

NCJ Interviews: Jim Hall, AD4EB

Radiosport has many facets, and one of them is mobile contesting. Jim Hall, AD4EB, a well-known member from the Tennessee Contest Group (TCG), understands both the art and science of mobile contesting. He outlines strategic goals and tactical guidelines for successful and safe contesting on the road. — Fred Regennitter, K4IU

NCJ: Jim, how did you get started in Amateur Radio?

AD4EB: My introduction to radio began as a young 13-year-old shortwave listener in Champaign, Illinois, using a Heathkit GR-64 receiver my father bought for me to build. I would listen to broadcast and amateur phone stations, but it was the dits and dahs and the unknown digital signals that really captured my interest. I was pleased to learn that my 9th grade geometry teacher, Charles Wallace, K9AIU (SK), was a ham. He invited me over to his home, and we had a phone QSO on his Drake TR-4. At that instant I had the feeling someday I would be a ham radio operator too.

Then one day, out of the blue, my mother asked me if I wanted to get a ham radio license. She had just run across a very tiny article in the newspaper announcing a Novice license class to be taught at the farmhouse of Nelda Reifsteck, WA9YXZ (SK). It was not long before I became WN9IZQ in 1972 at age 16.

NCJ: Describe your first station and early interests.

AD4EB: My first station consisted of a crystal-controlled Heathkit HW-16 with a simple trap dipole for 80, 40, and 15 meters. I upgraded to a Yaesu FTDX100 as soon as the FCC allowed Novices to use a VFO. I was a very active Novice, filling up quite a few ARRL logbooks, while improving my CW skills. But it was RTTY that had the biggest impact in this hobby and my professional career.

Soon after getting my Novice license, a family friend from church gave me a Model 19 teletype machine. After a little research, I was surprised to find that a small company in our town named HAL Devices (later HAL Communications) sold RTTY demodulator kits and other amateur-related items. I built their ST-5 kit but did not have the necessary equipment to accurately tune the filters. After contacting the company, one of the founders, Bill Henry, K9GWT (SK), invited me to the factory one evening and did the necessary tuning. Soon, I was in teletype heaven, with the heavy Model 19 shaking



AD4EB's well-appointed station with QSO party achievements on the wall.

the house typing out news reports from the AP, UPI, and Radio Havana, weather reports, and of course Amateur Radio communications. Shortly after that, Bill Henry called me up and offered me a job, as he was impressed by how I had built the kit and soldered the boards. I worked at HAL part time for a few years before heading off to college. My experiences in Amateur Radio and at HAL steered me toward a degree in electrical and computer engineering as well as a rewarding career in automotive manufacturing systems.

NCJ: When did your wife Melody become a ham?

AD4EB: Melody, who's KI4HVV, has always been supportive of my ham radio activities, but I never anticipated she would want to get a license. One summer we were vacationing up in Maine, and I had brought along an IC-706. Melody's young niece and nephew became interested in the radio, and wanted to learn Morse code. Using the radio's sidetone we proceeded to learn the alphabet and spell out some words. Melody thought that looked like fun, so she decided to take a

Technician class and passed the exam in 2004. She is not active, preferring to spend her free time on art, as she is an accomplished artist specializing in landscapes and fine art oil paintings.

NCJ: How have your ham radio interests evolved?

AD4EB: One great thing about this hobby is the many different aspects one can engage in. In the past, my interests have varied from rag chewing, DXing, satellites, digital modes, and even meteor scatter. But my main passion has always been Morse code.

My first contest experience was ARRL Field Day back in 1972, where I helped dupe check at W9YH, the University of Illinois club station. Early on I was never very interested in contesting, but the bug began to nibble starting 15 to 20 years ago. I was one of those very "casual" contesters. In a typical contest I would log 25 to 50 QSOs on the back sheets of my ARRL logbook, and that would be it. I never considered sending in a log. Most of these contests were RTTY, and I was using MMTTY at the time.

NCJ: What other contest activities led to your current radiosport focus?

AD4EB: Well, then along came *N1MM Logger*, written by Tom Wagner, N1MM, and his development team. That was a game-changer for me. It made contesting fun and easy, and soon I became more proficient. In 2004, I joined the Tennessee Contest Group (TCG), then headed up by Kirk Pickering, K4RO. This provided me with a great group of mentors and increased my motivation in radiosport. The TCG had a club award called the "Most Radio Active" amateur, presented each year to the member with the highest total number of contest contacts. It was pretty much always won by a local ham I had not met — Don Binkley, N4ZZ. In 2005, I decided to try giving him some serious competition. Just about every weekend that year was spent with BIC, trying to keep up with him. We were neck and neck, and I ended up with 35,805 QSOs accumulated in 61 contests. That was enough to win! Don and I have become great friends since that battle and now enjoy working together especially as mobile contesters.

NCJ: When did you catch the roving bug?

AD4EB: Ted Bryant, W4NZ, and Don are most responsible for getting me involved in mobile contesting. Ted had done this for years and had Don join him for a mobile contest. They both kept telling me how much fun they had and twisted my arm to give mobile contesting a shot. In 2009 we set up our Pontiac Montana van for contesting, and Melody, Don, and I did the Tennessee QSO Party (TNQP). The three of us picked up second place in that contest, and we were seriously hooked. Since that contest, we have done around 22 mobile QSO parties, about half multiop with Don — Tennessee, Alabama, and Georgia — and the others a single op — Texas, Florida, and Illinois. The 2000 Montana van now has 265,000 miles on it and is going strong.

NCJ: What are your favorite contests?

AD4EB: My preferred mode is CW, so naturally I enjoy the ARRL November Sweepstakes CW and the North American QSO Party CW contests. Now that I am retired, my favorite contests are the Wednesday CWops mini tests (CWTs). They have great participation, high rates, and provide a good opportunity to work on improving my SO2R abilities. They also provide a chance to encourage new potential CW contesters.

NCJ: What is your current mobile setup?

AD4EB: My current mobile rig is an Icom IC-7600. On top of the Montana



The mobile antenna farm for AD4EB's rover activities.



The roving team ready for departure in another QSO party.

van are two Hustler verticals with 55-inch masts and interchangeable coils. During the day, the front mast has 15 and 20-meter coils attached, and the rear mast has a 30-meter coil with a top hat for 40. During the late afternoon/evening the front coils are removed and replaced with a 60-meter coil with a top hat for 80 meters. Ted suggested using these higher-frequency coils with capacitive top hats, which make the antennas a little shorter without much effect on performance.

We run *N1MM Logger+* on an older 17-inch laptop. Interfacing to the radio uses a dual-port USB-to-serial converter, an Icom CI-V converter, and a simple homebrew interface for the PTT and CW keying signals. A 12 V dc-to-ac inverter is used to power the laptop. I use Bose noise-cancelling headphones, which re-

ally help to block out the road noise.

NCJ: Can you give an example of an ideal mobile contesting rig?

AD4EB: Any rig that with good filters and an effective noise blanker will do a good job. Having a decent spectrum scope display on the radio helps quickly find clear frequencies. But more important than the rig, all the equipment must be well grounded.

NCJ: Can you offer advice on route planning and logging tools?

AD4EB: I think that route planning and execution are one of the keys to our success in mobile contesting. Very often I will spend a full week before a contest evaluating and fine tuning the route. The goal is to operate from as many counties as possible, and, ideally, also staying in each of those counties between 15 and

20 minutes.

Google Maps and Google Earth are used to lay out the route and by trial and error find the best path and places to cross into each county. For counties that we would pass through too quickly, locations are found where we can safely park and wait. Since we use a Garmin GPS in the van, I use Garmin *MapSource* and/or *BaseCamp* to finalize the route. This provides the turn-by-turn directions for the GPS, as well as the estimated travel times through each county. From this information an *Excel* spreadsheet is put together with all the route details. This includes the directions, county line crossing times, how long to stay at the wait locations, where to stop for gas, food, and rest areas. Melody uses this spreadsheet as a guide during the contest.

The final route is downloaded to the GPS. During the contest the GPS shows the minutes to the next county, and as a new county line is approached it beeps and shows the county abbreviation. The GPS also logs our actual track. This log comes in handy the following year when comparing our planned route to the route and the wait locations we actually made.

Route planning can be rather tedious. Chuck Sanders, NO5W, has developed software tools that have automated and simplified much of what I do manually. You may want to look at his tools when planning a mobile QSO party; they're free. I utilize his county line overlays when using Google Maps.

NCJ: What roles does Melody have in your contesting activities?

AD4EB: Melody's primary role is driver, which is really key to a successful mobile contest. Safety is of utmost importance,

and she is a very defensive and steady driver. I suspect very few spouses that would singlehandedly drive their husbands around for more than 1,000 miles in 2 days so they could play on their radios. She is also a great cheerleader and helps make contesting fun.

Melody works hard to keep us pretty close to schedule, often to the minute. Stations that use our estimated county line crossing times benefit from working us first, before the pileups begin. Additionally, she notes problems and errors that occur on the route and suggests changes for the future.

NCJ: What are rover strategies and best practices? How have these changed over the years?

AD4EB: As a rover, rate is king, and I run pretty much the entire contest. In the more popular QSO parties, rates often exceed 200/hour. Maintaining these rates is highly dependent on the selected route, because in any long-duration counties, rates can drop off to a trickle. So, a best practice is to keep refining the routes, trying to find the shortest paths through each county with decent roads and speed limits. The more counties, the better, but making sure to stay in each one at least 10 to 15 minutes.

As far as multipliers go, rules vary from contest to contest and must be taken into account when deciding what bands to operate and for how long. For example, in the Texas QSO Party, multipliers are counted only once, regardless of band or mode. In the Tennessee QSO Party, multipliers are counted per band, so it is crucial to spend sufficient time on every band possible to get the multipliers. Some state parties, such as Texas, now allow

mobiles to operate at county lines, working multiple counties per QSO.

A welcome change over the years has been the Reverse Beacon Network (RBN). It has made it much easier for home stations to find the mobiles, especially when signals are weak.

NCJ: What are some important safety considerations for rovers?

AD4EB: That is where Melody comes in. I don't really have to worry much about safety when she is driving. She never gets in a hurry, and is always alert at the wheel. If she were to get overly tired, I know she would pull over and take a quick nap rather than risk an accident.

When laying out the route and timing, the Garmin mapping software has configurable driving speeds. I typically use 65 on interstates, 55 on major highways, and between 35 and 45 on other roads, which is below posted speed limits. We will not make it through as many counties, but it is safer this way, because we never have to hurry. We also know we will automatically get back on schedule eventually, if we should fall behind.

NCJ: How do rovers decide on mode selection in multimode events like state QSO parties?

AD4EB: I prefer operating CW when mobile, and I have only tried multimode in one QSO party without much success. Our Hustler antenna setup has a very narrow bandwidth on 40 and 80, which makes it rather impractical to operate both CW and SSB. Those who use screwdriver-style antennas would be more capable of multi-mode operation.

NCJ: Why is CW your preferred mode?

AD4EB: It's much less tiring and easier to work the pileups. It seems there are more stations in these contests running CW than SSB.

NCJ: What is your favorite contest for mobile operation?

AD4EB: My favorite single-op mobile contest so far was the 2019 Florida QSO Party, where we racked up 3,121 QSOs in 20 hours, and Melody and I had a great vacation in Florida afterwards. It is also nice to share the fun with another operator like Don, and all three of us really enjoy mobile contesting in our home state during the Tennessee QSO Party.

NCJ: What's the biggest thrill for a mobile contestator?

AD4EB: The biggest thrill for me is when we are in a highly sought-after county, and a huge pileup develops. It is like being on rare DX island and really gets the adrenaline pumping.

NCJ: What recommendations would you have for fixed stations when working mobile stations in a contest?



AD4EB's mobile setup: Note the detailed itinerary for Jim and Melody.



Jim operates the 2019 Texas QSO Party

AD4EB: Do a little research online before the contest. Check the QSO party websites and find out what mobile stations will be active, their modes of operation, and what counties they will be in. Look them up in QRZ.com for additional useful details, such as county line crossing times. Also, you may find that some mobile stations will be trackable

using APRS.

Chuck Sanders, NO5W, turned me on to APRS during the 2019 Texas QSO Party. He recommended I set up my phone with an app called *APRSdroid*, so our position could be monitored on the APRS.fi website. Chuck set up a link on the Texas QSO Party web page, which displayed all the mobile stations using

APRS, their planned routes, county lines, and current APRS locations. I am sure it was really useful for those who were aware, and I plan to continue using APRS in future contests.

NCJ: What does mobile contesting offer for casual contesters and HOA-restricted hams?

AD4EB: If the casual contester happens to be interested in county hunting, then working mobile contesters can help get new counties quickly. It can also be good practice on learning how to bust through the pileups.

For HOA-restricted hams who want a big boost in their contesting results, then going mobile may be the answer. It's not difficult to set up a vehicle for mobile HF operation. For many years I just used a simple Comet mag-mounted HF antenna on the vehicle's roof with excellent results. Give it a try, you will be amazed at how much fun you can have.

NCJ: Any final thoughts?

AD4EB: I would like to thank the people who work behind the scenes managing these QSO parties, the sponsors, and all the operators who take the time to seek out and work the mobiles. But most of all I want to thank my wife Melody for being such a trouper in helping me enjoy and participate in this exciting type of radiosport. I could not do it without her.

And, thanks, Fred, for letting me talk about some of my mobile radiosport activities.