource was available. Although landline telephone service continued to function normally for everyone who still had a hardwired phone to use, cell coverage was

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spotty. I reported the autopatch news on the local Army MARS VHF frequency.

Numerous amateur radio groups sprang into action. Emergency-minded hams were already on a heightened state of alert because of the flash flood and urban-and-small-stream warnings that had been issued the night before. In addition to the RACES and EARC response on O'ahu, the health comm group made sure vital communication links were preserved among the various hospitals on the island, the blood bank and related services. Billy Gomban, a state civil defense volunteer, phoned the state's EOC straight away to learn the precise details of the event; before heading to the state civil defense EOC in the Diamond Head crater, he relayed the official information to his brother, Reno, who made the announcement on the leeward repeater, which I had been monitoring.

As soon as word of the earthquakes filtered out, SATERN (Salvation Army Team Emergency Radio Network) activated. Within 90 minutes, SATERN volunteers were guarding their traditional frequency, 14.265, ready to assist with passing information back and forth among the islands and between Hawaii and the rest of the world, as needed.

By mid-morning the flow of information to the general public increased. Commercial broadcast stations got on the air and the newspapers were Web posting. Mainland friends and relatives began to call islanders with updates—not always accurate. "I monitored national news, and I heard a lot of distorted things," Connie McCurdy remarked. "One of the strong points about our amateur nets was that hams only discussed confirmed facts. Tom and I relied most on the things we heard on the ham frequencies."

"It's wall-to-wall people, bubbling chaos."

Indeed, that night's EARC training net saw a spike in participation. By net time, power had been restored to many different neighborhoods but, was still out in some of the most heavily populated areas, including Waikiki. "Ron Hashiro, NCS for KH6OCD, the state civil defense station, requested that EARC stations checking in be asked if HECO power was on or off at their respective QTHs. Between 1930W and 2000W, approximately 39 stations reported power status from all over O'ahu ranging from Mililani and Makakilo to Kailua and Hawaii Kai," said Tom Seale, KH6AAA, who has conducted this particular net for many years. "On average, about 15 stations check in on Sunday nights versus the 39 that Sunday."

Moody, at O'ahu civil defense, made a similar observation. "I heard more call signs in one day than I hear in a month, some that I've never heard before. It takes an earthquake to bring people out. But it really worked!"

Connie McCurdy, NH7IE, shown with some of the gear she used during the hurricane emergency.

As it happened, this geologic hula was the proverbial learning experience. Some lessons were more profound than others. Among other things, Moody discovered the linkage among the three VHF repeaters didn't work as well as anticipated, despite careful planning and repeated testing.

More troublesome, perhaps, was the noise and commotion within the EOC. "Few people have been in OCDA during an activation," Moody observed. "It's wall-to-wall people, bubbling chaos. All the major elements of city/county government send representatives, including the mayor. Each is prepared to announce the most current information. Everybody has two to three cell phones (with priority output) and a radio or two, in addition to the phones at each station in the EOC. Direct TV links our EOC to state EOC and other islands for expanded conference calls, including the National Weather Service. Several people are always talking on the phone to their units. The players assess the situation, identify needs and move to fill them."

Commenting further on the noise level, Moody continued, "Voice talk was limited by overload. However, text messages went through with greater success. This is a plus for everybody." Attention, hams: packet radio still has an important role to play!

"I should have had my AA-battery back-up ready to go," confessed Edward Dung, NH6WI. "I've never had to rely on it for very long, so I don't know how long it will last. My primary interest is weather-related emergencies, and there's usually a little warning before they strike." Attention, hams: fresh batteries at the ready are essential at all times. ■

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One VFO Short of a DX'er

Charles J. Guenther, Jr., NIØC

Chuck, KØVSH
(now NIØC)

On the evening of February 14, 1960, I was CQ'ing on the 20-meter CW band. I was 15 years old. Although I had received my General Class license in December 1959, I had not yet scraped together the funds for a VFO, and only possessed a few crystals for my World Radio Labs Globe Chief 90 transmitter. A 7.060-Kilocycle crystal put me on 14.120 Kilocycles—not the most active part of the band, but I was CQ'ing on 20-meters, the king of DX bands. Finally, I heard a strong but fluttery signal coming back to me. It was OH3NY, Matti Paivio, of Lyly, Finland, my first European contact!

That night I became a DX'er. After suitably highlighting the QSO in my logbook, I got out the world map and located all the countries that were as close as Finland and that I now knew I could reach with my 90 watts (input) transmitter and end-fed wire antenna.

"The antenna was ugly…"

Soon afterwards, I purchased a used VFO, and built a fixed wire beam antenna (W8JK) for 20-meters. I had to replace the VFO oscillator tube every two to three months, hand selecting tubes to get one that would produce a clean note on CW. The antenna was ugly, a couple of twin-lead folded dipoles separated by two, eight-foot, one by twos covered with several coats of varnish. I never checked its SWR because I didn't own an SWR or power meter. I just constructed it carefully, double checking all measurements and put it on the air. It worked!

Just three years later, I submitted QSLs to Bob White at ARRL headquarters for my first DXCC award. Working my first hundred countries, I checked (and occasionally submitted) reports of DX heard and worked on the various bands to Rod Newkirk's *How's DX* column in *QST*. Rod let us brag a little, too, by publishing our DXCC worked/confirmed totals next to our call signs in *QST*, e.g., KØVSH (72/62). I pored over the DX call signs carefully to see what others were hearing. Although I reported such stations as GD3UB, FA2VV, JZ0PH and DU7SV, others were hearing the VU's, the AC5's and other exotic Asian stations. DX spots, two months old, published in a magazine, that's what we had to work with in those days.

During the early 1990s, I subscribed to *QRZ DX*, a weekly publication. In May 1990, I read a report about an imminent operation on Conway Reef (3D2AM). I was worried I would not be able to work this rare one if they used a wide split, because my TS-520S only had one VFO. My strategy was to pounce on them right away and try to work them before the pileup got too spread out. I knew their tentative schedule from *QRZ DX*. I combed the 20-meter band at the scheduled time. Finally, I heard a huge pileup on SSB. Obviously, the operating team had arrived and was on the air.

I didn't even think of calling them on SSB that evening. They were already working a wide split, and I only had one VFO on a barefoot transceiver connected to a mobile whip antenna mounted on a transformer box near the patio of my townhouse apartment. So, I immediately went down to the CW band and listened around 14.025. Within a few minutes I heard, "CQ de 3D2AM," and frantically fumbled with the RIT control to position my transmit frequency up about 1 KHz. I called once and they came right back. I logged them at 0642 UTC, May 18, 1990. VE7CT's article, "The Murphy Adventure 3D2AM," that appeared in Martti Laine's book, *Where do we go Next?*, confirmed I was the first in the world to work the expedition on CW. Soon afterwards, I replaced the TS-520S with a TS-440S that sported two VFOs!

During the 1997 Heard Island Dxpedition, I got my first introduction to "online logs." My friend

CONTINUED - ONE VFO SHORT ON Page 7

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W.A.S. With a Watt and a Wire

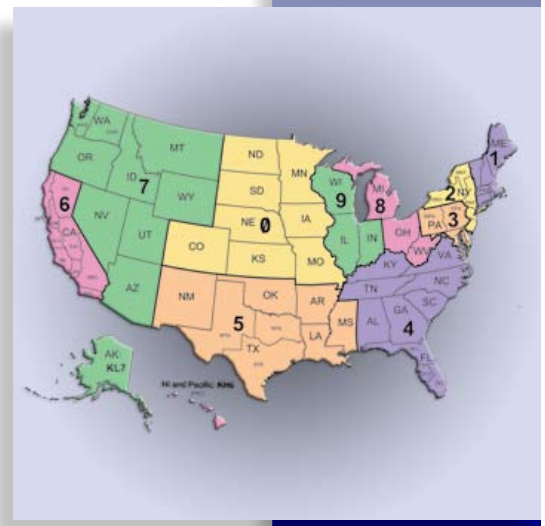
Dick Sylvan, W9CBT

About three years ago, thinking it wouldn't be too difficult to work all 50 states using just one watt and dipole antennas, I accepted the challenge. After all, propagation was a bit better back then. Boy, was I in for a surprise as I plied my quest.

The first thing I had to do was find a rig that could power down to one watt and still be efficient. I used my trusty old Kenwood TS-850SAT throttled down to one watt by cutting the ALC control and relying on a separate power meter rather than the built-in one. The TS-850SAT also has a really fine receiver with good filtering. The rig's output power LED display goes dark at one watt, so I acquired an old Colt SWR3 power meter/SWR bridge, which gives me a full-scale reading with one watt out. This offered a very accurate readout, as I did not want to exceed more than one watt out.

At first I thought I would be able to achieve one-watt W.A.S. in a relatively short time because in the first month I worked 40 states. Well, it didn't happen to work out that way. The last 10 states proved to be quite a challenge; particularly one state, Montana. I was working states all over the country, but always those I had previously contacted. It was frustrating. I worked 40- through 10-meters to take advantage of propagation. I thought Alaska and Hawaii would be the toughest to work, but found they were really no problem. I snared Hawaii on 10-meters and Alaska on 30-meters. All contacts were achieved on CW. To attempt one-watt W.A.S. on phone would be a really difficult feat, particularly without the benefit of a gain antenna. I wonder if any of our readers know of anyone making one-watt SSB W.A.S. without a gain antenna?

I worked some DX with one watt. It is not easy, but can be done by doing lots of careful listening, timing and working with propagation. I wound up working 25 countries along the way with many DX repeats. It was getting tougher to work new countries and new states.



As we edged into the bottom of the solar cycle the missing 10 states came in very slowly. By July 2005 I had my total up to 49 states, lacking only Montana. I got to the point that I would only look for 7's to have a better chance to work Montana. I never even heard that state. I was considering setting up a sked with someone, but decided against it.

"The quest was finally over!"

After a while I became discouraged and stopped looking. Nine months later, in April of 2006, while working WF1S, he indicated his QTH was Billings, Montana. I couldn't believe it! The quest was finally over!

Now that I have finally completed working all 50 states, I have halted my one-watt adventures and gone back to working DXCC with four watts, CW and a dipole. I have five 4-watt QRP transceivers with 67 countries worked so far. I am not in any big hurry to make QRP DXCC, but it's fun.

If you are looking for an operating challenge, cut your power to one watt and give it a try. You might be surprised how much fun it can be. ■

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Volume 3, Issue 12

The Wealth Effect at WQPC

Rufus Left Us Poorer but Wiser

Rod Newkirk, VA3ZBB/W9BRD

He signed on with us fresh from the farm and a country high school. Rufus, a ham at age 12, got the required FCC 'phone and CW commercial tickets on his own. He ate up the job right off the bat, even liked shift work. Our state police radio station, Chicago district, staffed eight operators, all hams, two on days, two on evenings, and a midnight solo. The sequence rotated every two weeks, days off and vacations accounted for. It was a tight grind, but it worked.

There was nothing Rufus couldn't do and do well. He loved our transcontinental CW network: equipment maintenance and installs, dispatching, filing and public contact. Conscious of his hayseed accent, Rufe operated with quiet efficiency. We knew he was no ordinary rookie when, on one of his first days off, he bicycled in through the snow with a borrowed camera and climbed our 350-foot tower to snap some bird's-eye pictures for the folks back home.

"It was a tight grind…"

Saving money for college, the kid seemed to thrive on peanut butter sandwiches and apples. We took him out and fed him a pizza now and then. He passed up the beer. Fact is, contrary to first impression, he was thoroughly overqualified for the job. Maybe any job. Without being flaunty, Rufus instinctively saw the best and fastest way to get something done. We began to watch him carefully for tips and shortcuts.

Case in point. Detectives in our undercover squads frequently broke off their covert 42-MHz whips, leaving inaccessible plugs of jagged copper in the base mounts. Standard practice was to replace the entire antenna installations with new ones, a clumsy half-hour task if you didn't fumble. Rufe's approach was simple. He grabbed a drill, made three shallow overlapping inline holes in the "inaccessible" plug, stuck in a screwdriver, twisted out the broken copper and screwed in another whip. A seven-minute job for Rufus.

Rufe was no showoff, but he did enjoy impressing us. One day he almost went too far. WQPC's operators often exchanged working days when necessary. I had just arranged to use a day off doing friend Jim's next Thursday. Jim would then owe me a day I might need down the line. It's good to have credit. Rufus watched me add another hen track to our jumbled tally sheet.

"Jim really won't owe you a thing," he observed. "After you work his Thursday, you, Jim and Jack will be even."

"Jack? He's on vacation and knows nothing about my switch with Jim." I replied. "I'll still owe Jack a day."

"Well, you've got a round robin," the kid explained. "You owe Jack a day, he owes Jim a day, and now Jim will owe you a day. You hold identical IOUs. Back to square one."

Not being very nimble at mathematical word problems, I had to mull this over. Rufus was right, as usual. The debts canceled. But the thing bothered me. How could those days of hard work just disappear?

The kid wasn't done yet. Inspecting our doodley scorecard, he found other triangles in the matrix. He even spotted a four-way cancellation. By the time he was through factoring, very few debit days remained. Most of our credit and debt didn't actually exist. We just thought it did.

After a couple of lively years with us, Rufus had enough savings for some higher education. But he liked our radio routine so much he started thinking about becoming a State lifer. Convinced that he was meant for better things, we ganged up on him and practically pushed him out the door. That wasn't

CONTINUED - WEALTH EFFECT ON Page 7

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CONTINUED - BUGDOM FROM PAGE 1

The transition from paddle and keyer to bug was not all that tough, at least not as bad as I'd heard. Fortunately, the Speed-X is quite happy coasting along at 18- to 20-wpm, no additional weights, tamers or solder wrap needed. This domesticated behavior really helped me get the hang of it at the beginning.

The dits were simple enough, but my fingers kept forgetting the dahs did not repeat—I was waiting for the dahs that never came. Finally, after a bit of practice with the cipher groups and sentences in the *Radiotelegraph* book, a D.I.Y. dahs synapse was born.

In a Cold Sweat

In the midst of writing this article I had my first bug QSO; actually it was a tyro bug op to tyro bug op QSO. Answering his "buggy-sounding" CQ with the paddle, I learned it was his first run with a newly acquired Vibroplex Original; I mentioned my newly acquired Speed-X and he suggested we both go semi-automatic. Then, for a bit of piquancy (and new SKCC number), finished on straight keys—a veritable Morse smorgasbord.

The bug, jerry-rigged to the straight key's terminals made for a mess of jumpers, but sufficed to premiere the bug from Illinois to Pennsylvania on 40-meters. Need I mention I broke out in a cold sweat for the first time since my inaugural QSO 30 years ago? I did, but it was an exhilarating first time visit to an exotic and beckoning telegraphic destination.

What's next? A Cootie key? ■

CONTINUED - WEALTH EFFECT FROM PAGE 6

easy. Rufe had become close family. He enrolled in a teachers' college downstate. Later we heard that Rufe had graduated cum laude on a scholarship and joined the faculty. Good thing he didn't go into high finance. He would have unraveled Wall Street's house of cards and the world's redundant bookkeeping to bring on another Great Depression. Being a professor must be a snap for Rufus. He sure taught us a lot. ■

K9YA Takes Field Day...

Congratulations to K9YA's Field Day team, which placed 1st in class 1A (one XMTR, portable, independent of commercial mains) for Illinois and the Central Division. Team K9YA placed 5th overall, out of 177 entries. Kudos to K9PL, N9BOR, N9WAT, NIØC and WB9JKZ.

CONTINUED - ONE VFO SHORT FROM PAGE 4

Paul, KØJPL, and I both worked a station signing VKØIR on 30-meters. We suspected we worked a pirate. The next day, I went to the local public library for Internet access, and checked the online logs. Neither one of us appeared, so we went back to the pileups, eventually both making multiple contacts with this rare one. My 40-meter CW contact with VKØIR was my last QSO with the TS-440S before I upgraded to a TS-850S.

Since then, like most DX'ers perhaps, I've acquired Internet access in the ham shack, enabling me not only to check those online logs, but also to receive and send "DX spots" in near real time. But, it just isn't as much fun as it was in the early 1960's when we got our "spots" from W9BRD.

But what became of Matti, OH3NY? In 1998, I worked Ossi, OH3YI, also of Lyly, Finland on 17-meters, SSB. Ossi told me Matti had been his mentor in ham radio, but had since passed on. I hope the propagation is good for Matti. His answer to a lonely CQ by a 15-year-old ham will not be forgotten. ■

Happy Holidays

From the K9YA Telegraph Staff

Ham Quips

DICK SYLVAN, W9CBT

MAN WILL WORK QRPp W.A.S. WHEN PIGS FLY

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Volume 3, Issue 12