K9YA Telegraph

Robert F. Heytow Memorial Radio Club

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The Hassell-Cramer Flight

A Forgotten Footnote in Amateur Radio History

Philip Cala-Lazar, K9PL

The year was 1928 and the world was still on the aviation high occasioned by Charles Lindbergh's 1927 solo transatlantic flight. With increasing frequency, aviators vied to pioneer new air routes, and to make and break speed, distance and duration records.

Greater Rockford

Barney Thompson, editor of the Rockford Daily Republic newspaper wondered, "How could Rockford, Illinois get in on this aeronautical fervor?" After conferring with local and Chicago businessmen it was decided, they would bankroll a flight from this city with its strong Scandinavian heritage to Stockholm, Sweden to explore a potential commercial aircraft route between America's Midwest and Europe.

"The air was so 'thin'…"

The two aviators who made the cut to carry Rockford's banner were pilot, Bert "Fish" Hassell (1893-1974) and co-pilot/radio operator, Parker D. Cramer (1896-1931). Hassell, a veteran pilot and barnstormer earned the moniker, "Fish" after crashing his Curtiss seaplane and being fished out of the drink. Cramer, another longtime pilot, was an aeronautical inspector for the Department of Commerce. Both pilots started flying around 1913 and both served in the U.S. Army Air Service during WWI.

Originally scheduled to depart Machesney Airfield on Thursday, July 26, Hassell was forced to perform an emergency landing of the yellow and blue (colors of the Swedish flag) Stinson Detroiter christened, *Greater Rockford*, in a nearby cornfield. He said, "the air was so 'thin' he could not elevate his machine to get over the Rock River hills, and decided to land"—it was too heavily loaded. The high-wing monoplane suffered severe damage to the propeller, engine, wing, tail and fuselage, which necessitated repairs at the Stinson factory in Michigan. The Wright Whirlwind-powered aircraft finally departed Thursday, August 16 and arrived seven hours and 720 miles later in Cochrane, Ontario, Canada—the first leg of their trip.

The next leg would take them to Mount Evans, Greenland about 1,600 miles from Cochrane. From there they planned to proceed to Reykjavik, Iceland before forging on to Stockholm.

Cramer transmitted hourly reports of the flight's progress on "32.8 meters" using an "experimental radio set" installed by Don Mix of the Burgess Battery Company. According to the Chicago Daily Tribune, "Local amateurs reported that the signals were coming in with great strength and that the plane would be heard …all the way to Greenland."

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Beginnings...

Adam M. Farson, VA7OJ/AB4OJ

Adam, VA7OJ/AB4OJ, in His Current Shack

I came into ham radio (and ultimately into a 35-year career as an RF/telecom engineer) via the SWL route.

My first exposure to ham radio was 20-meter AM, in Pretoria, South Africa (1951). We had a horrid little British ITT AC-DC table radio in a white plastic cabinet. This receiver happened to have a shortwave band as well as medium- and long-wave. I used to listen to ZS6XT on 20-meter phone, as he chatted with his stateside friends. He was a U.S. Foreign Service officer (Chester Davis, now N7FCK, living in Thailand) who lived down the street from us.

My Elmer

One thing led to another, and Chester became my Elmer. I can recall the long hours I spent in his shack as an 11-year-old, listening in utter fascination as he worked U.S. stations on 20-meter AM with his RCA AR-88 and rack-mount transmitter with an 813 final and 866B's glowing in the PSU at the bottom of the rack. Unfortunately, I was too young to qualify for a license at that time (the age limit was 18), but in later years—long after he returned to the States—I honored his friendship and support by taking over the callsign ZS6XT that he had held during his tour in South Africa.

Although my interest in radio continued (and grew stronger) during the intervening years, the demands of high school and university caused my 18th birthday to come and go without my earning a ham ticket. Then, in 1962 (I was 22 and in junior year of EE) I picked up a clean British Army WS62 set in working order. Now, I owned a transmitter but was unlicensed—technically in breach of the Radio Regulations. So, I applied for an amateur license, and received the callsign ZS1ZG in November 1962. (The new call, ZS6XT, came with my relocation to Johannesburg after graduation.)

In November 1962, I received a telephone call from the local branch post office: "Mr. Farson, your amateur radio licence is here. Please stop in and pick it up, and pay the fee." So now I was ZS1ZG. And I was QRV on 80 and 40m CW, with a clean, working WS62 which had cost me all of two pounds (about $5.50) at a surplus dealer's. I also had my faithful SWL receiver, an R.A.F. R1155B with a homebrew mains PSU.

So, all in a whirl, it was off to the post office with my buddy who was soon to become ZS1ZS, rush back to the student dorm, licence in hand, grab the WS62, hook up the key (a beautiful ex-Royal Navy job), longwire aerial and battery, call CQ on 3510. All of 5W! No joy. Try 40m; CQ on 7020. Silence. Eventually the battery discharged.

"…my dorm-mates threatened to lodge a complaint…"

I ultimately had to abandon my beloved WS62, as it put out a spur on 920 kHz at -20 dBc. Several of my dorm-mates threatened to lodge a complaint with the Radio Branch unless I stopped "jamming" their favorite rock station on 917 kHz. I tried putting a series trap in the buffer grid circuit, but it was of little, if any, help.

British Army Wireless Set No. 62

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Fast Forward to 1963

I had held my license for a year, and was thus qualified to operate phone. (South Africa still has a CW-only first year, but the age limit is now 12.) So, I built a plate-&-screen modulator for my homebrew 6AG7 - 2 X 1625 transmitter. It also used a pair of 1625's and a WW2-surplus modulation transformer. I incorporated a high-level clipper-filter to allow up to 125% positive over-modulation without negative peak-clipping, and put a 300-3,000 Hz BPF in the speech-amp plate circuit to match the 3 kHz roll-off of the high-level LPF. You will note that the telecom engineer was emerging even then, at age 22. I used a British Army dynamic mic, designed for the same AF response. My receivers were the R1155, and later a British Army PCR3. A WW2 U.S. Navy RAX-1 with a home-built down-converter replaced these.

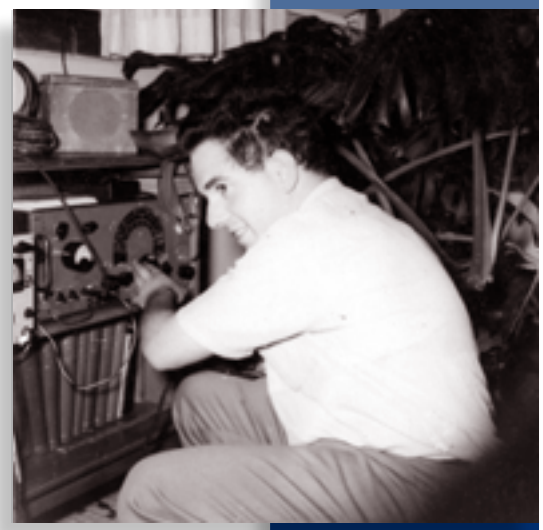
Everything looked good on the spectrum analyzer in the elec comms lab on campus, so I put the beast on the air and called CQ. A couple of local guys gave me good reports. A friend of mine who was a S.A. Navy and RNVR wireless op informed me that I sounded a bit like a Royal Navy shipboard transmitter; this I took as a great compliment!

Kilowatts From Heaven

1963 was also the year I learned about "kilowatts from Heaven" (the 9 dB S/N advantage of SSB over AM) in our electrical communications class. That year, I also began hearing SSB signals from Collins equipment on amateur and maritime channels. As I was living in Cape Town, there was plenty of maritime traffic to listen to. I was impressed by the clean sound, and the penetrating power, of these SSB signals.

> *"…I put the beast on the air…"*

Then I discovered to my chagrin that my friends in Johannesburg, 1,600 km to the north, could not hear me worth a tinker's damn with 100W AM carrier input—the legal limit back then—whereas they always gave me 589/599 on CW. My antenna at the time was a 20-meter ground-plane, elevated 10 meters. (The ZS legal limit is now 400W PEP output on SSB and 150W input for all other modes.) So I began to use AM only for local contacts, and CW exclusively for anything long-haul. I had a regular CW sked with two friends in Johannesburg. One was the chief avionics engineer at Jan Smuts International Airport; the other was a colleague of his—a Marconi avionics technician.



A Youthful ZS6XT with the PCR3 Receiver.

Racal

In 1964, when I started working at Racal, my AM career ended forever. I designed and built a 20-meter SSB/CW transceiver with a unique topology, and never looked back.

The architecture of this radio was unique, in that the RCA-7360 beam-deflection mixer was dual-function; receiver front-end, and transmitter balanced modulator. This approach kept the tube count to eleven. The receiver audio output stage, AGC/S-meter circuit, VOX and transmitter speech amplifier were solid-state.

It lives on as a link on my Web site. The front panel meter is part of a wheelbarrow-load of parts Chester gave me shortly before returning to the U.S.

With that little 65W PEP radio and a 1/4-wave ground-plane elevated 15 meters, I had a tremendous amount of fun being comparatively rare DX on 20-meter CW and SSB.

Homebrew 20-meter SSB/CW Transceiver

End of an Era

That era ended when I emigrated from South Africa. I was re-licensed in Canada in 1976 as VE3DGY, and returned to the HF bands in 1989, earning the U.S. Extra call, AB4OJ. My current Canadian call is VA7OJ. My present station is an Icom IC-756Pro3 driving a Yaesu Quadra amplifier, with a Cushcraft R8 vertical at 50 feet. Since retiring in 1999, I now have plenty of time for ham radio. At present, I operate mostly 20-meter and 17-meter SSB. ■

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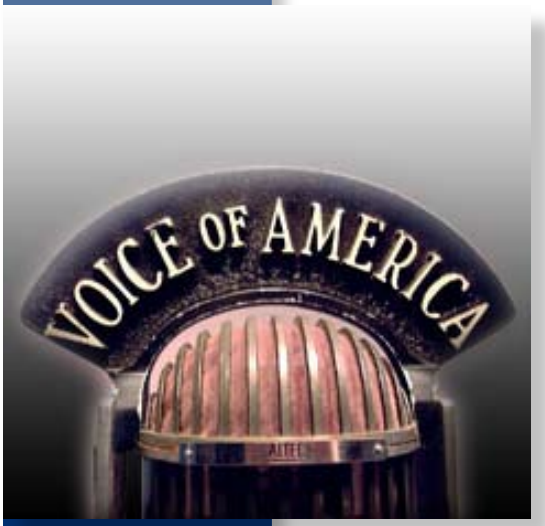
Running Forty Kilowatts—Legally

Fifteen Timely Minutes of Fame

Rod Newkirk, VA3ZBB/W9BRD



It was actually more like 400 kilowatts simultaneously on several frequencies. The Voice of America became prominent on shortwave broadcast bands following World War II, radiating monstrous signals worldwide. VOA's difficult challenge was to make propaganda as palatable as possible. Program content ranged widely. The subject of amateur radio was favorably highlighted from time to time.

By the late 1940s, while schooling in Chicago, I had accumulated some bylines in ARRL's journal, *QST*. That must have been the basis for a telephone call requesting a short recorded interview for possible airing over VOA. Sure, why not? As promptly arranged, two well-dressed gentlemen with a Webster wire recorder appeared at my modest ham shack. We quickly scripted a dozen questions and answers concerning the hobby. My visitors were expert professionals and the playback sounded pretty smooth. They said I would be advised if and when the production was to be aired. That was that. The project left my mind.

Uncle Harold

W9BRD then was located in the cellar of my Uncle Harold Flood's two-story building on Chicago's north side. He had generously allowed rooftop installation of an ungainly phased-verticals array, the best DX antenna I ever had. Its low-angle directivity was switchable east or west on 10 or 20 meters. Admittedly, my guyed two-masted radiator, soaring forty feet above the roof, caused the structure to resemble some sort of angular warship under furled sail. In fact, the skyhook stood out like a very sore thumb and caused the neighbors much imaginary TV interference. Uncle Harold received complaints when I was nowhere near my station, so he wasn't much moved by their paranoia. He was, however, tiring of the nuisance. My tenure was becoming precarious.

Friends and Family

Uncle Harold also regularly presided over weekend luncheons upstairs, feasts well attended by family, friends and neighbors. I still salivate copiously when I recall Aunt Harriet's delicious Scandinavian spreads. Just prior to one of these events I was notified that my brief VOA presentation would be broadcast at so-and-so times. 'Tis said that timing is everything. In this case the scheduling couldn't have been better.

The usual brunch crowd gathered in the Flood dining room, lingering over coffee and gossip. One of those popular bargain three-band table radios was nearby. Propagation on the 19-meter SWBC band was perfect. I tuned in the Voice of America's booming signal in time to learn that a segment on amateur radio was upcoming. The set's pilot lights dimmed on audio peaks—rushed postwar engineering—but the output was loud and clear. I cranked it to full volume.

> *"Rod, that's YOU!'"*

Spellbound

Aunt Harriet was about to protest the sudden excessive amplitude when her nephew's voice, extolling the importance and enjoyment of amateur radio, filled the room. "Rod, that's YOU!" I nonchalantly sipped my coffee as though my broadcasting career was an everyday thing. The guests were duly impressed. For that matter, so was I. It's a unique experience to hear one's own syntax roaring through the ionosphere with such power and authority. Most important, Uncle Harold was spellbound. My humble W9BRD junk heap, on the verge of DXCC, now was fully respected and secure. ■

Saturday, August 18: *Greater Rockford* departed after a two-day rain delay. Burgess Battery Company station, 9EK, in Madison, Wisconsin reported the flyers were making good progress as they reached Nottaway Bay, about 200 miles from Cochrane. "By a prearranged plan, Cramer gave only the call letters (KHAH) of the plane and a single letter which represented a point on the flight." Later that day Cramer reported their position as they reached, successively, Rupert House—Fort George—and Apiskigamish Lake, about "400 miles from the (Atlantic) coast."

Sunday, August 19: amateurs reported hearing the team's radio signal "R" designating their location 75 miles off Cape Chidley.

Monday, August 20: It is suspected the aircraft is down, nothing has been heard of it since its last transmitted location off Cape Chidley. Captain MacMillan of the schooner *Bowdoin* at anchor in Bowdoin Harbor near Nain, Labrador, and close to *Greater Rockford's* last received position says, "We are keeping a sharp lookout for any signals which may come." (See: *K9YA Telegraph*, July 2006, pg. 7)

Hoaxed Signals Heard

Shortly after the aircraft went missing, amateur radio operators in several American cities including Chicago and Toledo reported hearing Morse signals purportedly from the flyers. In Chicago, Dr. Charles E. Sceleth, 9GZ, and Irving Strauss, 9AAS, were two of many hams claiming to hear signals from the now presumed lost flyers.

"…Rupert House—Fort George—and Apiskigamish Lake…"

These reports were taken seriously enough by the U.S. government that it closed "…three navy wave bands and two operated by private broadcasting stations temporarily to permit possible reception of further signals from the Greater Rockford."

There was a problem with the signals. Both Sceleth and Strauss found irregularities in the radio messages. "The letters which could not be understood as part of the international or any other code were laid down, however, to the inexperience of Cramer, who, it was stated knows little of radio."

"The signals received were a series of 5 R's immediately followed by a series of 5 D's. These were repeated until 10 sets of them had been sent and then came two A's in rapid succession."

Strauss explained that the letter "R" meant position or "message received O.K." He continued, "The letter D is not an international code, and we can only speculate that they mean by it that they are down. The letter A also means nothing."

Greater Rockford Draws Crowd at Machesney **Airfield**

Another problem with the signal was that it was not heard on the wavelength where it should have been received, 32.5-meters (later stated as 32.8-meters), but around 24-meters. This discrepancy was explained away by suggesting that while in flight, the aircraft's antenna hung down, but once on land it "…has been set upward from the ground and that would make the difference." Reinforcing this theory was Chief Operator Hunt of the Tribune's "powerful radio station, W-G-N," who said it "was technically possible." However, the set's installer, Don Mix, believed it "…could send only on a wave length of 32.8, about 10 meters below the wave length on which Harris (see below, and others) reported receiving the signals."

Thursday, August 23: two other amateurs, R.J. Harris, 9CEJ, of Chicago and Joseph E. Williams in Toledo also reported signals from the downed flyers who claimed to be, "safe and sound, but their food supply is running low, and they are sorely in need of assistance…" and that they were stranded on an island, "100 miles off Newfoundland."

Harris believed the message authentic, but other amateurs were more skeptical, they "…pointed out that neither Bert Hassell nor Parker Cramer …had more than a sketchy knowledge of wireless." Whereas Harris reported, "…the signals came as if from the hand of a veteran wireless operator." Also in doubt was the source of power for the radio set: "…one amateur asking where the airmen would get the power to operate the generator. The plane's set used battery power when in the air."

Harris receives the following message in response to his inquiry call on 42.8-meters [sic]: "Please call the Associated Press and give them word that we are

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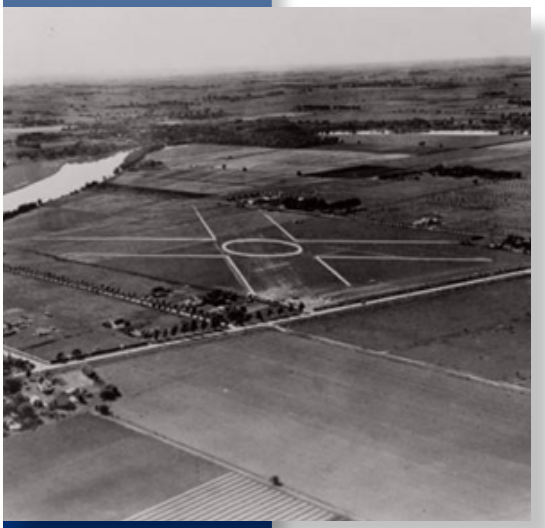
the Rockford flyers, bound for Sweden. Our oil feed failed us and we had to land near Newfoundland. We are O.K. and safe, but our food supply is getting low. We are using our generator for communication. The only way you can get here to assist us is by ship. Our location is on a small island near Newfoundland."



Machesney Airfield (1927)
Rockford, Illinois

After a pause, Harris asks if he can schedule them for later that night, and receives this reply: "We are very tired and need sleep badly, so we can't have another schedule tonight. Will call you tomorrow night at 9 o'clock, central standard time. Please get word to our families. Regards to all from the Rockford flyers."

Harris, described as an experienced operator and experimenter, explains the frequency discrepancy as, "…entirely possible and that even greater changes could be made."

Williams, in Toledo, hears only the fragment, "because we haven't had any deer meat since yesterday" and "Just say we are safe and well."

"…Sukkertoppen ice arm."

That afternoon Strauss picks up more "repetitions of the letter R" though with more signal strength. That evening as "many of the 1,000 amateurs in the Chicago district operating with short wave sets…" listened along, Dr. Sceleth hears "a series of R's," "an occasional A," several series of D's" and "an indistinct signature." Seated alongside Sceleth is Ralph Hassell, Bert's brother, and "two experienced operators in an effort to decode the message if repeated." Some local operators subsequently confirmed the signals heard that evening on Sceleth's receiver.

That same day, reliable sources reported the *Greater Rockford* was seen flying over the southwest coast of Greenland.

Saturday, August 25: Chicago's Field Museum radioed Captain MacMillan at the behest of the Department of Aeronautics at the U.S. Department of Commerce requesting vessels of the museum's Rawson-MacMillan arctic expedition search for the downed pilots.

Meanwhile, the Canadian government called off its search operations for the *Greater Rockford* following receipt of a telegram stating the Stinson had "positively" been spotted over Greenland.

ARRL Offers Reward

The ARRL responded quickly to a situation that was casting a very unfavorable light on amateur radio. In the September 1928 issue of *QST*, ARRL secretary, Kenneth B. Warner made public a $500 reward for information leading to the identity of the person responsible for the spurious radio transmissions.

According to Warner, powerful forces were out to punish all amateur radio for the misdeeds of one or a few persons who might be licensed hams. These punitive voices included "…a gentleman prominent in aeronautics…" who was "…demanding the cancelling of the 20,000 amateur station licenses…" in the United States. Warner was "indignant" that the idea a ham originated the hoax signals was originally brought to the public's attention "…by a spokesman of America's largest radio communication company." "What reason is there for thinking that such a thing was done by an amateur more than by any other class of operator?" Warner asked.

Judging by the number of editorials and correspondence in *QST*s of the period referring to unlicensed, bootleg operators, they were more than an occasional annoyance both inside and outside the amateur radio bands. So the likelihood that one or more of these "slims" were responsible for the hoaxed signals was good.

Happy Ending

Sunday, September 2: The missing flyers are found. Most had abandoned hope they would be found alive including Assistant Secretary of War F. Trubee Davison who had been prevailed upon by Cramer's younger brother, William, to dispatch army search planes to Greenland. Secretary Davison believed the "flyers had perished and that an expedition to search for them would be of little use."

Nothing could have been further from the truth. Sunday, Aug. 19, running out of fuel after encountering a storm off Cape Chidley, Hassell masterfully put the *Greater Rockford* down, undamaged,

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on Greenland's Sukkertoppen ice arm. For the next two weeks the pair trekked over difficult, ice crevassed terrain subsisting on "a pemmican ration of eight ounces per day." Finally, their smoke signal was spotted by "Eskimos in an umiak (a boat made of skins)…" who then reported their sighting to members of the University of Michigan's Greenland expedition who sent a motorboat to retrieve them.

It was a happy ending: both for the flyers who survived and for a young radio service that successfully weathered a potentially damaging event by confronting it head-on. Of course, had Hassell and Cramer not survived, amateur radio's public image would have suffered severe damage regardless of the responsible party's license status.

Postscript: The *Greater Rockford* was located and photographed by the U.S.A.A.F. in 1944. In 1968 it was recovered and returned to the U.S. where it began a long process of rebuilding and can now be seen at the Midway Village & Museum Center.

Parker D. Cramer was lost in the North Atlantic during another exploratory flight in 1931. His last words received: "I see the coast of Norway."

This article references contemporary accounts in the Chicago Daily Tribune *and the February, June, July, September and October 1928 issues of* QST. *Also referenced are the* Early Birds *and* Early Aviation *Web sites and Rockford and Machesney Park, Illinois area Web sites.* ■

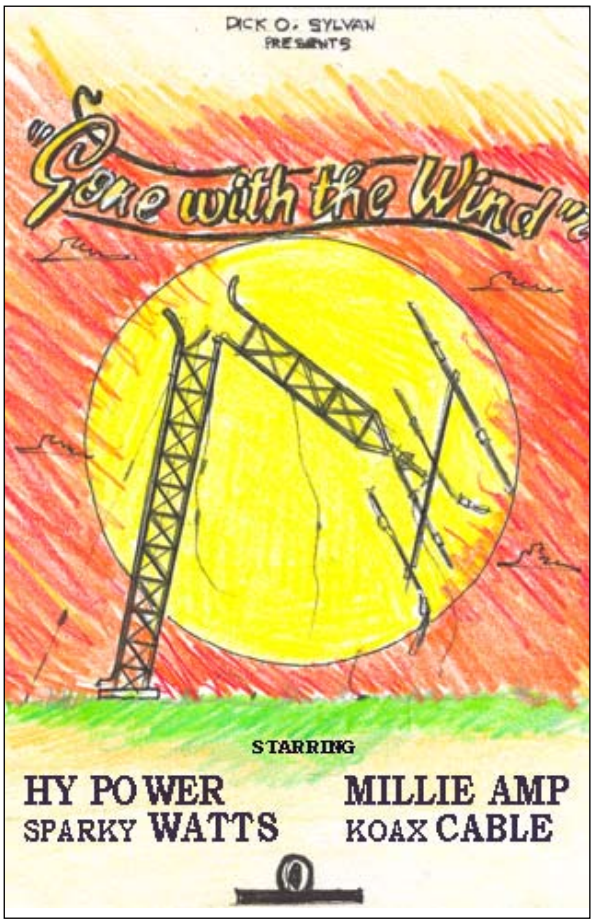
Bugdom Revisited

Shortly after the December 2006 *K9YA Telegraph* was "put to bed" I read an interesting letter in the "Correspondence Department" of the January 1928 *QST*. The letter, penned by J.H. Platz, offers this suggestion, quoted in part, for adjusting a bug:

For radio work a very heavy dot is necessary. I got the best results from my bug by screwing up the dot contact so that the thing closes after seven or eight dots. That gives a good heavy dot that is easy to read.

In my article, "The Road to Bugdom," I quoted Signal Corps material that directs adjusting the bug for "…25 or more dits before stopping." Here, Mr. Platz offers another route to the "Road to Bugdom."

Ham Movie Poster



DICK SYLVAN, W9CBT

K9YA Telegraph

The Good News About Amateur Radio Celebrates Another Birthday

January 2007 marks our fourth year at the *K9YA Telegraph*. As we wrote at the completion of our first year: "Our success derives from you, our large, enthusiastic and devoted subscriber base worldwide, and to the writers whose contribution of personal stories—at once fascinating, humorous, enlightening and compelling—made the *Telegraph* staff's inaugural year one of consistent joy and fulfillment." That truth remains unchanged, but ever more encompassing as more of you, drawn from the international ham community, have joined the *Telegraph* readership and lent your experience to enlighten, evoke and entertain.

The *Telegraph* staff continues in its fourth year—as in our first—ebullient. Thank you for your messages of praise and encouragement, and remember: we're always on the lookout for your good story, or two.

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Volume 4, Issue 1

Code Testing SK

Philip Cala-Lazar, K9PL

Like death and taxes another of life's inevitabilities was the Morse exam—but for U.S. licensees that triumvirate is now a duality with the demise of Morse testing. We have followed, belatedly, in lockstep, other countries' lead in this area in response to an international treaty change made a few years ago.

We've discussed this subject in the pages of the *K9YA Telegraph* before, but felt we'd be amiss not to mark the occasion of the passing of what many believed the bedrock of the amateur radio service.

In days of yore successfully passing both sending and receiving tests was required for admission to any class of amateur radio license. Fail that portion and you could not sit the written exam; go home and practice for 30 days. The receiving portion necessitated one minute of solid copy. By the late 1970s multiple-choice replaced solid copy and the sending bit was removed as it was reasoned, at the time, "if you can copy code, you can send code"—as fallacious then as it is now. We then witnessed the creation of the no-code Technician license for dedicated VHF/UHF users, and finally, a 5-wpm test for all HF-access licenses. The graduated 5-, 13- and 20-wpm "incentive licensing" progression was history. Now, all amateur radio Morse testing in the U.S. is history—soon to be ancient history.

For the short term I remain positive about CW as an active mode with many practitioners, but, for the long run, it's really tough to arrive at a positive assessment. The latest FCC action is not a death sentence for Morse on the air, but rather a life sentence that will terminate when the number of active, practicing CW ops drops through natural diminution below a self-sustaining level.

In the meantime, as I wrote last year (See: *K9YA Telegraph*, October 2005, pg. 8), there are plenty of CW ops—but as we die off new licensees will not replace us. Then the FCC and ARRL, or whatever entities replace them, will be wholly justified in promoting and enacting the removal of any CW-only subbands remaining. And who will be around to object?

"O brave new world…" ■

K9YA Code Practice Nets

Fast Net

Every first Wednesday of the month, 7.121 MHz (plus or minus QRM) at 7:00 P.M. (0100 Z, Thursday). Check in, exchange FISTS numbers or hang around for a chat. The Fast Net is called at 20+ wpm.

Slow Net

Every 2nd, 3rd and 4th Wednesday of the month, 7.121 MHz (plus or minus QRM) at 7:00 P.M. (0100 Z, Thursday). Check in, exchange FISTS numbers or hang around for a chat. The Slow Net is called at 10-wpm, but speed will be adjusted to that of the slowest operator.

Reminders

Subscribe to the K9YA Code Practice Net Reminders by e-mail. You will receive a reminder e-mail 24-hours before each net.
http://groups.yahoo.com/group/K9YA_Code_Nets/

Straight Key Nite

Work K9YA in SKN on January 1, 2007.
http://www.arrl.org/contests/rules/2007/skn.html

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