K9YA Telegraph

Robert F. Heytow Memorial Radio Club

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Cold War Tales

The Golden Age—Postwar Radio—The Early Years

Philip Cala-Lazar, K9PL

Often referred to as the "Golden Age of Amateur Radio," the postwar to 1960s period is one fondly remembered by those who were there and wistfully imagined by those who were not.

Soon after war's end, America's industrial engine reverted to a peacetime economy and revved up to meet years of pent-up consumer demand and a newfound prosperity.

War surplus radio equipment, suitably modified for amateur use, filled the breach for years to come as manufacturers refreshed their product line with newly designed equipment. Meanwhile, ads for surplus gear and plans to modify them for amateur use filled many pages in ham publications into the 1960s.

During the Korean conflict, as in WWII, hams proved their value to the nation both in and out of the military with service in civil defense agencies and disaster relief.

How often did amateur radio news items appear in the mainstream media? What surprises the 21st century reader is their number and the details included. As in the interwar years, ham radio was mainstream America.

Now, catch a reflection of those earliest of the golden years from the Chicago Daily Tribune, ARRL press releases and U.S. government publications.

(Note: The text in quotes follows the word choice, spelling and grammar of the original source.)

"…the classic ham shack meme…"

March 17, 1949: TELL WHERE TO TAKE RADIO SETS TO REMOVE LOADED DETONATORS

The War Assets Administration warns some war surplus gear contains "dangerous war time destructor explosives" meant to keep "war secret devices from falling into enemy hands." Such sets including IFF (Identification Friend or Foe) sets, sold as surplus for as little as $10 to $17 originally cost the government $2,000. The potentially booby-trapped sets include: ABK-1; ABD; ABE; SCR-535; SCR-595; SCR-695; AN/APX 1, 2, 3, 8, 13; and some BC-645. Owners of this gear are urged to have them decontaminated at Ft. Sheridan or Great Lakes Naval Training Center, both near Chicago.

March 20, 1949: RADIO AMATEUR CHOOSY WHEN IT COMES TO HOME

Photographs of what will become the classic ham shack meme accompany this half-page article. "It is every amateur radio operator's dream ultimately to own (1) a hilltop, (2) an 'antenna orchard,' (3) a 'ham shack' in his own home, and (4) an understanding wife." (See: *K9YA Telegraph*, December 2005, "A Place of One's Own," pg. 1)

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Inside This Issue…

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The Black Bouncer

An Innovation in Straight Key Design

Duke Wahl, Jr., WA9WJB

Duke's "Black Bouncer" (Version 4)

Over the years I upgraded my license and moved to FM and SSB because I wanted to flap my gums. I thought it was a step up in rank and certainly easier than CW. But for a variety of reasons, I returned to my CW roots. I began with a paddle and keyer, and even tried a keyboard. These modern, sophisticated devices made my CW sending easier. Then, one day, it struck me: What am I doing? What if there were no keyboards or electronic keyers? Using the keyboard was boring. Sending CW manually actually has entertainment value; fancy that—I've "regressed" to the straight key ever since.

In my Novice days, the biggest influence on my CW operating was an old key collector. I can't remember his name, but he was at every hamfest I went to. He had stories to tell and was a very entertaining character. Some of the following is what I remember hearing from the old guy.

The Old Guy

Straight keys used during WWII were effective, but not very ergonomic. The idea was to mass-produce equipment in a hurry because we were fighting a war. There wasn't a lot of time and money to spend improving on a functioning idea. A lot of operators developed carpal tunnel syndrome (or glass arm) from the constant daily operation of a straight key.

I don't have carpal tunnel syndrome, but I can see how it develops. Whenever I send with a regular straight key, my forearm will tense up, resulting in cramps unless I send slow—QRS. During the war, bugs were used to increase the speed of transmission and reduce glass arm. Bugs were an improvement, but little was done to enhance the lowly straight key.

The old key collector showed me a J-38 mounted on a "leg iron." This compact device, used primarily by airborne radio operators, clamped to the thigh stabilizing the key and keeping it within reach. It was a great solution for the tight confines of an aircraft.

When I was a Novice, my straight key was screwed to the tabletop to keep it from walking around and had a "hard" feel to it. It was never in a handy place and was not comfortable in use.

The old key collector let me try his leg iron and I fell in with it love immediately, but he wouldn't sell it. So I fashioned my own from plywood and a rubber (inner tube) strap, but it was uncomfortable and difficult to put on and take off. Despite that, using the J-38 and my leg iron proved more comfortable for my sending arm. The old key collector said operators using the leg iron often would *bounce* their leg to aid sending. The bouncing leg acted like a cushion and springboard. I tried it and it did feel better—this experience stuck with me.

My Concept

"What if there were no keyboards or electronic keyers?"

For the past 35 years, I've worked at Fermilab, an atom smasher, for the government. I've worked alongside many brilliant physics doctorates. Over the years, I have bounced many a question off these guys. A lot of my work in electronics and electro-mechanical devices was guided by some of the great minds of physics.

With wide experience from Fermilab, and after studying straight key versus bug issues for a

Version 1

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while, I developed a bunch of new ideas. The bug had a weight and spring assembly that repeated dits rapidly with *periodic motion*. The straight key is just a hard contact which returns *nothing* after the key is closed. The bug has periodic movement, the straight key does not. How could I make a straight key with periodic movement that would make it easier to send dits?

Another way to look at it, if you had to jump up and down with your whole body, would you rather bounce on a trampoline or a concrete sidewalk? You will expend more energy on a concrete sidewalk. By the same token, you will expend more energy sending dits on a regular straight key, which may account for the forearm muscle cramps. My first idea involved some bug design features, but turned vertically. That idea soon proved impractical because while dits were easy, there was no crossover for dahs.

The Working History

I have been working on my ideas for about two years with the help of Joe, K8LKC. Joe has a small machine shop and artistic talent. He came up with the first actual working model and produced the first two keys in fine fashion. His second version was about as close to perfect as you can get, in both feel and looks. Version 2 resembles a regular straight key with nice brass machining. A real treat for the eyes, but difficult to produce on a mass scale. I was looking for simplicity and function. Since retiring recently, I had lots of time to develop Version 3 and Version 4 straight keys myself. Since Version 3 was my first attempt, I learned from it and moved on to the next version. Version 4 was about the best I could make without an elaborate machine shop.

> *"…it bounces."*

I have humble means: a drill press, grinder, hacksaw and black spray paint. My finished product had to be dressed with black spray paint and very few personal touches, it's not pretty by any means, but it is very functional. The only thing I could think of to dress-up and personalize the key was engraving the paddle with the owner's call letters.

Version 2

My work on Version 3 actually started by modifying an old J-38 key. I proceeded modifying it until I determined any further work to the J-38 would be an insult to the key. I restored the J-38 to its original character and placed it on the shelf where it could rest in peace.

"Black Bouncer" (Version 3)

Joe's original Version 1 was a good start, but was a high maintenance item. It needed service (cleaning and lubrication) every few weeks. The brass parts rubbed together and needed to be highly polished and lubricated to reduce wear and contact bounce. Noisy contacts were a problem. When I started my work on Version 3, Joe's Version 1 disappeared. Version 3 came from parts scavenged from Version 1. The only thing left of Version 1 is a picture.

Version 3 eliminated the friction on the brass parts. I thought I was home free, but Version 3 didn't feel very good—it had a spring problem. I fought with many springs, but couldn't get the feel I wanted and maintain simplicity for production. Joe's Version 2 used two springs very effectively. I used one spring for simplicity. My Version 4 came about in April 2006. I refined many aspects of the key, but the spring problem remained and still does today. I got close to the feel I was looking for, but was now back to a friction problem. But this time, the friction did not affect key contact bounce (noisy contacts), so I am living with it until a better idea comes along. It still needs lubrication, but not as often.

Operational Aspects

To my knowledge, this key operates unlike any key before—it *bounces*. After contact is made, the sending arm is allowed to continue traveling until its downward travel is overcome by spring tension. The spring begins to return energy to the hand that pressed it achieving the sort of periodic motion I was looking for. The periodic motion allows the hand and arm to repeat dits with little or no effort. Dahs are a slight (and easy) modification to the bounce, and that energy is returned to the hand.

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Fun on 160, Texas Style

Jumpin' Jack and a Rig to Remember

Rod Newkirk, VA3ZBB/W9BRD

Military surplus radio gadgets tempted hams on their return to the air after WII. Most of the stuff required extensive modification for peacetime use. It would have been easier to build gear from scratch, but buying something for peanuts that had cost the government a bundle was hard to resist. Fantastic markdowns resulted in some peculiar contraptions. After weeks of hammering, sawing, drilling and rewiring you were finally ready for hard-earned QSOs, albeit with bandaged fingers and broken tools.

Not all the bargains were so labor intensive, the BC-348 receiver with which I managed to make DXCC needed only a small AC power supply and a 10-meter converter. Other popular items, ready to use, were whip antennas for tank radios. These came in kits of screw-together sections extendable to 22 feet. My skyhook used two sets to good DX advantage. For local chats on 160 meters, the whole thing was loaded against ground. A few watts of clamp-tube modulation enabled me to make my share of top-band QRM.

One lazy afternoon I was doing just that, signing off with a neighborhood buddy. A wispy southern accent called me. His signal undulated like polar DX. The OM heard me mention war-surplus whips and said he used one, too. He asked if he could drop over and show me his station. Mobile, I thought, and no big deal. We arranged to meet near my QTH in half an hour. He said he would be arriving by bus. Bus? This I had to see.

As good as his word, a lanky kid hopped off public transportation wearing two packages on his belt. He knelt down and put together a colossal whip from lengths he carried in a quiver on his back. Carefully avoiding overhead utility wires, he, plugged this into one of the packs. "Hi, Rod! Here's my 160-meter walkie-talkie. How did it sound from five miles away?" I didn't realize then that I was seeing something the likes of which I would never see again.

Mind you, miniaturized transistor technology was years away. Over a beer in my ham shack, Jack showed me the meticulous five-tube 1.8-MHz transceiver built for extra credit in his school radio course. Yes, he was a Texas W5. I can't find his name in my old logs but I'll call him Jack because his transmitter used what we then called jumping-jack amplitude modulation. Carrier was varied in proportion to microphone audio input, neat for conserving battery juice. The A- and B-cells were outboard in pack number two. I facetiously asked him where the key jack was. He pointed to it.

Jack's tube lineup employed the low drain 1.5V-filament variety popular at the time. He toggle-switched between receive and transmit, about two watts output. DX? Three states so far. No. 4, Wisconsin, should be a cinch from the top deck of a downtown hotel. I sometimes wonder whatever happened to Texas Jack. He must have gone on to a super electronics career. Probably retired by now, completing WAS atop Sears Tower. ■

"A wispy southern accent called me."

Hams Are Waiting

We're sure you know the *K9YA Telegraph* is read by amateur radio operators in more than 100 countries. What you may not know is that these same operators are interested in your story. How do we know? Easy. Since its launch the *Telegraph* has exclusively featured articles detailing the experiences, opinions, creativity and knowledge of its subscribers.

Evidenced by your feedback and our expanding worldwide subscriber base we know we've hit on a winning formula: YOU + *K9YA Telegraph* = A Great Read. But without your side of the equation, it just doesn't add up.

Please don't keep them waiting any longer. Get the ball rolling at: http://www.k9ya.org/write_for_us.htm

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Pictured are the shacks of Jim Wells, W9GW, and Charles Waller, W9QIO. W9GW, depicted seated at his large and very sturdy-looking operating desk in a shack filled with rack-mounted gear, has "…contacted almost 100 countries."

October 2, 1949: IF HAM BLOCKS TV VIEWING, TRY TO ARBITRATE

Baby boomers, television and amateur radio's Golden Age were all born of the postwar period. Not so much a problem today, TVI was once so common that a neighbor asked me why I *wasn't* interfering with her television reception.

"Kukla, Fran & Ollie," "Capitol Cloakroom," "Amazing Polgar" or "Garroway at Large" tearing up? In 1949 the FCC said, don't get mad, arbitrate, it's mostly likely the complainant's TV set, not the ham's transmitter.

August 6, 1950: CHICAGO HAMS TRAVEL NORTH ON 20 METERS

Again, hams provide communications for the schooner *Bowdoin* sailing off the coast of Greenland. Twenty-seven years earlier the headline read, "12,300 Miles, 5 Minutes, New Speed Mark for Radio" (See: *K9YA Telegraph*, July 2006, pg. 8 and January 2007, pg. 5) when a message was relayed to the *Bowdoin* from Hartford, Conn. No longer pioneering or record-breaking, just reliable communications with hams doing yeoman's work as "Amateurs are providing the principal message link between the expedition and the outside world."

"Box 88, Moscow, of course!"

Check that headline; today, how many newspapers readers would know what "20 METERS" was all about?

February 2, 1951: SIX NEW GROUPS SET UP BY FCC FOR RADIO 'HAMS'

The FCC doubles license classes—from three to six—and adds 50 "kilocycles… between 3,800 and 3,850 kilocycles for radio telephone operations."

Former class A, class B and class C licenses are replaced and bolstered by these new classes: Novice, Technician, Conditional, General, Advanced and Amateur Extra.

Two FCC commissioners, Frieda B. Hennock (see below) and George E. Sterling (a ham) disagreed, for them: the space allotted was insufficient for increased phone activity, the new license classes granted insufficient recognition to "old timers" and, since amateur operations might be curtailed due to a national emergency, the entire matter should have been tabled.

February 3, 1951: AMATEUR RADIO BANDS ALLOTTED TO DEFENSE JOB

Tornado relief. Bunker Hill, Ill. March 1948

Much news in the new year. For hams taking part in the civil defense program, the FCC assigns " . . .all the amateur 1 meter band and portions of the 2, 5, and 10 meter bands, a small part of the 80 meter band, and all the 160 meter band."

February 18, 1951: CHICAGO HAMS CRACK RUSSIA'S IRON CURTAIN

Readers learn that though it's quite legal to communicate with hams behind the Iron Curtain, they're tight-lipped when it comes to conversation. In a practice that will last into the 1990s, Soviet bloc operators reveal little but their name, signal report and "general data on equipment."

Where to QSL? Box 88, Moscow, of course!

Readers also learn that following Mao-Tse Tung's rise to power Chinese hams disappeared from the airwaves.

March 3, 1951: D.C. Wash by Ruth Montgomery

In a Washington insider-type column it's noted that FCC commissioner, Frieda B. Hennock, supported America's 96,000 hams against the imposition of "stringent rules" by noting, " . . .amateur radio operators have contributed inestimable service to their country not only by transmitting messages during World War II, but by discovering the higher part of the radio spectrum." Ms. Hennock, at the time, the FCC's only woman commissioner, is described as "shapely" and a "pretty blonde."

March 12, 1951: RADIO HAMS AIM FOR LINK WITH STATE DEFENSE

They're commonplace now, but here we see their origin, purpose and the strong support for ham

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radio plates. Ham radio spokesman, Ero Erickson, W9HPJ, of the Chicago Area Radio Club council, said the plates "'would enable police officers and emergency services to locate amateur operators quickly in times of emergency or disaster, and save time often lost when ham-mobile [sic] stations attempt to get thru guard lines to set up on-the-spot communications.'" The legislation is strongly supported by the state's director of civil defense, Maj. L.R. Lohr, who states, in part, "amateur radio operators… will have a very important role to play in providing radio communications for emergency defense operations." The article continues, "More than 150 Chicago hams with mobile stations installed in automobiles are ready at a moment's notice to provide radio communications for the fire department."

Radar dome. Mill Valley Air Force Station, Marin County, California

Ham tags were already available, or were about become so in: Georgia, Tennessee, North Dakota, Florida, Mississippi, Louisiana and the Canal Zone. In Illinois, an additional $1 fee covers the proposed plates.

"Duck and Cover"

March 18, 1951: RADIO MOSCOW'S PITCHMEN PROVE SIMPLY BORING

America's hams and SWLs were not immune to the political events swirling about them. Transmitting propaganda on " …7.25 megacycles, right in the heart of the 40 meter amateur radio band," the USSR's powerhouse broadcaster is subjected to "'unintentional' jamming by American hams."

April 19, 1951: EYES IN COPTER GUIDE BIGGEST DEFENSE DRILL

"Duck and Cover" hams of a certain age will remember the massive government civil defense programs of the period. During an atomic bomb attack drill, amateurs, as part of the "…approximately 400 vehicles and more than a thousand civil defense workers," relayed messages "…by 'handy-talkie' short wave from a hovering helicopter…"

April 29, 1951: MARS CRACKLES ORDERS AS WAR GODS THREATEN

Originally open only to hams in "active military service, military reserve, or national guard" MARS (Military Amateur Radio System) now opens its doors to "Civilian members (who) must be 21 years old and hold a valid amateur license issued by the federal communications commission."

MARS operators spend their "leisure time" "conducting drills" and passing messages from servicemen and servicewomen to family and friends at home. However, their primary task is as a "fall-back radio service during times of national emergency or disaster, or when military circuits are loaded with traffic."

"There are six army nets, one for each of the armies in the continental United States." Some names chosen for the nets: Commuters and Nomad (Chicago-area), Cowpoke (Wyoming and North and South Dakota), Breadbasket (Nebraska and Kansas) and Hotrod (Indiana and Michigan).

May 9, 1951: Senate Group OK's Radio Letters on Car Tags

Passed—the bill to permit ham radio plates was approved by the Illinois senate's highways and traffic regulation committee on a 10 to 1 vote.

June 27, 1951: "It's a Girl," Ham Radio Informs GI in Korea

Amateur radio serves American servicemen and women—messages passed can even reach a distant Korean hilltop as Sgt. John F. Sobota (U.S. 2D Division) of Minneapolis discovered when informed of the birth of his daughter.

July 15, 1951: RADIO HAMS LINK FLOOD AREA TO OUTSIDE WORLD

Flooding in Kansas and local hams manning American Red Cross station, W9DUA, have been passing health and welfare traffic. Most of the messages go to Chicago-area residents with news of relatives in the stricken region.

According to NOAA: *The great flood of 1951 killed 24 people and caused thousands to abandon their homes, schools and businesses. The unprecedented high waters affected all area river basins especially the Kansas, Neosho, Marias Des Cygnes and Verdigris. Damage costs in*

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1951 exceeded 760 million dollars, which today would be over 5 billion dollars.

July 16, 1951: AMATEUR LOSES RADIO LICENSE OVER ILLEGAL TV

In an example of a ham behaving badly, or perhaps, a case of poorly conceived entrepreneurship, a ham, and others, retransmitted television programs originating in Philadelphia from their unlicensed television station in Williamsport, Pennsylvania. The FCC suspended his operator's license for the remainder of its term.

Novices in the News

The Novice license springboards a new generation of operators. (See: *K9YA Telegraph*, "Let Us Praise Novices," February 2006, pg. 1)

August 9, 1951: BOBBY EARNS HAM'S LICENSE AND HE'S ONLY 8

Eight-year-old Chicagoan, Robert Clute, WN9ONA, passed his Novice Class amateur radio test before FCC examiners. The test required receiving and sending Morse at 5-wpm "…for five minutes with at least a minute of errorless transmission and (having a)… knowledge of (the) operating procedures and rules and regulations governing amateur radio operation."

His shack is alongside that of his stepfather, Ladd Smach, W9CYD, who taught the lad his radio ABC's. Smach also built most of his and Bobby's radio gear which the young op uses as he plies the bands at 10-wpm and more in preparation for his class B license at 13-wpm.

September 19, 1951: 'HAM' OPERATOR STILL ON AIR THO HE'S IN HOSPITAL

Hospitalized Leo Heuer, WN9OKF, exercises his Novice two-meter privileges with Ed Webb's, W9IPO, assistance. Webb, who operates a recording studio, monitors Heuer's transmissions and retransmits them from his downtown office. Replies to Heuer are, in turn, retransmitted. "'Hams will go to any inconvenience to help a guy when he's down,'" Heuer is quoted. Proto-repeater, anyone?

Whew! And that's just the first few years of the Golden Age; amateur radio is just starting to stretch its post-war muscle. ■

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The hand and arm can actually be compared to the bug's swinging weights.

Some older operators who have tried the new bouncing key face a problem called *tradition*. When sending, older ops are looking for a *hard stop* (the key contact) on the downward stroke. This doesn't happen with the bouncing straight key. With the first touch of the key, contact has already been made. The rest of the motion is the periodic cycle. For some, tradition is a very difficult thing to overcome.

But some ops have taken to this new bouncing key like a duck to water. With the new bouncing straight key, from my experience (and John's, K9KEU), the tensed-up forearm and pain that goes with it is gone. I can send for hours, non-stop, without the unpleasant, cramped forearm. My sending is faster, more uniform, and pleasurable. I've had many ops tell me they thought I was sending with a keyer at 20-wpm. I can only wonder; if this type of key had been available to WWII radio ops would they have benefited from it? I'm only 65 years too late with a new idea. I usually hang out on 3.552 MHz monitoring to see who's there. If you have time, jump on and give me a call. I may just come back and you can hear for yourself what a bouncing straight key can sound like. Be prepared to stick around for a while for a long ragchew.

Additional information is available on my Web site at: http://my.inil.com/~torpor-skog/WA9WJB.htm ■

K9YA Holiday Pizza Bash

Exchanging Tall Tales & Smiles

Dave, NE9H; Steve, WA9FZB; Mike, N9BOR; Arny, W9FO; Dick, W9CBT; Don, KB9WBM; Steve, N9WAT; Philip, K9PL; and Gil, K9WDY

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K9YA Telegraph

Cartoon Caption Contest

Put Down Your Slide Whistle and Pick Up a Pen

Dick Sylvan, W9CBT

Ham Parodies

YOUR CAPTION HERE!

SO YOU THINK YOU'RE PRETTY FUNNY, EH? YOU WERE THE CLASS CLOWN IN HIGH SCHOOL AND NOW THE OFFICE CUTUP? HERE'S YOUR CHANCE TO STEP UP TO THE PLATE AND PROVE YOUR NYUK, NYUK, NYUKINESS! OUR ILLUSTRIOUS CARTOONIST, DICK SYLVAN, W9CBT, HAS A CHALLENGE FOR YOU—WRITE A CAPTION FOR HIS CARTOON ABOVE. THE FUNNIEST CAPTION, AS JUDGED BY OUR TEAM OF CRACK HUMORISTS, WILL WIN A FULL-COLOR, AUTOGRAPHED PRINT OF THE CARTOON WITH YOUR CAPTION! THE WINNING ENTRY AS WELL AS HONORABLE MENTIONS WILL BE INCLUDED IN OUR MARCH ISSUE.

SEND YOUR ENTRIES TO: CONTEST@K9YA.ORG ENTRIES MUST BE RECEIVED NO LATER THAN FEBRUARY 15, 2007.

W9CBT'S CARTOON CAPTION CONTEST WILL BE OVERSEEN BY THE PRESTIGIOUS LAW FIRM OF DEWEY, CHEETUM AND HOWE. ALL DECISIONS FINAL. CELEBRITY VOICES IMPERSONATED.

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