

Letter from America

Summer 2005 Road Trip Report

Vacation and the three things I love the most

By Mike Josi W2/M0HSX

Hello from W2/M0HSX. It seems I am finally settling in and as the house improves so does the time allocated to my hobbies, (at least I hope so). While we have still some way to go and only three rooms are decorated (our office, the radio-shack and our family room/bar – please note the implied priorities) our QTH is always open for LEFARS members to visit. There are currently two VHF/UHF antennas operational up on the roof and hopefully the HF vertical will go up this month with a full size 80m Skywire loop planned in spring - more on my quest for antennas, both here in W-land as well as in my M3 days in Essex, in a separate article.

With the summer came not only the heat but also the first vacation since January. Daniela (my XYL) and I decided to take our motorcycles out of storage and head west for a 2-week trip in the Rocky Mountains and up into Yellowstone National Park.

Since we bought a new car just before the trip, it had no radios in it and no antennas on it. The trip from my QTH in New Jersey to Ft. Collins in Colorado is 1800 miles one way. I desperately needed a radio to play with during this long trip that we usually drive non-stop. I thought about installing my trusty FT-857D with the ATAS120 antenna but I also wanted to use APRS on this trip so our family could track our progress across America. (APRS: Automatic Packet/Position Reporting System [1])

I ended up buying a Kenwood TM-D200 2m/70cm dual xmitter with integrated TNC and built in APRS software. I will not go into details as to what I like about the radio and what not, but suffice it to say I prefer Yaesu's or Icom's, but they had nothing comparable. With the new antenna on the roof of my car, I now need 10ft of clearance – using a McDonald drive-thru is now out of the question. I hooked up a mapping GPS, set one receiver to TNC/APRS mode and to my amazement the GPS map started populating itself with call signs of nearby APRS stations!

I did not expect the Radio actually talking TO the GPS, just the other way round. I got an ARRL repeater directory, programmed most of the 2m and 70cm repeaters in memory loaded the bikes onto our trailer and we were ready for our long trip.

APRS worked well for most of the time (output set to 50W on 2m). Even in Kansas where you sometimes have to drive 4 hours on the motorway from one mid-size town (>1000 inhabitants) to another, our signal was picked up by digipeaters and iGates every 40 miles or so.



FM voice on 2m and 70cm was a different story. I was either listening on the local repeaters or the national calling frequency. In a total of nearly 70 hours of driving/listening I overheard only two conversations and no one answered my CQ calls. 2m and 70cm FM was just dead! This was a huge disappointment. Just earlier this week, I came across an article in Monitoring Times [2] where they talked about the complete lack of activity on FM in the USA. Having many hours to spare and remembering the good rag-chews I used to have with M0DWA, then M3HSX and others around my Essex QTH in Billericay, I was very disappointed.

In Ft. Collins, Colorado, about 1 hour north of Denver we parked our car for nearly 2 weeks while we rode our motorcycles for the next 3000 miles. My XYL has a 500cc single cylinder touring bike while I have a 1340cc V-twin Harley Davidson.



Just after we moved to the USA, we lived in a corporate flat for a month. Since there was nothing to do in the evenings (I am not a city person) I built a small 2m transmitter with integrated APRS encoder. I built the frequency agile version (so it can be used in Europe and the US) of the PocketTracker [3].

The device is designed to fit into an Altoids can, connects to a GPS, reads the position, encodes it into an APRS sentence complete with Callsign and optional free text status message and then transmits in on the chosen frequency.



I had hardwired the Altoids can into my motorcycle electrical system which also fed the handheld GPS receiver but I was not sure any Digipeaters would hear me as the radio only delivers 50mW (yes, that is 50 milliwatt) and I was using a rather poor performing rubber duck as antenna. We bungeed a waterproof bag with our clothes to each motorcycle, I turned on the GPS and pockettracker and off we went.



We rode into the Rocky Mountains, northward into Wyoming, criss-crossing the continental divide. The roads were a real joy to ride – very curvy – and there was nearly no traffic. Perhaps a car every half hour to an hour. We drove through Jackson Hole, along the Grand Tetons and after a couple days riding arrived in Yellowstone National Park. Yellowstone is one of my favourite places (the other being the Red Lion Pub in Billerica ;:-).



It feels like a different planet. Boiling lakes, steaming mud, rainbow coloured lakes, steam escaping everywhere and lots of wildlife.



We saw Elk, Bison, Bear, and many others.



Some roads took us all the way up to 14000 feet elevation, which is more than 2½ miles high!



From Yellowstone we rode into Montana, from there we held a westward course into Idaho, then turned south into Utah, and finally back into Colorado. The trip was fantastic. I had my motorcycle, my XYL and some radio gear and nothing but the open road ahead. I was happy.



Some hotels had free internet services and we always checked our track and last heard APRS position [4]. I was surprised to find that my 50mW, 2m radio got picked up many times a day in very remote places. The system worked! I did read later that the Radio Amateurs in many states make it a priority to also cover the remote areas in order to be able to track rescue missions.

Another radio related experience catapulted me into instant hero status with my XYL! We were in a motel in some small and lonely town. There was quite some oil drilling activity going on around town (a small oil boom, the locals told me) and for this reason, the town had been equipped with a mobile phone tower. My XYL called home to her parents quite often, as her grandmother was sick. She had some mobile phone reception in this place but not enough to sustain a call. When she got frustrated with all the aborted calls I took her mobile phone, placed a wooden coat hanger with a straight metal wire close to the phone thus creating a reflector. I was trying to remember how to calculate the distance from the driven element in a Yagi antenna to the reflector given the frequency mobile phones operate on. I slowly turned the mobile phone and the coat hanger and easily found a null with 0 “bars” signal strength and on reaching the opposite direction was rewarded with 3 “bars” reception (4 is the maximum on her phone). She had her phone conversation while I held the coat hanger. I saved her day with my improvised 0 element Yagi! Amateur radio knowledge to the rescue!

After some incredible and beautiful 3000 miles, we returned to our car and loaded the motorbikes up for our 1800 mile trip home. Driving at night, I was playing with the 2m/70cm FM rig in my car. Again, no voice activity, plenty of APRS messages though but not enough to keep me entertained. By coincidence, I found a repeater that was broadcasting what sounded like Air Traffic control QSO's. After listening, I realized that the repeater was broadcasting live NASA voice traffic between Capcom and the Orbiter as the last Space Shuttle mission was coming to a close. (This is expressly allowed for US amateurs). I heard the commander of the Space Shuttle, Eileen Collins, go through the pre-burn checklists to ready the ship for re-entry into the atmosphere. I listen to ground wave them off for one more orbit and then scrub the re-entry in favour of the a next day landing in California. Needless to say, that night of driving passed very quickly. Whenever a repeater started to get scratchy I would just search for the by now familiar voices on a different channel. For at least 600 miles, I was able to listen to these broadcasts of NASA traffic on local repeaters. This made me feel a little better about the apparent lack of 2m and 70cm FM QSO's.

Playing around with this APRS 2m radio I had built myself from a kit, riding my motorcycle in such fantastic places in beautiful weather and finally to listen in on the Space Shuttle communications made this vacation great.

I will plan a similar trip next year but I want to take a HF rig along so I can operate /m with my motorcycle.

Note: Back here in New Jersey I find that nobody seems to be able to hear my 50mW APRS transmitter. Actually even my 50W rig in my car with a pretty good antenna (9dBi collinear) seems to have trouble to reliably getting into a digipeater. I attribute the success I had on this trip with my 50mW transmitter on the motorcycle to the following few points: - in Colorado, they do have digipeaters on mountaintops whereas in New Jersey the area is mostly flat. In Colorado, I drove on mountain roads, high up and with a free view whereas back home most of the area is densely wooded – and finally, out west there are simply fewer signals to jam or cover the weak signal of the pocket tracker.

73

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Links

[1] <http://web.usna.navy.mil/~bruninga/aprs.html>

[2] <http://www.monitoringtimes.com>

[3] <http://www.byonics.com/pockettracker>

[4] <http://www.findu.com/cgi-bin/find.cgi?call=m0hsx-9&terra=4>

