

## **APRS How-To: Getting Started**

APRS (Automatic Packet Reporting System) is a digital protocol used by amateur radio operators to send small packets of information such as position, messages, weather, and telemetry over RF and through internet-connected gateways. APRS packets are digipeated across an area and often gated to APRS-IS, where they can be viewed on mapping and monitoring sites.

### **Basic RF settings (North America)**

- Frequency: 144.390 MHz FM as the primary APRS VHF channel.
- Modulation: 1200-baud AFSK over FM (the common setting for most APRS radios and TNCs).
- Power: Use the minimum power needed to reliably reach at least one digipeater.

### **Callsign-SSID**

APRS identifies your station by callsign-SSID. Common conventions:

- CALLSIGN-9: Primary mobile (car/truck).
- CALLSIGN-7: Handheld or portable.
- CALLSIGN-1 or -0: Home or primary fixed station.

### **Paths and beacon rates**

Choosing sensible paths and beacon rates is critical to keeping APRS useful and uncluttered.

- Typical mobile path: WIDE1-1,WIDE2-1 in many parts of North America.
- Typical fixed station path: WIDE2-1 or even no path if you mostly gate to APRS-IS.
- Mobile beacon rate: About every 1–3 minutes while moving.
- Fixed station beacon rate: About every 15–30 minutes, slower if you don't need frequent updates.

### **What equipment can I use?**

- APRS-capable mobile/HT with built-in APRS menus.
- Any FM radio plus an external TNC (Bluetooth or wired) and an APRS app.
- A small computer (Raspberry Pi or similar) with a soundcard or SDR, running APRS software for RX or IGate use.

In all cases you will configure your callsign-SSID, RF frequency, path, beacon rate, and (if needed) GPS.

### **Good operating practices**

- Use standard local frequencies and avoid unnecessary high power.
- Keep paths short; avoid “flooding” wide areas with long, multi-hop paths.
- Keep status text brief and meaningful so it fits comfortably in APRS messages.

– Review your own APRS track on a map from time to time and adjust settings if you are beaconing too often or too widely