APRS

History and Use of the Automatic Packet Reporting System

Generated on May 1, 2026

What is APRS?

- APRS stands for Automatic Packet (positioning) Reporting System.
- Developed for amateur radio operators to exchange real-time digital information.
- Uses packet radio technology to transmit position, weather, messaging, and telemetry data.
- Commonly used with GPS receivers and VHF radio systems.

History of APRS

- Invented by Bob Bruninga, WB4APR, in the early 1990s. Bob was SK in 2022.
- Originally designed to track mobile assets and tactical information.
- Expanded from simple packet radio to a worldwide amateur radio data network.
- Became widely adopted by amateur radio emergency and public service groups.

The Role of ARRL

- The ARRL (American Radio Relay League) promotes amateur radio education and innovation.
- ARRL publications and training helped popularize APRS among radio amateurs.
- ARRL supports APRS use in emergency communications and field operations.
- ARRL events often demonstrate APRS capabilities for tracking and messaging.

How APRS Works

- Stations transmit short packet messages over amateur radio frequencies (144.390)
- Digipeaters repeat packets to extend communication range.
- Internet gateways (IGates) connect radio traffic to online APRS networks.
- Operators can view APRS data on maps and software applications. Aprs.fi

Common APRS Uses

- Vehicle and personnel tracking during events or emergencies.
- Weather station reporting and telemetry monitoring.
- Short text messaging between amateur radio operators.
- Search-and-rescue coordination and public service activities.

APRS Equipment

- VHF/UHF transceiver.
- Terminal Node Controller (TNC) or sound-card modem.
- GPS (Global Positioning System) receiver for position reporting.
- Computer or mobile device running APRS software.

Modern APRS Applications

- Used in disaster response and emergency management.
- Integrated into mobile and handheld radios.
- Supports satellite and internet-linked APRS networks.
- Remains an important digital communication tool in amateur radio.

Conclusion

- APRS combines radio communication, GPS, and digital networking.
- ARRL has played an important role in promoting APRS education and use.
- The system continues to evolve with modern technology and amateur radio innovation.

APRS Equipment

- Kenwood TM-D710A
- Kenwood TH-D72A
- Anytone
- Baofeng

APRS Books

- https://web.tapr.org/~wa1lou/mybooks/
- https://www.amazon.com/Mastering-APRS-Comprehensive-Lickfold-Publishers-ebook/dp/B0DYF1VV3Q
- https://www.barnesandnoble.com/w/mastering-aprs-duarte-braga/1146892198?ean=2940181462533