



## DA-7X2 APRS Setup

*Configure analog APRS or DMR APRS without copying region- or network-specific defaults*

**What APRS lets you do:** APRS lets the DA-7X2 share and display station or location reports over an authorized analog APRS channel or a DMR network that supports Digital APRS. Choose the path your local network supports.

**Choose one path first:** Analog APRS uses an analog RF channel and AFSK packets. DMR APRS uses a working DMR channel and a system-defined digital destination. Configure and test one path at a time.

### Before programming

1. Read the radio with the current BTECH CPS and save a separate working copy.
2. Open Tool > Options and enable GPS, APRS, and Analog APRS RX when those installed functions are used.
3. Obtain the authorized frequency, packet path, beacon interval, destination ID/talkgroup, call type, and slot from the local APRS coordinator or DMR system owner.
4. Use the lowest practical transmit power and a responsible beacon interval for the local network. Disable automatic beaconing while bench-testing or updating firmware.

### Analog APRS

1. Create an analog channel using the authorized regional APRS receive/transmit frequency. Do not add CTCSS/DCS unless the local system specifically requires it.
2. In Channel Information, enable APRS Receive/APRS RX for the channel when received packets should be decoded and logged.
3. Open Common Settings > APRS. In the Analog APRS area, set TOCALL to APBT72 and TOCALL SSID to 0. APBT72 is the registered APRS device identifier for the BTECH DA-7X2.
4. Enter your assigned amateur call sign without a suffix in Your Call Sign, then choose the station-use suffix in Your SSID. Use -7 for normal handheld/pedestrian operation, -9 when the radio is the primary mobile station in a vehicle, or 0 for a primary fixed station.
5. Set the analog transmission frequency to the same authorized APRS frequency and choose the required decode path for the main or sub band.
6. Enter the local digipeater path exactly as coordinated. Do not copy a WIDE path from another region by default.
7. Choose GPS Beacon when transmitting the current GNSS position, or configure a Fixed Beacon only for a verified fixed location.
8. Set PTT upload and automatic interval behavior intentionally, save the file, and write it to the radio.

| CPS field      | DA-7X2 value / choice                          |
|----------------|------------------------------------------------|
| TOCALL         | APBT72                                         |
| TOCALL SSID    | 0 (no suffix)                                  |
| Your Call Sign | Your assigned amateur call sign, without -SSID |

| CPS field | DA-7X2 value / choice                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------------|
| Your SSID | -7 handheld/pedestrian; -9 primary mobile; 0 primary fixed; -6 for a distinct special/satellite activity |

**Identity and receive path both matter:** Use APBT72 only for the DA-7X2 device TOCALL, and choose your station SSID by how the station is actually used. Do not use -10 unless the station is operating as an internet gateway. The radio has separate analog APRS receive paths for the main and sub bands, so select the path carrying the APRS channel.

## DMR APRS

**Confirm network support first:** Digital APRS is not available on every DMR network. If yours does not support or permit it, leave it disabled. BrandMeister U.S. example: Private Call to 310999. This is not universal; confirm current instructions because other networks and BrandMeister regions use different destinations.

1. Create and voice-test the DMR channel first. Confirm its receive/transmit frequencies, color code, slot, Radio ID, and system access.
2. After confirming the network supports Digital APRS, open Common Settings > APRS and configure one Digital APRS report row using the exact destination and call type supplied by the network or system owner.
3. Set Report Channel to Current Channel or to the assigned report channel. Set Report Slot to Channel Slot unless the system requires a fixed slot.
4. On the radio, select DMR APRS as the upload type and choose the required upload ID/report settings.
5. Enable PTT upload or a timed interval only when the system allows it. Write the codeplug and test one controlled report.

## Verify on the radio

| Check           | Expected result                                                                                |
|-----------------|------------------------------------------------------------------------------------------------|
| GPS status      | Green/locked position when GPS Beacon is used                                                  |
| Analog receive  | Ana APRS Info records decoded packets on the selected decode path                              |
| Analog transmit | One controlled packet is received by the intended local gateway/digipeater                     |
| DMR transmit    | The selected system accepts and routes the configured digital report                           |
| Read-back       | Call sign/SSID, path, frequency, report destination, slot, and interval match the working file |

## Fast troubleshooting

- No analog decode: verify frequency, APRS Receive, main/sub decode path, and that the received signal contains analog APRS data.
- No GPS position: move outdoors with a clear sky view and wait for a lock before testing GPS Beacon.
- No analog gateway report: confirm the local path, frequency, power, beacon content, and that the channel was clear.
- No DMR report: confirm the network supports Digital APRS, then verify voice operation, destination ID/talkgroup, call type, report channel, and slot with the system owner.
- Unexpected repeated transmissions: disable PTT upload and timed intervals until the configuration is corrected.