



ZERO BEAT

NEWS & ANNOUNCEMENTS



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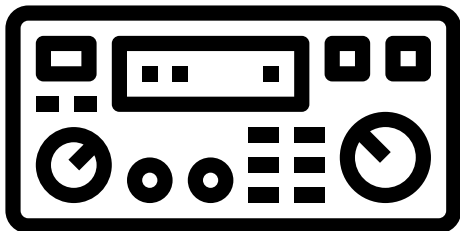
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Local JS8Call net

By LD / W0XLD

PPRAA's February on-air activity was a digital (data) net using the weak-signal JS8 mode from JS8Call software. This mode is similar to the popular FT8 mode, except it lets you say anything you want. So can we use it to send messages around the Pikes Peak region, and even conduct a formal net? We tuned our radios to 28.078 MHz on Friday evening, February 21st, and gave it a try.

The 10-meter band was our target because we wanted to stick with ground-wave propagation, eliminating complication from additional traffic from skip: we wanted to keep it to those who could get help by FM over the Cheyenne Mountain Repeater Group 147.345 MHz repeater, for example. But we didn't want to use 2 meters because only a small fraction of digital users have 2-meter SSB-capable transceivers, and we wanted to include as many participants as possible. In fact, even Technician-class licensees have digital permissions on the 10-meter band, so any ham could participate as long as they had the transceiver, computer, and antenna to do so.



JS8Call

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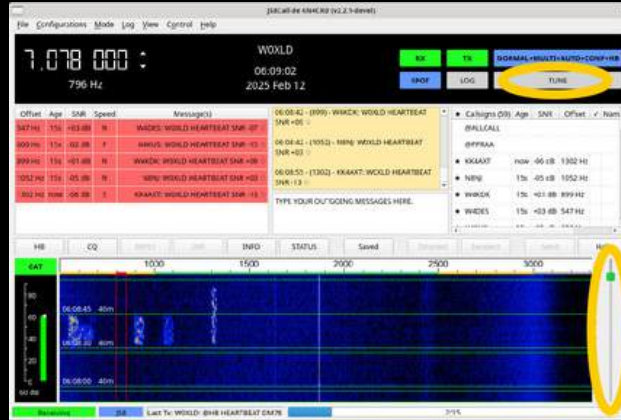
Local JS8CALL Net cont.

This decision worked out well: from the northwest corner of Colorado Springs, I was able to communicate clearly with Terry/K0IFT in Falcon and Jim/KD0KQL on the south end of the city as well. Most participants were heard clearly enough to be able to switch to JS8's "Turbo" mode, which sends messages almost as fast as we can type, without losing any bits. The choice of 10 meters proved effective for region-wide communications after dark.

Before we were able to shift up to turbo mode, though, we had to get through net check-ins. I modeled the check-in process after our usual FM 2-meter net on Thursday evenings, and broke the call for check-ins into callsign suffix groups. This was mostly successful with eight stations checking in, although there were two stations whom I could see chatting who did not check in when their group was called.



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Objectives accomplished on the net include:

- Sending messages to all net participants with the "@PPRAA" group call sign
- Triggering automated responses to "SNR?" and "INFO?" queries
- Shifting to "fast" or "turbo" mode for faster transmissions by stations with high signal-to-noise ratios
- Relaying messages from station A, through station B, to destination C, and receiving an automated "ack" message in reply to confirm successful relay. This could be used to relay traffic between stations who could not hear each other, even though in our exercise the endpoints could hear each other too.
- Saving a "msg" transmission in an inbox, to be viewed later if the operator is away from the station
- Sending 6- and 8-character grid coordinates for precise location spotting, including insertion to the APRS network

In addition, two more stations were able to get help by FM repeater to get their computers configured to talk to their transceivers to use JS8Call in the future. Thanks especially to Eric/K9EAJ for providing useful advice.

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We also had some lessons learned for possible future net operations:

- JS8 can be a very slow mode, especially if there are stations not shifting up to "fast" or "turbo" modes. It takes patience to read net control's directions and transmit only when called. Those tempted to have sidebar discussions can do so without interrupting net control, as they can just use a different frequency that's still visible on the same spectrum as the net controller. However, it pulls participants out of the net and means there are different conversations to choose from. No problem for an informal experiment, as we were holding, but it's something to consider if we are ever using JS8 for emergency communications or public-service events.
- One station was unaware of the "Allow sending standard messages without callsigns" checkbox buried deep in the settings window, and with it checked, their station did not send their call sign automatically prepended to their transmissions. The software is to blame here: the setting is not easy to find and takes a lot of time to explain over the JS8 mode, but it's critical to ensure the transmissions are identified (including for regulatory compliance).
- Because we can have multiple conversations throughout the JS8 spectrum simultaneously, maybe a net modeled directly on FM repeater nets is not the most efficient way to accomplish communications. For weather reporting or radiogram traffic handling, maybe check-ins and direction from net control are unnecessary: each station can simply go direct to their destination station. If there are doubles, they can be resent simply.

Local JS8Call Net cont.

This last lesson has interesting implications: What should we try next? If a net isn't necessary, how does an informal chat night sound? Should we try something more formal like National Traffic System formatted radiograms, or weather reporting? Could we experiment with ground-wave propagation around town, measuring SNR on 6 meters or down to 80 meters?

It's nice that JS8Call software opens up so many varying use cases, and that we had several successful tests and experiments. Though the software can be a little complicated, and interfacing computers to radios can impose some hurdles, there are several capabilities to be learned and fully exploited, and that sounds like a good time for hams who like to experiment!

FREE Radio Licensing Test Sessions
Second Saturday of every month at 10 am
Pikes Peak Regional
Office of Emergency Management
3755 Mark Dabling Blvd.
Colorado Springs, CO 80907
ve@ppraa.org

On the Air with PPRAA March 2025:

Who: All licensed amateur operators

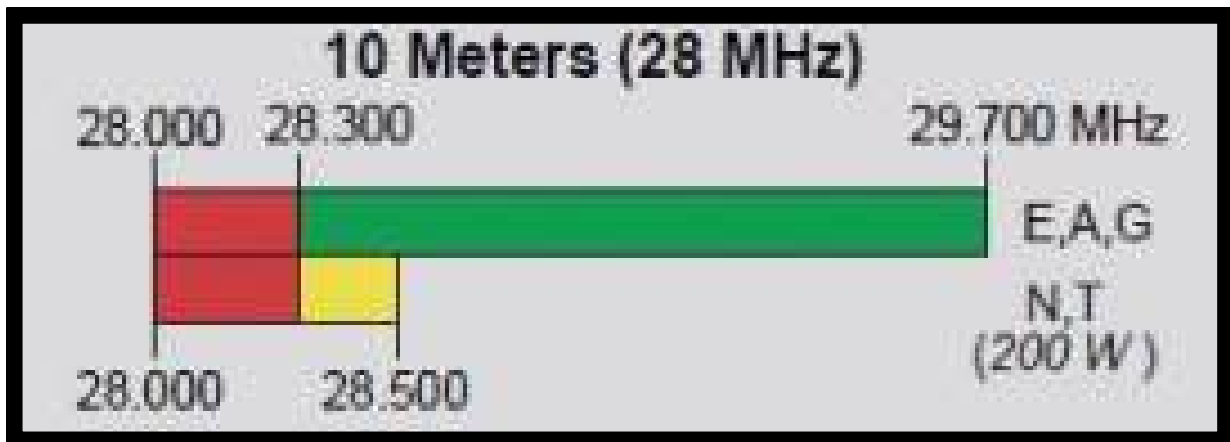
What: 10m Event

When: Friday, March 21, 2025 @ 8:00 PM MST

Where: Your ham shack!

How:

Join us at the PPRAA
monthly membership meeting
March 12, 2025 or watch the
PPRAA.org website
for more information.





General Membership meeting (12 MAR 2025) will be both in-person and virtual

Location: Golden Corral
1970 Waynoka Rd, Colorado Springs

The business meeting starts at 7 PM, but get your dinner and beverage of choice and check in any time after 6 PM for a social hour. Club members check your email for info or email Officers@PPRAA.org to receive the Zoom information.

Friday, March 21, 2025

PPRAA 10m Event

Watch PPRAA.org for more information

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.