

VHF FM Contesting Quickstart Guide

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So you have a pad of paper, a pen, and a 2m(/70cm) FM radio, and you want to get on the air for a contest. Here's what you need to know.

- Look over the rules for the contest (e.g. ARRL September VHF, ARRL 222 MHz-and-Up).
- Set your radio to 146.550 MHz FM. If you have a second frequency available, set it to 446.000 MHz. Before the contest, if you can give each of these frequencies (plus 146.580 MHz) its own memory on the radio, that would be good.
- Look up your grid square. If you're in Bloomington or elsewhere in the southern Twin Cities metro, it's EN34 (echo november three four). North metro is EN35. Make sure you get a 6-digit grid for the ARRL 222 MHz-and-Up contest!
- Use a decent antenna. The stock antenna on your handheld will radiate, but not very well. Upgrade it if possible, and borrow an antenna from a friend for the contest if necessary. Even a 19" piece of insulated wire with a little bit of the conductor wrapped around the outside of the antenna connector (i.e. connected electrically to the chassis) will help if you don't have a better antenna.
- Choose a good location. Ideally you would be on the top of a hill or other high place, in a relatively treeless, buildingless area (e.g. park or parking lot). In a pinch your yard would work, but try to stay outdoors. Operating indoors greatly limits your range.
- Choose a good time. I suggest (local) 4:00–4:30 PM Saturday, 8:30–9:00 AM Sunday, and 4:00-4:30 PM Sunday.
- Always give callsigns phonetically, using the ITU phonetics. “Alpha echo zero echo echo” is much easier to copy correctly the first time than “AEØEE”.
- Log the frequency, date/time, callsign, and grid square of the station you work. Date/time will need to be in UTC when you submit your log; use UTC directly or convert later.
- Use 146.550 MHz most of the time. If possible, move stations to 446.000 MHz after a contact on 146.550 MHz. In the unlikely event that 146.550 MHz is busy, move up to 146.580 MHz.

- For ARRL VHF+ contests only, it is allowed to use a cell phone or the internet to coordinate contacts (e.g. “I’m on 146.580 MHz and located on Buck Hill, would you please try a contact with me?”). This takes a bit of the fun out of calling CQ, but can be essential for VHF/UHF stations with beam antennas.
- When calling CQ, keep the call fairly short (10–12 seconds is fine), give a few seconds for a response, then repeat your CQ call again. After the second call, wait a few minutes before going through this two-call procedure again. It saves your voice and still puts activity on the air to catch people who are scanning.
- This is what a contact would look like:

AEØEE (146.550 MHz FM): CQ CQ CQ this is alpha echo zero echo echo, alpha echo zero echo echo, in echo november three four.

KØBBC: Kilo zero bravo bravo charlie.

AEØEE: Kilo zero bravo bravo charlie, echo november three four.

KØBBC: Roger roger, echo november three four.

AEØEE: Roger, do you have 70 cm?

KØBBC: Yes, how about 446.000 MHz?

AEØEE: Okay, alpha echo zero echo echo to 446.000 MHz.

KØBBC: Kilo zero bravo bravo charlie to 446.000 MHz.

AEØEE (446.000 MHz FM): Kilo zero bravo bravo charlie, kilo zero bravo bravo charlie, this is alpha echo zero echo echo.

KØBBC: Alpha echo zero echo echo, echo november three four.

AEØEE: Roger roger, echo november three four.

KØBBC: Thanks, is there anyone else on frequency?

[Silence]

AEØEE: Alpha echo zero echo echo back to 146.550 MHz.

KØBBC: Seven three, this is kilo zero bravo bravo charlie.

- It is okay in a VHF contest to talk with another station after the minimal exchange has been completed (e.g. ask their name and town[/state]). You should, however, identify more frequently (every 2–3 minutes), mention that you’re participating in a contest occasionally, and invite stations to break in if they want to work you. Leave a bit of space between transmissions to allow the breaking station to get their callsign in.
- Upon completion of the contest, fill out the online log conversion form with the information in your log; mode is FM. Check the rules regarding your classification for station type, assistance, power level, and transmitter category.
- Think about what went well and what needs work, what improvements to make—and how to make them—for the next time.
- Discuss how the contest went, and possibly the improvements you identified, with a friend.