DECEMBER 2025

ZERO BEAT

NEWS & ANNOUNCEMENTS

What's Inside

Year-end wrap-up

Your usual events reporter (LD/W0XLD) has been remiss in updating the club each month on our activities, but that's entirely my fault: the members have been quite busy, getting on the air, socializing, mentoring, and celebrating. Here's a year-end update to catch you up and inspire you for similar activities and beyond, in 2026!

Continued pg 2

Watch your email for the Zoom link

Wrap-up cont.

August

The club picnic was well-attended at Fountain Creek Regional Park, and in addition to the club chef Doug/N7LEM and family providing some excellent cookout fare, there were plenty of potluck offerings, and several radios set up to show off antenna setups and make some contacts. The main event, however, was a mobile radio car show, with several club members exhibiting new or improved mobile radio installations completed over the past year. The car show is always an excellent opportunity for club members to get ideas for their own mobile stations, but hams seeking ideas could especially take inspiration from Paul/K6IG who won the "cleanest install" prize, and from Joseph/K0OF. Joseph not only did much of the installation work on Paul's vehicle, but also won a prize for his own vehicle: "most expensive vehicle with an antenna hole drilled in it!" The collaboration between these two skilled hams set a high standard for mobile installations that we look forward to seeing challenged in the years to come.

Continued Page 3

Wrap-up cont.

September

A radio-direction-finding exercise was held on a beautiful Saturday in September at Cottonwood Creek Park. The temperatures were perfect, the park was busy, and tiny transmitters were beeping out their beacons across a wide area. Ben/AB2SG provided the "foxes" and the instructions for finding them, and hams equipped with directional antennas had fun trying to trace his sneaky footsteps. Some of the foxes were well-concealed, some were disguised, and some were stashed in trees or rocks, each providing a unique challenge and a chance to exercise some valuable radio propagation knowledge and skills.

Continued Page 4

Wrap-up cont.

October

An antenna-building workshop was held at Library 21C with accomplished RF engineer Ray/AA0L providing antenna plans, parts, and expertise for hams building handheld directional Yagi-Uda antennas for the 420 MHz band. Ray effectively demonstrated that useful antennas can be constructed inexpensively, and the results can be quite effective for real-world communications.

At the same time, Tom/W0TBT hosted a "Jamboree On the Air" event for Boy Scouts seeking to contact other Boy Scouts around the country, with a compact HF station deployed from the back of his pickup. Local scouts were able to get on the air and practice some basic radio skills, and Tom did an excellent job informing them about opportunities to earn their radio badges, get licensed themselves, and join the amateur community. Even the parents of the scouts were impressed with the amateur radio capabilities Tom showcased, and seem willing to join us for future events.

Continued Page 5

Wrap-up cont

November

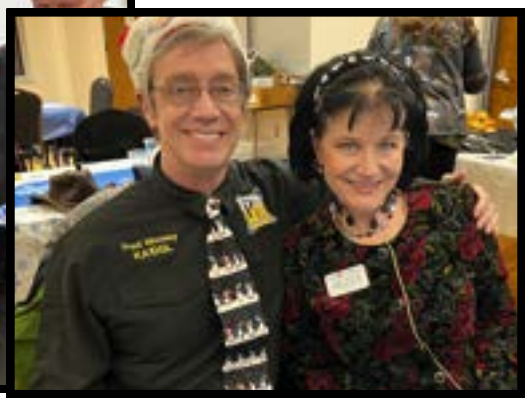
The second-annual "Black Friday simplex event" took place the day after Thanksgiving. Eric/K9EAJ set up this event and acted as net control, first convening a net on a local repeater, then walking participants through the simplex frequencies and modes to enable each person the chance to try transmitting and receiving, and to see how well they could be heard throughout the Pikes Peak region. This is a fun event for testing new radios (especially ones purchased during Black Friday shopping sprees on sale!) and antennas, building confidence in our stations' capabilities, but also helping us learn how effective our radios can be for emergency communications without repeaters, if the need should ever arise.

December

The December monthly meeting was held as a holiday party at Hillside Community Center, planned and coordinated by Leianna/N7ZOO, and catered by Mateo's Catering. The barbecue food was great, the desserts were exquisite, but as usual, the best part of the party was the company of other amateurs and their significant others. Awards were presented for accomplishments throughout the year, most importantly to Tom/W0TBT for "Elmer of the Year," as he has been faithful in teaching the radio badge to scouts at several events like field days and Megafests.

Continued Page 6

Wrap-up cont



Doug/N7LEM also received the "Under the Noise Floor" award because he usually just shows up to events and makes them go smoothly, organizing or contributing in big ways or small, always cheerfully and not always getting the recognition he deserves.

Thanks especially to the named facilitators for each of these events, and also to the many contributors who have helped out throughout the year. Whether reserving venues, providing supplies, preparing food, teaching and elmering, setting up tents, stringing coax and radial wires, hauling tables and chairs, decorating, interfacing with the public, or the myriad tiny tasks that add up to a successful event, the club's volunteers and participants have made 2025 a fun time all year long.

Happy New Year! We hope to have more of the same fun and learning experiences throughout 2026.

Beyond Radio Waves: The Surprising Uses of Morse Code

When Samuel Morse (& others) introduced the telegraph and its unique system of dots and dashes in the 1830s and 1840s, they likely did not imagine how far-reaching and enduring their invention would be. Morse code was designed as a practical solution for sending information quickly over long distances using electrical pulses, but its influence has extended far beyond its original use. While ham radio operators still keep the tradition alive, Morse code has found its way into music, space exploration, and even the life-or-death situations of espionage, captivity, and rescue missions. This is just a small sample of both the playful and the serious sides of Morse code's cultural legacy: including Rush's song "YYZ", Morse left in Martian soil, covert POW messages in Vietnam, and embedding CW in music for hostages in Columbia. With these examples, we can gain an appreciation for the strange resilience of this 19th-century technology in the modern world.

Continued Page 8

Morse Code cont.

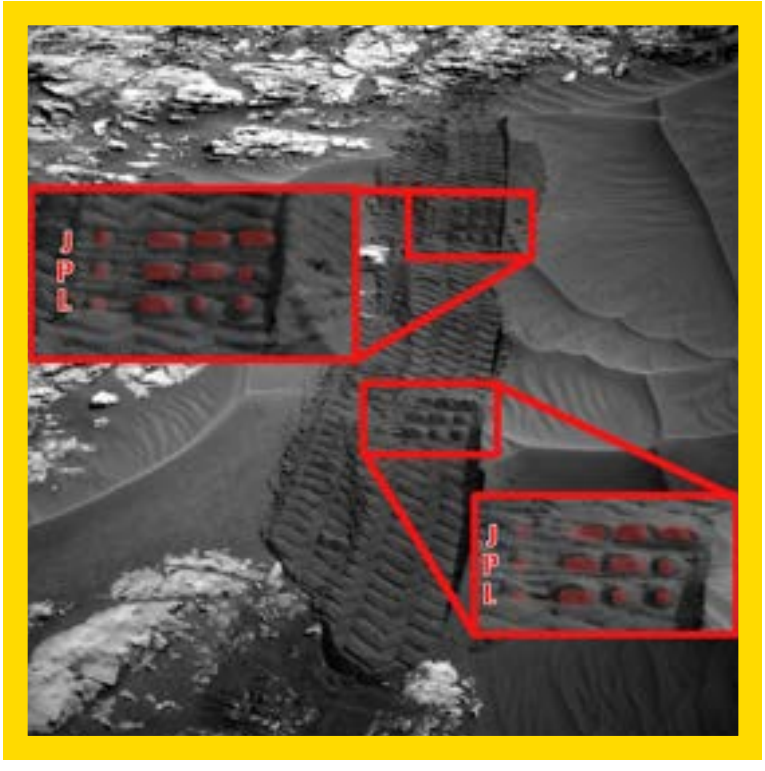
One of the most famous cultural nods to Morse code can be found in popular music. The Canadian band Rush immortalized Morse code in their instrumental track “YYZ,” released in 1981 on the album Moving Pictures. The title itself refers to an IATA airport code, which the band heard over over the radio on approach to Toronto’s Pearson International Airport. The musicians used the Morse code for “YYZ” (– · – – , – · – – , – – · ·) and transcribed it into musical notes. The song opens with an almost mechanical rhythm that instantly identifies the piece as something deliberate. For fans, this detail became a symbol of the band’s wit and ability to blend technical precision with artistry

Another cool and fascinating example comes from NASA’s Jet Propulsion Laboratory (JPL). The design team needed a functional but simple solution for gauging distance traveled by the Mars rover Curiosity. They decided to utilize a distinct pattern on the tread of the wheels to help measure distance traveled. By analyzing photos of its tracks across the Martian soil, they could then calculate using the circumference of the wheel -- simple and elegant. Early prototypes used a pattern that spelled out the letters “JPL” (for Jet Propulsion Laboratory), essentially autographing the Martian landscape with the lab’s initials.

Continued Page 9

Not the Same Old Field Day!

However, NASA's review committees were concerned that leaving a visible "signature" of the institution could be perceived as unnecessary branding on an international mission and ordered them to change it, and "change it" they did. The engineers then came up with a clever and subtle solution. Instead of spelling "JPL" in raised block letters, the team added 'grouser' patterns (small breaks in the tread). These openings seemed random to the untrained eye, but in fact, the cutouts formed Morse code for "JPL" (· – – –, · – – ·, · – · ·). They also spaced the starting dots for each character out slightly to make them a little less immediately noticable (see image). Reports vary on what happened next, but it has been stated by some at NASA that administrators did not notice this 'secret message' until it was too late to change.



Continued Page 10

While Morse code can be playful, its role in history has also been deadly serious. During the Vietnam War, American prisoners of war (POWs) held in brutal captivity by the North Vietnamese were often denied the ability to speak freely (to put it mildly). Commander Jeremiah Denton, a U.S. Navy pilot, was captured in 1965 after his plane was shot down and endured years of imprisonment and horrific treatment. Like many aviators of his era, Denton had received SERE training (Survival, Evasion, Resistance and Escape) which emphasized not only survival tactics but also methods of covert communication. One of the simplest and most effective techniques taught was the use of Morse code— something that could be tapped on a wall, scratched into a surface, or, in Denton's case, blinked with his eyes. In 1966, Denton was forced to participate in a televised propaganda interview meant to demonstrate the supposed humane treatment of American prisoners. Under intense pressure, he calmly answered questions but simultaneously blinked in a deliberate pattern. To casual viewers, it appeared he was simply nervous or tired; in reality, he was spelling out the word "TORTURE" (–, – – –, · – ·, –, · · –, · – ·, ·) in Morse code.

Cont. page 11

Morse cont.

U.S. intelligence analysts watching the broadcast quickly recognized the signal. Denton's message confirmed what many had suspected: POWs were being abused despite enemy claims of proper treatment under the Geneva convention. This moment became one of the most famous instances of covert resistance during the Vietnam War. Denton risked further punishment, but his action proved the power of Morse code as a lifeline. The antiquated signaling system allowed him to speak truth under conditions where no other voice was possible. His blinking message remains an iconic reminder of both personal courage and the enduring utility of Morse in dire circumstances.

Decades later, in 2008, Morse code again appeared in a tense, high-stakes context, this time in Colombia. Again manifested in music, but not in a lighthearted way. The terrorist organization Revolutionary Armed Forces of Colombia (FARC) had kidnapped and held dozens of hostages, some for years. Colombian military intelligence devised a clever plan to secretly communicate with these captives. They created a pop-style song titled "Mejores Dias" ("Better Days") that was broadcast on local radio stations where hostages might hear it. Hidden within the rhythm of the song's chorus was Morse code spelling out the phrase "19 people rescued. You are next. Don't lose hope" For the hostages who recognized it, this encoded message was a lifeline, confirming that they had not been forgotten and that a rescue was coming. Indeed, 'Operation Jaque' successfully freed fifteen captives. The blending of music and Morse code in this operation demonstrated once again that the code's endurance lies in its simplicity and adaptability.

Continued Page 12

Morse cont.

Though it began as a utilitarian code for the telegraph, Morse code has traveled far beyond its original purpose. It has left its imprint on rock music and the Martian surface, served as a lifeline for prisoners of war, and provided hope in covert rescue operations. Its persistence is due to its simplicity, adaptability, low bandwidth and low tech requiring nothing more than a binary, on-off signal. Plus, the symbolic weight it carries can not be underestimated either. Morse code endures not just because it is practical, but because it resonates with the human spirit, our need to connect, to express, and sometimes, to resist. In a digital age (and, make no mistake, CW is digital) dominated by instant messaging, streaming, and encryption, the humble dots and dashes of Morse code remain a timeless reminder that communication, at its core, is about making oneself understood no matter the medium.

Contact *Zero Beat*

Do you have photos of PPRAA events you'd like to share, or news from the ham radio world that the club might like to hear? Please email zerobeat@ppraa.org to share your ideas and pictures.

Save the Date

January

General Membership meeting (14 JAN 2026) will be by Zoom only!

(Golden Corral is closed for remodeling in Jan)

Location: Zoom only!

The business meeting starts at 7 PM

Club members check your email for info or email Officers@PPRAA.org to receive the Zoom information.

Winter Field Day
January 24-25, 2026

Visit PPRAA.org for more information.

PPRAA Megafest 2026 * July 25, 2026!

Watch PPRAA.org/megafest for more Megafest news