

ARES simplex coverage test — net control guide

RARCHAMS ARES net | Check-ins report whether they can hear net control, and whether net control hears them, on tactical simplex | Results go on a map

Before the net

- Pick the **tactical simplex frequencies** from your ARES plan (the app starts with only 146.520, the national simplex calling frequency). Add them in the app's **Setup**. Decide the order in which you will test them.
- Open `simplex-test.html` on the logging computer **with internet** (the map tiles need it). Set **your net control callsign** and **your location** (grid square, lat/lon, or click the map). Load the roster `aprs\net-roster.txt` (names) and `member-qth.csv` (approximate QTHs). Typing a member's callsign then fills in their grid square; **confirm it with them on the air** and correct it if it is wrong. Those grids come from FCC address records (mailing addresses, some only the center of a ZIP code), so a few will be off or missing.
- **Practice once**: press *Load demo data*, try saving a station and exporting, then press *Clear all data* before the net.
- Tell members ahead of time: **bring your normal emergency setup** (the radio, power and antenna you would really use), and **know your grid square or nearest cross streets**.
- **Optional APRS positions**: for members who agreed, run `python aprs_snapshot.py` shortly before the test (one `aprs.fi` request), then press *Load aprs-positions.json* in the app. Their position shows as a purple ring and fills in their QTH when you log them; confirm it on the air. It stays on your computer.
- Have the paper log sheet (page 2) as a backup.

During the net (after normal check-ins)

Report scale (use the same words everyone, both ways): **Not heard** · **Weak** (someone is there, but hard to copy) · **Readable** (copy all with some effort) · **Solid** (clear, no effort).

Step 1 — announce on the repeater.

"This is [your call], net control. We will now run a simplex coverage test on [frequency]. Stay on the repeater for now. When I call on simplex, listen, and then tell me here whether you heard me: not heard, weak, readable or solid. Be ready to give your callsign, your location as a grid square or nearest cross streets, and what radio and antenna you are using."

Step 2 — listen test (net control transmits on simplex). Switch to the test frequency.

"This is [your call], net control, simplex test on [frequency]. Test, test, test. Over." (Repeat once after about 10 seconds, then return to the repeater.)

Step 3 — collect "they hear NCS" reports on the repeater. Call each station in turn: "[call], what did you hear on simplex?" Record the result, their QTH and equipment. **"Not heard" is useful data**; log it too.

Step 4 — talk test (stations transmit on simplex). Send stations to simplex in small groups of three to five so the frequency does not get crowded.

"[call], [call], [call], go to [frequency]. One at a time, I will call you. Answer with your callsign only."

On simplex, call each station: "[call], net control, how do you hear me?" Log what **you** copy from them (the "NCS hears them" result). Return to the repeater and read the results back.

Step 5 — repeat for each test frequency. Keep each round short so the net does not run long.

Step 6 — close. Thank everyone, say the results will be shown as a map (shown by grid square, not by address), and return the net to normal procedure. **Optional**: read the opt-in announcement on the sign-up sheet. Tick "Member agrees to appear on the shared map" (and/or the APRS box with their call-SSID) only for members who say yes.

- **Identify** every 10 minutes and at the end, on the repeater and on simplex. If real traffic appears, **drop the test** immediately.
- If someone cannot hear you on simplex, note it and move on. It is a result, not a failure.

Using the app during the net

1. Type the callsign, QTH and equipment. The pin appears when you press **Save station** (or Enter in the QTH box).
2. Choose the results for each frequency: **They hear NCS** (what the station tells you) and **NCS hears them** (what you copy).
3. Map colors: **green** = two-way readable or solid; **yellow** = weak, one-way, or only one direction tested; **red** = not heard; **grey** = not tested.
4. The **Show frequency** menu switches the map between frequencies, or shows the best result on any frequency.
5. To share the map: press **Export members-optin.csv** (opted-in members only) and send it to the page maintainer to publish.
6. After the net: **CSV** (spreadsheet), **KML** (Google Earth), **Backup (JSON)**, or **Print map + list**. Save a backup before closing the page.

Privacy: `member-qth.csv` holds only each member's callsign, name and a grid square (no street addresses), but keep it private and tell members it exists. The app rounds each pin to a **6-character grid square** (a few miles) by default, and keeps data only in this browser. Don't publish exact home addresses. Treat the exports as private unless members agree to share them.

What the results can and cannot tell you

- One evening's result depends on **antenna, power, height, weather, and local noise**. Record equipment on every entry and compare like with like (for example HT with rubber duck versus a roof antenna).
- A "not heard" at one location may be fixed with a better antenna or a relay station, so use the map to decide where those would help.
- This guide is a suggested procedure. Adapt it to your ARES leadership's plans and your net's usual script.

Paper log sheet — simplex coverage test

Date _____ NCS call _____ NCS location _____ Frequency _____

Result key: **N** = not heard **W** = weak **R** = readable **S** = solid (leave blank if not tested). Write the location as a grid square (for example EN34ra) or nearest cross streets.

#	Callsign	QTH (grid or cross streets)	Radio / power / antenna	Freq	They hear NCS	NCS hears them	Notes
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Enter these into the app after the net if you used paper (or enter them live and use this as a backup). Time ID'd: _____