

# The Courteous Ham's Guide to AO-51

## v1.1

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This document was created due to the ever increasing load on the AO-51 satellite. While an increase in users is always a good thing, the limitations of the FM repeaters on board AO-51 can often cause a situation that is detrimental to all the users of the satellite. This document was created to suggest operating guidelines and discourage behavior that hurts everyone on the satellite.

- Pay attention to the schedule

The AO-51 control team publishes a schedule every month detailing what modes the satellite will be in, what repeaters will be active, and if there are any special events that might be happening on the satellite for a specific period. Read the schedule. Consult it regularly. It can be the difference between you working the satellite or having a frustrating pass because you're transmitting on the wrong frequency.

- Don't transmit if you can't hear it.

This is the cardinal rule of satellite operation. AO-51 has a rather strong signal and can be heard on high passes rather easily even with a modest setup. I can sometimes even hear it (albeit faintly) with a simple rubber duck on good passes. AO-51 usually is jammed packed with people when it is VHF Up, UHF Down (V/U) mode over the US. If the schedule says that it's operating in V/U, and you can't hear it, resist the urge to transmit. Sit down, go over your setup, and make sure your ducks are in a row. It's likely something on your end. Remember, there is always another pass.

- Don't throw carriers, whistle, or otherwise jam the bird

This is a bit of a continuation of the last rule. When looking for the satellite, don't transmit blindly. Again, when the satellite is over the US and in V/U, the satellite will likely be jammed packed. AO-51 can hear much better than it can transmit. There have been stations where the station transmitting has a great signal into

the satellite while saying they can barely hear it. If you transmit while the satellite is overhead, it will likely hear you, and you may step on an existing QSO.

- Listen to the downlink. But use headphones!

This is good practice, as you can verify you are "making the trip." It also has benefits, one of which we will discuss later. But, if you do this, use headphones to do it. If you don't, it is possible you'll transmit nothing but feedback, which makes you impossible to understand and gives everyone listening an earful of screechy badness.

- Don't call CQ.

Did we mention that AO-51 is crowded? We did? OK, because it is. Due to this, keeping your transmissions short is a win-win situation. It allows more people to use the satellite, and it lessens the chance of you getting stepped on by a spurious transmission. So, going "CQ Satellite, this is November One Whiskey Bravo Victor, CQ!" ties up the satellite and often has people stepping on the transmission as well. Instead, going "November One Whiskey Bravo Victor" or "November One Whiskey Bravo Victor, listening" or even "November One Whiskey Bravo Victor, Foxtrot November Four One" will keep it quick, and lessen your chances of being doubled.

- If you think you are doubling, stop transmitting!

Speaking of doubling, if you think you are, STOP TRANSMITTING! This is more common when you have the ability to monitor the downlink. Doubling helps no one. Even if you were "first" and someone came on top of you, just let it go. Having two carriers tie up the satellite helps no one, so just be the bigger person and let the other station go first.

- Use Phonetics, most of the time.

Use of standard phonetics is good practice always. Standard phonetics are often burned into Ham's brains and can allow quick translation between the word and the letter. While you may have a really cute version of your call based on your pet name from college, using it on the satellite will often require stations to ask you to repeat it. The only exception to this is that if the other station has your call correct, consider giving your call non-phonetically to help with speed.

- Yield to Portable and QRP

Portable and QRP stations are usually just above the noise and often have difficulty making it into the satellite. If you hear someone ID with "Portable" or "QRP" making a call, back off and let them have a turn. Marginal setups often require skill and luck, so help fate along and allow the station running 5W have a chance. However, on the other hand, if you have a hand held, and are clearly not getting a very good signal and the satellite is busy, give others a turn too.

- Know your grid

In VHF, position reports are given by what are known as "grid squares." AMSAT has a nice online converter at <http://www.amsat.org/amsat/toys/gridconv.html>. If you are going to try to work a pass know the first four characters of your grid square beforehand. Giving your position as a city and state will cause confusion as he or she will be expecting your "grid."

- QSO in progress? Back off!

If someone calls a station, give them a window to have the other station respond. Don't instantly transmit your call again. If the other station responds, wait until they exchange their information before transmitting again.

- In a QSO? Make it quick!

The flip side of this coin is that if you are in a QSO, make it quick as to allow other stations a chance to use the satellite. If a station calls you, jump on it quick so that you're not leaving the satellite idle. Also, AO-51 is very much like a contest when it's crowded so often the only things exchanged are call sign, grid, and sometime a name or a quick message. Knowing that you are in western Kansas visiting your great aunt may be OK for a ragchew on HF or the local repeater, on the satellite you're just tying it up.

- Don't clobber the bird with watts.

AO-51 can be worked even with a modest setup. Running 50W into a directional antenna may give you more "muscle", it is usually quite unnecessary. Consider leveling the playing field for less powerful stations by dialing down your power.

- Don't hog the satellite.

If you are one of the stations making a good signal into the satellite, the temptation is to work every station possible. While it is easy to do this in courteous fashion, let other stations have a chance as well. A good rule of thumb

is to go after 2-3 QSOs then back off. Remember, this might not mean 2-3 \*total\* QSOs, as if other stations call you, respond.

- Do encourage good behavior

If you hear stations acting in a courteous manner, be sure to try and work them. If you hear other stations acting in a non-courteous manner, don't work them. Also, feel free to message people "offline" via e-mail if you hear them working in a courteous manner but didn't have anyone work them. A little thank you goes a long way.

- Don't scold bad behavior on air

Scolding bad behavior on air may seem gratifying, but tying up the satellite with your message doesn't help the situation at all. Instead, contact the stations "offline" and offer help. Sometimes the station will be receptive, sometimes they won't.

- Use your judgment

As always, these are guidelines. Sometimes AO-51 is wide open or only has a handful of stations. You may need to transmit without "hearing" somebody. If it's rather empty, take advantage of it to have a quick conversation over satellite. Just leave gaps for other stations to join in. These guidelines are only suggestions from a few amateurs who love AO-51 and just want to see it used to its maximum potential.

Of course, the most important rule of courteous AO-51 operation is **to have fun!** Hopefully, the more people follow these guidelines the more chances you will have to test your homebrew antenna, your new low wattage setup, and grab new grid squares! AO-51 is an amazing asset to the amateur community and the more people use it in a courteous manner, the better it is for everyone.

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