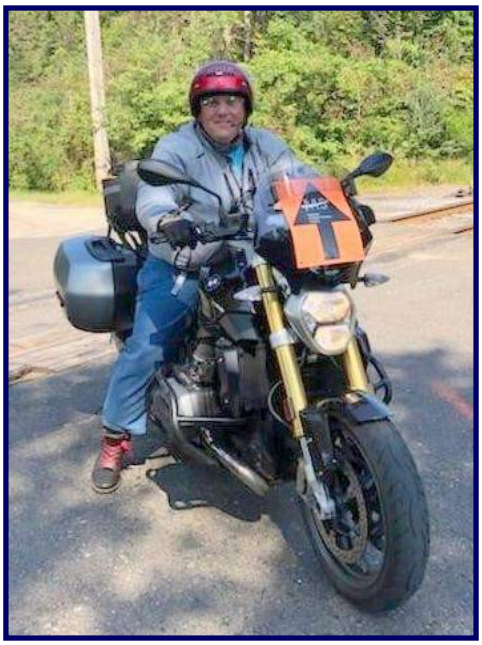
Motorcycle…Ham!

By Herb Dyer, KT2Y



Freshly Baked MC-Ham!
(Photo courtesy Jennifer KD2EYR)

As a motorcycle rider, have you ever watched the Tour de France bicycle race and seen the motorcycle support bikes and wonder what it would be like to ride along with the peloton? For many motorcyclists this resides only in our imagination. But for one weekend a year in South Jersey, a motorcyclist has the opportunity to experience bicycle support first hand. I had the opportunity to ride a motorcycle 2 days in support of the Multiple Sclerosis Society's "Bike MS: City to Shore Ride 2019" event. The MS 150 is one of the society's largest fundraising events, with hundreds of participating bicyclists. A 2-day bike race/tour from Cherry Hill NJ to Ocean City NJ. The first day ride route is from Cherry Hill to Ocean City. For the hardcore cyclists that have the energy for the 2nd day, the ride course reverses from OC back to Cherry Hill for 75 miles on Sunday. There are 100-mile, 75-mile, and 45-mile routes combined on the course and cyclists can choose the route that suits their cycling ability. Cyclists get sponsorship from friends, relatives, employers, and others to raise money to help those afflicted with Multiple Sclerosis. Along with traffic control from local police units in many towns along the route, hundreds of volunteers donate their time and resources for what could be compared to a military grade logistical and communications operation that spans across the state of NJ.

On the route there are **SAG** vans (**S**upport **A**nd **G**ear vans for bike repairs and stranded rider pickup), mobile repair shops operated by private bike shops (Support your local bike shop!) and emergency medical services (EMT's). All these use radio communications on multiple 2-meter frequencies managed by a central command center (net control) located in Ocean City NJ. The US Army would be proud of this communications operation. Ham radio repeater owners/operators donate their repeaters for this weekend and create a linked frequency network that has hundreds of square miles of 2-meter coverage. It's a herculean feat of radio engineering done by expert Ham volunteers. The BEARS system, K2DX, W2FLY, and K3BR are some of the repeaters pressed into duty. There is also an APRS (Automatic Packet Reporting System) team led by Jim AJ3DI & company that provide APRS beacons for the support vehicles that need them.

In addition to the repeater networks, the Amateur Radio community along with the motorcycling community combine forces along the route to ensure rider safety. Amateur radio operators occupy selected checkpoints (called Checkpoint Communicators) and motorcycle Road Marshalls patrol assigned sections of the route (equipped with cell phones to call for rider support). There are many miles of the course that have large gaps in coverage so in recent years a new support division was created combining both Ham radio and motorcycles. Motorcycle Hams! With a Ham License and the proper radio equipment installed, MC-Hams ride the entire course and fill in the gaps that lack the coverage of Checkpoint Communicators and Road Marshalls. MC-Ham motorcycles are equipped with APRS beacons for tracking on the **aprs.fi website** by the central command center. Much as the event is a challenge for a beginner bicyclist, Road Marshall and MC-Ham roles are not for the beginner motorcyclist. It requires a highly experienced motorcyclist to support and ride alongside cyclists that are taxing their abilities to the fullest. Due to the constant stream of visual and audio inputs motorcycle riding skills must be instinctual.

As a first time MC-Ham I joined an experienced team of 4 other MC-Hams and school was in! MC-Hams ride in pairs using a cyclical coverage system of riding 10 miles forward and turning around and riding 5

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miles back looking for stranded cyclists that need assistance. With multiple pairs of MC-Hams staggering their starts and stops, overlapping of coverage can be created along a section of the route that spans many miles. This "10 minus 5" method gets the entire course covered by multiple MC-Ham pairs from start to finish. All MC-Hams and Checkpoint Communicators use a designated repeater frequency to monitor and communicate with net control to call for rider support and checkpoint reporting (support vehicle identification as they pass checkpoints for command center tracking of their locations along the route). MC-Hams also use a simplex frequency for bike to bike communications. Scanning the route for stranded riders, monitoring net control radio traffic, and giving the cyclists as much road space as possible uses experience in both hobbies simultaneously.

MC-Hams traverse the entire route and must be mindful of dehydration and fatigue and must make good use of the rest stop provisions as much as the cyclists themselves do. (Communicators and Road Marshalls are released from duty after all the riders are past their assigned areas, and their snacks are just as good!) There are multiple rest stops along the route, for a quick rest, lunch or other refreshments, and dancing. (ok, the cyclists are too tired to dance, but the DJ's and sound systems are rocking! And yes, I got caught dancing…just a little.)

Since MC-Hams are the most agile of radio enabled support vehicles carrying a tool kit comes in handy as there are more than just flat tires happening when pushing bicycles to their mechanical limits. Mechanical assistance requests are handled by calling net control for a SAG van or Mobil Bike shop. I was able to get a 1 rider back on the road quickly without a SAG call using a Leatherman tool! We are there to support and protect the cyclists however we can.

As a first timer, I thought that repeater network coverage could be handled with my 10-Watt TYT-UV8000E radio (the same one I used last year as a Checkpoint Communicator) but learned on the southern branch of the route transmit capability to open the repeater is spotty. A 25 Watt or better DC powered radio with an external antenna mounted on the bike is the best equipment install. Plans are in place to install my 25W QYT8900 on my motorcycle for next year. (These QYT slice of bread sized radios are well suited for this task as 2 of my colleagues used the 8900D models.). Luckily, my riding partners helped me with this rookie oversight the times I was out of range of a repeater.

One of the most important things to identify is what mile marker on the route you are on at any given location. Even a GPS loaded with a gpx file route file there is not enough information to know exactly at what mile marker you are located. Route mile markers are critical information for calling for support. Using the odometer, or by resetting my trip meter on the bike to zero at a rest stop or specific mile marker, a quick math calc at any part of the route can ascertain your exact mile marker location. The APRS beacon can be used by net control for location clarification when emergency medical services are required as time is critical.

The ride route is on public roads and motorcyclists are fully aware of the dangers of distracted drivers in automobiles. These are hazards motorcyclists experience often and this is a well-covered subject in **Motorcycle Safety Foundation** (MSF) training classes. On this job it's not just you and your motorcycle that needs this awareness, but we need to extend this information processing to include dozens of other bicycles with us also. It's important to keep yourself visible and protect the cyclists who are often fatigued and may not be fully aware of their road surroundings at every moment. MC-Hams and Road Marshalls need to be able to effectively communicate verbally and visually to autos and bicycles converging to help maintain safety for all.

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The most satisfying aspect of this experience is the gratefulness of the cyclists (there are many more, including the complementary OC beachfront hotel and dinner for 2-day volunteers!). The riders are as tough as iron to sign up for this great cause and they know what we bring to the table for their safety. The gratitude they express to us at every opportunity is immensely gratifying. Either on the road, or meeting at rest stops, their appreciation of our work is unlimited. Rarely does one get to combine two "hobbies" for such an incredible impact, and the money raised goes to eliminate one of our most debilitating diseases.

After 2 full days of this event and hundreds of miles of riding I was happily exhausted. This was combined with an incredible exhilaration of the total experience. What was learned, what was accomplished for a great cause along with new friendships made. This does not happen every day!

Thanks to my new friends and coaches : Rick KC2VXI, Rick KC2YFY, Charlie N1CRR, Dennis W2DDS, and Tom KD9BVC from the **Jersey Shore Amateur Radio Society** for all their help and patience breaking in a "Beemer" newbie. Special thanks to Jim AJ3DI, Karl W2KBF, Mike N2SRO, Jim KD2TAT, and Joe DiBartolo KC2SFB, for their help on boarding a new MC-Ham. And thanks to the 139 Hams that stepped up and made this event possible including GCARC member Checkpoint Communicators, Jennifer KD2EYR, Frank W2FJM, Laurie KD2EYW, Sheldon K2MEN, and Bruce KD2LBU. (Sorry if I missed anyone!) Could not be done without you!

If you are a ham radio operator and/or an experienced motorcyclist and have not participated in this event, you are missing out!

Communicator Checkpoint 46.5. (Refreshments courtesy of Tom KD9BVC)

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Rest Stop Party!

Jim KD2TAT with one of Winslow's Finest

APRS Beacon
(Courtesy of Jim AJ3DI)