Hams at the New York City Marathon

At the 1994 NYC Marathon, more than a million spectators watched 29,545 runners, as 400 hams provided communication for the event.

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Marathons are *always* 26.2 miles. Why? Because 2500 years ago, before H-Ts or repeaters, the Greek messenger Pheidippedes ran 20-plus miles from the plains of Marathon to Athens to announce that Greek warriors had whipped the Persian Army. After gasping the news, Pheidippedes dropped dead. More than 40 centuries later "the marathon" was introduced at the first modern Olympics in 1896. Ten years later in London, the race was stretched to 26.2 miles to accommodate the Queen's wish that it finish in front of her box seat at Olympic stadium.

Like a Force of Nature

Today, with more than a million spectators lining the route to watch a seemingly endless stream of almost 30,000 runners pour through The Big Apple's five boroughs, the New York City Marathon early in November may be the world's largest one-day spectator event. As distance running has evolved from a sport of eccentrics to one enjoying mass popularity, the New York race has become the defining marathon. It has also become a defining event for Amateur Radio public service, with more than 400 hams taking part.

"The New York City Marathon is like a force of nature," says Steve Mendelsohn, WA2DHF, race communications coordinator and director of ARRL's Hudson Division. "By mid-morning of race day, there's so much momentum it doesn't matter what anybody does. The race is going to go. With more runners packed at the starting line than there are spectators at most events, the public safety issues are staggering. Amateur Radio is the central nervous system, keeping the whole show moving in the same direction, so everybody stays safe."

Allan Steinfeld, KL7HIR, agrees. A ham since 1959 and an avid DXer, Steinfeld is considered the nation's leading authority on the technical aspects of road running. Having recently inherited the mantle of race director from the late Fred Lebow, he is responsible for the overall direction of the marathon, from day one until the time the last runner crosses the finish line 14 hours after the starter's cannon fires.

"It would be hard to run the New York City Marathon without Amateur Radio," Allan says. "A massive event like this demands coordination. No other communications medium allows one individual to speak efficiently with five, ten or even more people at the same time. The hams who participate offer the further advantage that they are trained volunteers who supply their own equipment."

Since the legendary Lebow first talked New York City hams into participating back in 1976, with one repeater and 30 volunteers, the Marathon hams have developed into a skilled team.

"Today, we have a core group that probably could handle communication for any contingency," says Steve. "It demonstrates to the nation what a well-organized Amateur Radio group can do when we put our talent on the line."

Steve notes that the New York Marathon is also one of the most visible sporting events. The Big Apple is the media capital of the planet, and Sunday is a slow news day. So the chance to watch world-class athletes hammering through crowd-lined urban streets attracts television cameras and newspaper photographers from all over the world. "That visibility helps Amateur Radio," says Steve.

"This is a chance for all of us to shine nationally. Network TV coverage always gives us a pat on the back, and a million or so New Yorkers get to see us 'up close and personal' making a positive contribution to the health and safety of runners and spectators alike."

There's One Born Every Minute

You can't appreciate a marathon until you've run one. So, wits dulled by mid-life crisis, I ran the Marine Corps Marathon (in 1991) then the Boston Marathon (in 1992). To my total relief, I didn't imitate Pheidippides, though I was stiff and cranky for three months afterward. In 1993, letting my ego take command of common sense, I ran in the New York City Marathon. The idea was to write an article for *QST* about the crucial role of ham radio.

When the starting cannon went off, I was lost in a sea of arms, torsos, legs and heads, all shuffling off optimistically toward the finish line in Central Park. I enjoyed equal opportunity to be stepped on and elbowed by people of all nationalities, languages, ages and genders.

If that's what lemmings feel like, count me out. My only clear memory is being passed by a runner dressed in a rubber Gumby suit at the six-mile mark. As the miles went by, I cursed the race, runners, hams, spectators and anybody else I could think of, motivated only by the thought of catching Gumby and killing him. At the 18-mile mark, I passed the soggy, reeling Gumby, now a victim of his rubber suit, and experienced the odd satisfaction of beating a cartoon character. Sadly, the article never got written.

This year, I attended as a spectator, again in search of hams. But this time I was equipped with a borrowed dual-bander H-T (144 to 148 MHz and 420 to 450 MHz) to eavesdrop on the ham radio side of things. I got into town early so I could witness the race from this unique vantage point.

Lesson One: Know What You're Doing

Mendelsohn's crew of volunteers includes an experienced senior staff to coordinate the key communications functions, along with hundreds of additional hams who handle communication and work with community coordinators at each mile's checkpoint.

Mendelsohn attributes his group's success to its understanding that running in a marathon and "running" the marathon have much in common.

"A marathon isn't won on race day, but in the endless miles of training leading up to it," Mendelsohn says. "There's no other event where good luck plays less part, and good preparation plays more. The same goes for the volunteer Amateur Radio crew that keeps the race going. We start planning for next year's race just days after this year's, and we put in a lot of hours fine tuning our plan as we count down until November."

The volunteer hams hail from all over the eastern seaboard, with the majority from New York, New Jersey and Connecticut. According to Assistant Communications Coordinator (and section manager for NYC-Long Island) Rick Ramhap, N2GQR, the group never knows where new volunteers will come from.

"This year we had a group come in from Virginia that brought its own repeater, and some who drove in from Pittsburgh. In past years, we've had hams come from as far away as California to help out."

Rick has developed a training program to help newbies learn what they need to know to handle the task. The presentation stresses the important contribution every volunteer plays in the effort, outlines the communication hierarchy, and explains the role of Amateur Radio in "making the connections" for race officials.

"We work hard to teach our volunteers how to stay at what we call the 'communication layer,'" Rick says.

Hams are cautioned not to become involved in medical emergencies, but to relay information quickly and accurately from qualified medical personnel on the scene. The close relationship is best symbolized by the Amateur Radio Net Control trailer and the Emergency Medical Services trailers parked side by side at the finish line.

The real action begins when a core group of the senior staff meets in the city in October to review assignments and discuss procedures. Steve unveiled a ham radio "game plan" that resembled a plan for the invasion of Normandy. It called for 17 "official" frequencies on 2 meters and 70 centimeters. Several additional frequencies were added at the last minute for hams in key roles for backup in case a frequency became overused.

Senior staffers were assigned responsibilities including net control, "shadows" for key race VIPs, the finish line

area, medical support, park security, family reunion area, press convoy, sweep and trail vehicle operations, the starting line at Ft Wadsworth on Staten Island, and a special event station in Central Park.

Spirits were high, but there was palpable tension and anticipation in the air. Discussion covered everything from dealing with emergency medical personnel to who's got an extra 50 feet of coaxial cable for the net control at the finish line. As the meeting closed, color-coded security badges were distributed to permit access to restricted areas.

Mendelsohn's plan—which could be adapted to other large-scale events—is based on articles he's written on planning and organizing communication for the New York City Marathon that appear in the ARRL's *Special Events Communication Manual*.

One Day and Counting

Setup activities peaked on the Saturday afternoon before the race. Hams scrambled around the finish line area installing scaffolding, flags, bunting, fences, and VIP bleachers.

A familiar flag flew among the many national flags on the finish line scaffolding—none other than the ARRL flag. Several years ago, when the flag first appeared, Mendelsohn told race officials that it was the official banner of the "Australian Road Runners' League." Now it's a fixture that draws smiles from hams and even nonhams "in the know."

A visit to the trailers at the finish line revealed a scene much like a Field Day site, but devoted exclusively to VHF and UHF. A cluster of hams, including Gary Kantor, WA2BAU; Norm Krajkowski, N2GKM; Doug Sharp, WB2KMY; and Brian Justin, WA1ZMS, worked feverishly to assemble the network of linked repeaters. Coax was draped throughout the trailer, and the sweet smell of rosin core solder hung in the air.

The operation used 17 assigned frequencies on 2 meters and 70 centimeters, for both repeater and simplex operation. In the past, much of the work was done on 2 meters, but as that band gained popularity on the East Coast, there were simply too many signals on the band. These days much of the most important communication is done on the less-populated 70-centimeter band. Virtually all of the equipment was loaned by ham volunteers from New York, New Jersey and Connecticut—from transceivers to coax and antennas.

With their "toys," the hams bring their expertise. "All the money in the world could buy all the radios in the world," says Allan, "but we could never buy the talent to use them." Indeed, integrating the vast array of equipment into a workable (and flexible) system required the kind of seat-of-the-pants knowledge that can only be acquired through years of Field Day work and other operating events.

Other key radio sites included the family reunion area a mile from the finish, a net control operation at Ft Wadsworth, which is the staging area adjacent to the start of the race at the foot of the Verrazano Narrows Bridge, and at the police situation room at One Police Plaza in Manhattan.

Radio communication was backed up by cellular telephone, landlines and commercial radio links to cover every communication contingency and provide discrete communication channels when necessary.

What Do 400 Hams Have In Common?

The net operation tied communication together. The next layer was comprised of "ham shadows" assigned to the dozen or so senior race officials directing the action on race day. The shadow's responsibility was to provide for the official's communication needs. An additional nine officials at the finish line area were also assigned shadows, as well as park personnel and security officials, medical personnel, and family reunion area coordinators. A special tactical net in Central Park was controlled by Paul Vydareny, WB2VUK (Eastern New York section manager) and Adam Epstein, N2DHH.

In addition, hams staffed the eight vehicles in the lead convoy, as well as the eight sweep buses and additional

trail vehicles that brought up the rear of the race.

And finally, stationed at each milepoint along the route, ham volunteers in their bright orange caps kept a watchful eye on the flow of the race. Each milepoint featured an Amateur Radio mile captain who worked directly with the community mile captain and other volunteers at the milepoint. Each Amateur Radio mile captain was supported by three or more hams who were there to relay medical, logistics and dropout information.

Logistics Control

"Ham radio plays a major safety role in getting everybody down the course with no collisions or accidents," says Rick, "and it also makes efficient logistics possible. When something you need is 26 miles away and the race is starting in a few minutes, you've got a big problem. But a few guys who know how to get the message through can come to the rescue."

Rick pointed to an incident where special wrenches for city fire hydrants couldn't be found for a three-mile stretch along the course in Brooklyn. Brooklyn uses a different hydrant wrench than the other boroughs, and the wrenches were in short supply.

That turned out to be a big deal, because if there's no water, as heat and humidity increase, adequate water for runners becomes a health and safety issue. The ham assigned to the logistics vehicle that went down the course before the start as a final check was able to call net control, which, in turn, relayed a message to the fire department for wrenches and other supplies in the nick of time.

The Dropout Net and the Family Reunion Net

The dropout net, under the supervision of Tom Raffaelli, WB2NHC, is less visible than the medical net, but may ultimately affect more people, and certainly follows in the best Amateur Radio tradition of "health and welfare" traffic.

Even for native New Yorkers, the Big Apple can be a vast and confusing place, particularly if you drop out tired, cold and disoriented after running 20 miles. It can be no less frightening if you're a family member of a runner who fails to show up at the finish line.

Runners are asked to report to a ham (identified by his bright orange hat) if they leave the race. The recorded race numbers of the dropouts are batched and sent to the family reunion area at the Great Lawn in Central Park.

At the family reunion area, other hams use a copy of runner database to match additional information about a runner, and create an information card with the runner's name, where he or she dropped out, why, and where he went (for example, back to the hotel, to the airport, or even to a hospital for medical treatment). Family members have a place to seek accurate and timely information if a runner doesn't show up at the expected time. That's a welcome service if you're part of the family of a runner from a small town overseas who is visiting New York for a once-in-a-lifetime adventure.

Convoy Control

But the proof of the marathon is in the running and, through the years, hams have provided increasing expertise in managing a traveling circus of runners, camera trucks, and police, emergency and support vehicles that wends its way safely through the cheering throngs.

The race convoy includes numerous precursor vehicles such as press buses, photographers' trucks, the pace car, the timing car and scores of police cars and motorcycles. Bringing up the rear are the dropout buses and other emergency vehicles.

The Dawn's Early Light

On race day, the effort begins before dawn as sleepy hams trudge to their stations along the streets of New York City to staff the 26 mile-marker checkpoints along the route of the marathon. The first buses starting rolling from

York City to staff the 26 mile-marker checkpoints along the route of the marathon. The first buses starting rolling from Manhattan to the staging area at Ft Wadsworth before dawn on the morning of the race.

I was at the library on Fifth Avenue in time to catch the second bus out. As we pulled away from the curb, I caught sight of my first ham radio operator working with the crew of volunteers who coordinated the 135 vehicles that make nearly 300 trips to transport runners to the starting line.

The course begins at the entrance to the Verrazano Narrows Bridge. After pouring off the upper and lower decks of the bridge, it winds through the many neighborhoods of Brooklyn into Queens. From Queens the race wends across the Queensboro Bridge for the longest straightaway of the race, directly up Manhattan's First Avenue to the Willis Avenue Bridge for a brief visit to the lower tip of the Bronx, and then back down 5th Avenue through Harlem to the top of Manhattan's Central Park. The race loops around the bottom of the park and finishes near the Tavern on the Green. All along the route, hams stand watch.

What I Heard on the Radio

I took a position near Steve on the lead press photographers' truck, the vantage point from which he choreographed the progress of the convoy via ham radio. From his position high in the specially equipped Mercedes truck, he was able to tell drivers when to speed up, when to slow down, and call out necessary lane changes to get the lead convoy safely down the course.

According to Allan, who rode in the pace car with former race winner Greta Weitz, once the cannon goes off, ham radio is controlling the entire convoy and the parade of runners that follows.

I tuned through the assigned frequencies to see how hams were performing "where the rubber meets the road."

A report on a local milepoint net typically began with a tactical call sign that identified the location and reporting responsibility of the operator.

"Two-one, water." The operator would exchange information about water supplies (for example) with net control, and then sign off with "Two-one, this is [ham call sign], out." Net controls identified by call sign at least every 10 minutes, along with a brief description of the event. The language was crisp and precise, and marked by an absence of ham jargon.

"Most hams in the area are cooperative the day of the race because they know what an important health and safety role Amateur Radio plays in this event," says Steve. "And, we go out of our way to urge our volunteers to use proper operating procedures at all times."

Steve notes that the Amateur Radio medical nets were particularly busy as the higher-than-normal temperature and humidity (for the second year in a row) punished runners who had prepared for cool November weather. There were hundreds of reported heat-related illnesses—some serious—and two fatal heart attacks. Spotting downed runners in time to render medical aid is one of the most important functions of hams, and if the hams had not been there to provide early warning to medical officials, the toll might have been higher.

As the race proceeded through the five boroughs, the ham groups at the milepoints were easy to spot in their orange headgear. They were a visible reminder of what the New York Road Runners Club press kit calls the "gossamer web of communications that will keep families, runners and marathon officials safe and in touch."

What Does it All Mean?

"Hams over the years have given a supreme effort," Steinfeld says. "Steve Mendelsohn and his team manage to get the best people year after year. They've been trained in communication, but also in what a marathon's about. They can think on their feet, anticipate, and know what's likely to happen because they know what's happened in the past."

Allan says hams around the country can learn much from studying the Amateur Radio activity around the New York Marathon.

"We've been involved in event planning around the country and around the world," he says. "We advise other marathon organizers to reach out to the local Amateur Radio group. Get them involved. It won't involve any monetary outlay. The hams will bring equipment, expertise, and knowledge of how to deal with all the communication contingencies a race is likely to encounter."

The Passing of an Era

The 1994 NYC Marathon was the first to be run without the guiding hand of Race Director Fred Lebow, who passed away in October from cancer. According to Mendelsohn, it was Lebow who challenged the hams to attempt the impossible, and inspired them to achieve it.

Steve says, "every ham who ever worked on the marathon with Fred is a better person for having done so. Fred understood how valuable ham radio is, and gave us his complete confidence. He was a man with exacting standards. So his faith in us was a high honor."

Lebow would have been appalled by any article about his beloved marathon that didn't mention the thousands of runners who ran it. So, you should know that this year, the men's race was a shoulder-to-shoulder battle from the 21-mile mark between German Silva and Benjamin Paredes, two wiry Mexican runners, pursued closely by American Arturo Barrios. Silva won in a time of 2 hours 11 minutes, after recovering from a wrong turn less than a mile from the finish. In the women's race, first-time marathoner Tegla Loroupe of Kenya became, says the New York Times, "the first black African woman to win a major marathon." Finally, 29,535 runners crossed the finish line before race officials stopped the clock and began taking down the scaffolding—and the Australian Road Runners' League flag—for another year. The hams stayed on until well after dark to see the last runner safely in.

Figures

Marathon communication this year was a happy marriage of cellular telephone and ham radio. Cell phones were reserved for private two-party conversations. Pictured here (l-r): Rick Ramhap, N2GQR, and Steve Mendelsohn, WA2DHF.

The ARRL flag just before it was raised at the race finish by Steve, WA2DHF, and Ralph Haller, N4RH. This is the flag that Steve convinced race officials was that of the Australian Road Runners' League, and thus deserving of display.

Almost 30,000 runners jockey for position as the cannon fires to start the 1994 New York Marathon (note the smoke from the cannon).

Race Communications Coordinator Steve Mendelsohn, WA2DHF (l), and Race Director Allan Steinfeld, KL7HIR (r), at the finish line the day before the New York Marathon.

The elite women runners take early positions on the Verrazano Narrows Bridge, high over the Hudson River. The elite men started in the other lane.

