



The Short Circuit

March 2020

since 1927

Volume 93, Issue 03

Next Meeting

Breakfast at Think Café

No Program This Month

March 7th, 8 am
at the Think Café

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Weekly Club Net

Join us on the URAC Club
Net Thursdays at 8:00 P.M.
145.510 simplex.

K6AA monitors

Frequency 145.51 MHz

Club Station K6AA

Website: k6aa.org

The club station is located
in the Los Angeles Maritime
Museum and is open to club
members during museum
operating hours.

The March meeting of the United Radio Amateur Club will be held SATURDAY, March 7th, in conjunction with the *First Saturday Breakfast*, 8:00 am at the Think Café (302 W 5th Street) in San Pedro.

Los Angeles Maritime Museum - FAQ

Why are You Temporarily Closing?

The Port of Los Angeles (the Museum's landlord) is currently renovating the waterfront. The next phase of this project is a 36-million dollar "town square" and promenade that will be built directly in front of the Museum's entrance. Due to the Port's safety concerns, the Museum will be closed to the public for approximately two years beginning in the early part of 2020.

What will happen to the staff?

Though the building will be closed to the general public, the museum staff will continue to work here. We have many exhibits and artifact-related projects requiring attention. In addition, the Port will be starting some long-awaited infrastructure improvements to our 78-year old building, which is on the National Register of Historic Places.

The Museum will be offering off-site programs, lectures, and fun events. Please watch the website for updates.

What about the artifacts, exhibits, radio room and tugboat?

All will stay in place and will be cared for by staff and volunteers during the closure. The radio room operators will continue to transmit from K6AA inside the Museum. The crew of the Angels Gate tugboat will continue their regular maintenance schedule. In addition we are launching a new website that will give you the opportunity to view the collections on line.

What about the Research Library?

The Museum archivist will continue to assist researchers. Call 310-548-7618 ext. 215.

How do I find out what is going on during the closure? For updates, please visit: www.facebook.com/LAMaritimeMuseum

K6AA Station Statistics

January 2020

7 operators made 89 QSOs, in 30 different states, along with 4 DX contacts.

How the National Bureau of Standards helped make “radio” **... Dan Romanchik KB6NU**

This was originally published as “NIST’s Role in the Early Decades of Radio (1911-1933)” on the National Institute of Science and Technology’s blog, *Taking Measure*.....Dan

Even if you weren’t able to watch the recent Super Bowl on TV, you could still listen to the play-by-play commentary on the radio. But radio does more than just broadcasting sporting events or playing music. It plays a major role in emergency response, navigation and science.

The word “radio,” however, didn’t become part of our regular vocabulary until 1911, and it happened thanks in part to J. Howard Dellinger, a radio scientist at the National Bureau of Standards (NBS), the agency that became the National Institute of Standards and Technology (NIST). This came about when the second International Radiotelegraph Conference was being planned in London, and a professor sent Dellinger a paper that he was going to present to the conference for review.

At the time, “wireless” was used as the term for radio communication, especially by the British. However, NIST was charged with revising standards in preparation for the conference, and Dellinger suggested that the professor use “radio,” which was already becoming a popular word in the U.S., instead of “wireless.” The professor agreed, and the word “radio” went on to become the universally accepted term.

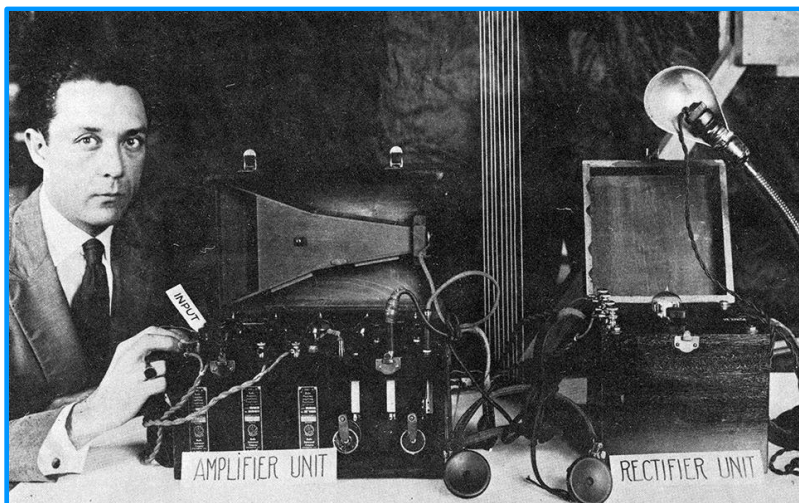
Dellinger not only played a role in popularizing the word “radio,” but he also played a role in the first radio work done at NIST. A commercial company asked NIST to calibrate a wavemeter, a device developed by one of its engineers that measures electromagnetic waves like those of radio. Dellinger was known as the wireless expert and took on the project of calibrating the first radio instrument at NIST.

A New Type of Radio Receiver

But for radio to become mainstream, it first had to be commercialized, which began with its introduction into households. However, the challenge was building a radio set that used the electrical current, called alternating current (AC), which powered lights, fans and kitchen appliances when plugged into wall sockets. The predecessor

to this technology was developed and patented by two researchers, Percival D. Lowell and Francis W. Dunmore, at NBS in 1922. They called their invention the “mousetrap.”

Percival Lowell with his patented radio set powered by alternating current. Credit: NIST



Percival Lowell with his patented radio set powered by alternating current. Credit: NIST

The “mousetrap” was a receiver for a radio amplifier that could run on AC. This was considered a breakthrough because at that time radios were only able to be powered by direct current (DC) provided by batteries. These batteries were bulky and heavy, had to be charged from time to time and were considered dangerous because of the acid used in them. The researchers’ prototype meant the radio could be used in homes without causing damage and with the same performance quality.

Lowell and Dunmore filed two more patents together for other innovations, and for the “mousetrap” they sold the rights to the Dubilier Condenser Corporation. Little did they know that, because there was no uniform policy on patents issued to government employees, their actions would result in more than a decade of litigation over who legally had the rights to the patent.

While they were tied up in court, the Radio Corporation of America (RCA) developed its own model of the AC radio in 1926. Its model later became the first AC-powered radio sold to consumers.

Flying by Radio

During the early years of flight navigation, NIST was doing research to assist pilots while they were flying and landing. Pilots needed three things to get their bearings when flying “blind,” meaning it’s foggy, too dark or too cloudy to see. They needed to know the longitudinal position, altitude and speed of the aircraft, which were all achieved by various beacons installed in the plane. The remaining issue was that there were two frequencies the pilot constantly had to switch between the frequency that the Department of Commerce used to send weather information to planes and ships, which sometimes caused interference for pilots, and the frequency the radio beacon operated on, which gave altitude and other information.

Dunmore created a prototype, but Harry Diamond, a radio engineer who joined NIST in 1927, completed the device, called the radio guidance system. Diamond solved the problem by developing a separate device that allowed for voice communication to the pilot without receiving any outside interference from ships’ radios.

A Curtiss Fledgling, a trainer aircraft developed for the U.S. Navy, was equipped with the device, and flight tests were performed between NIST’s experimental air station at College Park, Maryland, and Newark Airport in New Jersey in foggy weather. After a series of successful tests were performed, the device was turned over to be used by the Department of Commerce in 1933.

Praise From a Famous Inventor

While mostly intended for serious users, some of NIST’s journals and publications were popular with the public. One such book, titled *The Principles Underlying Radio Communication*, covered topics such as elementary electricity, radio circuits and electromagnetic waves and was also published as a textbook for soldiers in the U.S. Army. The famous inventor Thomas Edison received a copy from NIST and wrote a letter thanking the first director, Samuel W. Stratton, for publishing it, saying it was “the greatest book on this subject that I have ever read.”

As these and other examples show, NIST had a significant influence on radio research between 1911 and 1933. However, NIST’s radio work didn’t end with the first blind landing. NIST would continue to contribute to the field leading up to and during World War II, and research continues to this day in areas such as 5G, public safety communications and spectrum sharing.

ABOUT THE AUTHOR

Alex Boss is a general assignment writer in the NIST Public Affairs Office and covers standard reference materials (SRM). She has a B.S. in biology from Rhodes College and an M.A. in health and...



CW Corner**“Morse Code” ... who created today’s version?**

Morse Code is *named* for the inventor of the telegraph, Samuel Finley Breese Morse.

American Morse Code — also known as Railroad Morse—is the latter-day name for the original version of the Morse Code developed in the mid-1840s, by Samuel Morse and Alfred Vail for their electric telegraph. The "American" qualifier was added because, after most of the rest of the world adopted "International Morse Code," the companies that continued to use the original Morse Code were mainly located in the United States. American Morse is now nearly extinct—it is most frequently seen in American railroad museums and American Civil War reenactments—and "Morse Code" today virtually always means the International Morse which supplanted American Morse. https://en.wikipedia.org/wiki/American_Morse_code

Some scholars argue it was Vail, not Morse, who actually came up with the dot-dash system. What we recognize as *Morse code* is actually an international variation of the original, or "American," code. <https://www.wired.com/2008/06/dayintech-0620-2/>

Friedrich Clemens Gerke (22 January 1801 – 21 May 1888) was a German writer, journalist, musician and pioneer of telegraphy who revised the Morse code in 1848. It is Gerke's version of the original (American) Morse code now known as the International Morse code and standardized by the ITU (International Telecommunications Union) which is used today. https://en.wikipedia.org/wiki/Friedrich_Clemens_Gerke

Special Event Stations - March

- **03/01/2020 | Nebraska Statehood Day**
Mar 1, 1300Z-2300Z, N0N, Lincoln, NE. Southeast Nebraska Amateur Radio Club. 7.180 18.150 14.292 14.265. Certificate & QSL. Charles Bennett, KD0PTK, P.O. Box 67181, Lincoln, NE 68506. Hams will be broadcasting from the 14th floor of the State Capitol building. Clubs across Nebraska are encouraged to participate. Please include SASE. <https://www.facebook.com/SENRC>
- **03/02/2020 | Amateur Radio Club at UC San Diego: Dr. Seuss Birthday Celebration Special Event**
Mar 2-Mar 3, 1715Z-0030Z, KK6UC, La Jolla, CA. Amateur Radio Club at UCSD. 14.300. Certificate. Amateur Radio Club at UCSD, 9500 Gilman Dr, Mail Code 0078, La Jolla, CA 92093-0078. kk6uc@ucsd.edu
- **03/05/2020 | C-47 Skytrain**
Mar 5-Mar 12, 0000Z-0000Z, W5S, Oklahoma City, OK. Mid-Del Amateur Radio Club. 144.200 14.280 7.280. QSL. Mid-Del Amateur Radio Club, P.O. Box 30512, Midwest City, OK 73140. www.w5mwc.org
- **03/13/2020 | Bataan Memorial Death March**
Mar 13-Mar 16, 1800Z-0600Z, K5B, Las Cruces, NM. Mesilla Valley Radio Club. 147.180 +(100) Mega Link talk-in; 147.350 +(100) Mega Link talk; 7.070 USB PSK 31 40Night 20day 14.250 Voice 20M Day 40M Night. QSL. Mesilla Valley Radio Club, P.O. Box 1443, Las Cruces, NM 88004. General Communication Operations in support of Bataan Memorial Death March Race. Operation of Ham Camp for HF communication and introduction of Ham Radio to the public attending the race. HF operations on PSK 31, *.070 20 m day and 40 m nights. Voice general *.250 on 20m day and 40m nights. Local 28.400 USB or 29.600 FM calling. QSL by request SASE. www.n5bl.org
- **03/14/2020 | Battle of Picacho Peak Anniversary**
Mar 14, 1600Z-2100Z, K7T, Tucson, AZ. Oro Valley ARC. 7.040 CW 14.040 CW 14.250 USB 18.100 FT-8. Certificate. Email, qsl@TucsonHamRadio.org, for certificate. No paper QSLs please. www.TucsonHamRadio.org
- **03/14/2020 | PI Day March 14, 2020**
Mar 14-Mar 15, 0500Z-0500Z, N2RE, Princeton, NJ. David Sarnoff Radio Club. 14.250 14.050 7.120 7.050. QSL. Bob Uhrig, 104 Knoll Way, Rocky Hill, NJ 08553-1013. www.qrz.com/db/N2RE
- **03/14/2020 | The American Legion's 101st Birthday Celebration**
Mar 14, 1700Z-2300Z, K9TAL, Indianapolis, IN. The American Legion Amateur Radio Club. 14.275 7.225; *CrossRds* EchoLink Conference IRLP Reflector 9735. Certificate & QSL. The American Legion Amateur Radio Club, 700 N. Pennsylvania St., Indianapolis, IN 46204. The year 2020 marks the beginning of The American Legion's 2nd century of service to our Nation

and our veterans. Any ham radio operator who contacts the station is eligible to receive a QSL card and a commemorative certificate to document their participation. To receive a QSL card and certificate after working K9TAL, send your name, address, call sign, and a 9x12-inch self-addressed stamped envelope to The American Legion Amateur Radio Club, 700 N. Pennsylvania Street, Indianapolis, IN 46204. k9tal@legion.org or legion.org/hamradio

- 03/14/2020 | USS Midway Museum Ship Special Event; Launching of USS Midway**
Mar 14, 1700Z-2359Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 PSK31 14.070 DSTAR REF001C. QSL. USS Midway Museum Ship COMEDTRA, 910 N Harbor Drive, San Diego, CA 92101.
- 03/14/2020 | WHOA/SCOTA**
Mar 14, 1300Z-1900Z, W1M, Russell, MA. Western Mass Council--Scouting USA. 7.030 7.190 14.060 14.290. QSL. Tom Barker, 329 Faraway Road, Whitefield, NH 03598. Paper logging is used--there will be a delay in sending out qsl cards.
- 03/16/2020 | Maine Bicentennial Special Event**
Mar 16-Mar 22, 0000Z-2359Z, W1L, Boothbay Harbor, ME. Boothbay Harbor Memorial Library. 14.262 7.262 3.962. Certificate. Via email: director@bbhlibrary.org, or from , website, www.bbhlibrary.org . W1L will be operating from Boothbay Harbor, ME. Other participating calls include K1B, K1J, K1P, W1C, W1H, W1K, W1L, W1O, W1P, W1S, W1W, and W1Y. Certificate for contact; endorsements for bands, modes, and clean sweep of contact with each of the Maine 200 Special Event call signs. www.maine200specialevent.com for Bicentennial information;for W1L information, n1mhc@arrl.net or www.bbhlibrary.org
- 03/16/2020 | Maine Bicentennial Special Event**
Mar 16-Mar 22, 0000Z-2359Z, W1S, Various Cities, ME. Maine Bicentennial Special Event Group. HF, 6 and 2 meters, SSB, CW and digital. Certificate. Tim Watson, KB1HNZ, PO Box 6833, Scarborough, ME 04074. Calls include K1B, K1J, K1P, W1C, W1H, W1K, W1L, W1O, W1P, W1S, W1W, and W1Y. Certificate for contact; endorsements for bands, modes, and clean sweep of contact with each of the Maine 200 Special Event call signs. maine200specialevent.com
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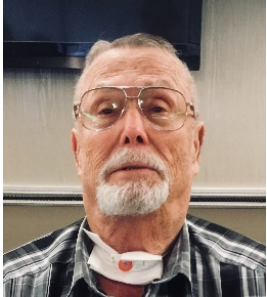
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- **03/16/2020 | Maine Bicentennial Special Event**
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- **03/20/2020 | Alcatraz Federal Penitentiary Anniversary of Closing**
Mar 20-Mar 31, 0000Z-2359Z, N6A, Healdsburg, CA. Will Pattullo, AE6YB. 21.265 14.265 7.265 3.815. QSL. Will Pattullo, 161 Presidential Circle, Healdsburg, CA 95448. N6A, Special Event for the Anniversary of the closing of the Federal Penitentiary on Alcatraz Island in San Francisco Bay, March 21, 1963. www.qrz.com/db/ae6yb
- **03/24/2020 | The Buckingham Army Airfield**
Mar 24-Mar 26, 1300Z-2000Z, W4LX, Fort Myers, FL. Fort Myers Amateur Radio Club. 14.240 21.240. Certificate & QSL. Fort Myers Amateur Radio Club, P.O.Box 061183, Fort Myers, FL 33906. 9 AM to 4 PM local time. fmarc.net
- **03/28/2020 | Battle of Horseshoe Bend (Creek Indian War) Anniversary**
Mar 28, 1400Z-2100Z, N4H, Daviston, AL. Lake Martin Amateur Radio Club. 14.250 7.280 3.850. Certificate & QSL. John Philips, PO Box 938, Alexander City, AL 35011. Commemorating the 206th anniversary of the Battle of Horseshoe Bend. This battle brought a close to the Creek War, made Andrew Jackson an American hero and opened much of present day Alabama for settlement. SASE for QSL or SAS (large envelope rate) 9X12 envelope for QSL & certificate. www.facebook.com/K4YWE/ or www.qrz.com/db/n4h
- **03/28/2020 | Cherry Blossom Special Event Station**
Mar 28, 1400Z-2000Z, W4BKM, Macon, GA. Macon Amateur Radio Club. 14.240 7.225. Certificate. Macon Amateur Radio Club, P.O. Box 4682, Macon, GA 31208. www.w4bkm.org
- **03/29/2020 | Vietnam War Veterans Day**
Mar 29, 1630Z-2130Z, W5KID, Baton Rouge, LA. Baton Rouge Amateur Radio Club. 14.250 14.035 7.225 7.035. QSL. USS KIDD Amateur Radio Club, 305 S. River Road, Baton Rouge, LA 70802. Operation aboard the USS KIDD, DD-661, WW II Fletcher class destroyer. qrz.com/db/w5kid
- **03/31/2020 | Sun-N-Fun International Fly-in and Conference**
Mar 31-Apr 5, 1400Z-2100Z, W4S, Lakeland, FL. Sun-n-Fun and Tom Ruhlmann (W9IPR). 14.250. QSL. Tom Ruhlmann, W9IPR, 465 Beechwood Drive, Cedarburg, WI 53012. W4S has been our call sign for the past several years. We typically have 12 or more operators and from several states. Walk up operators are welcome as schedules allow. We will be running about 500 watts to a beam.. Event description available at www.sun-n-fun.org www.sun-n-fun.org

http://www.arrl.org/special_events/search/page:1/Date.start:2020-03-01/Date.end:2020-03-31/model:Event

March Calendar of Events

~ March 2020 ~						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5 URAC two meter simplex RoundTable: 145.510 MHz, 8 pm	6	7 URAC First Saturday Breakfast and Membership Meeting: 8 AM, Think Café, San Pedro
8 Daylight Saving Time Begins 	9	10	11	12 World Kidney Day URAC two meter simplex RoundTable: 145.510 MHz, 8 pm	13	14
15	16	17 Saint Patrick's Day 	18	19 URAC two meter simplex RoundTable: 145.510 MHz, 8 pm	20 Spring Begins	21
22	23	24	25	26 URAC two meter simplex RoundTable: 145.510 MHz, 8 pm	27	28
29	30	31				

2020 URAC Executive Board

<p>PRESIDENT Ivan Mikulich KB6ATT kb6att@k6aa.org</p>		<p>VICE-PRESIDENT John Linder KC6JHV kc6jhv@k6aa.org</p>	
<p>SECRETARY Janet Meek janme711@hotmail.com</p>		<p>TREASURER Gary Forister N6HMR n6hmr@k6aa.org</p>	
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<p>DIRECTOR Homer Meek K6HKT k6hkt@k6aa.org</p>		<p>DIRECTOR John Rockwood WA6SDK</p>	
<p>PAST-PRESIDENT Sam Lollar K1SL k1sl@k6aa.org</p>		<p>NEWSLETTER EDITOR Scotty Butler K6ZNL k6znl@arrl.net</p>	<p>WEBMASTER Tom Marinello K6IGY k6igy@k6aa.org</p>

