

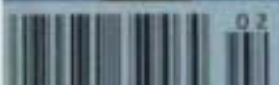
February 1991 \$4.95

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FOR RADIO AMATEURS

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Ham Classes

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Insiders Tell the Real Story



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Cover: Photo by James Boesch WB3DBV, East Greenville PA.

Winter Olympics Torch Run

— a one-year perspective

Editor's Note: In the May, 1980, QST, one participant's view was presented of amateur radio's part in the Winter Olympics Torch Relay Run. Due, in part, to more detailed explanations of the project's complexity and the many amateurs' responsibilities, we believe the story presented here lends a different perspective to and perhaps better captures the spirit of involvement of all those who had a hand in this historic event.

Amateur radio made important contributions last year to the Olympic effort at Lake Placid.

A great deal of traffic handling and commemorative operating took place with the Winter Olympic

Radio Amateur Network (WORAN) and its station, W0RAN. Amateurs also performed admirably dur-

ing the Winter Olympic Torch Relay Run.

We were among the amateur operators who were chosen to accompany the Olympic Torch from Langley AFB to Lake Placid between January 31 and February 8. There were over 1,000 miles and nine days of extraordinary operating, mostly on VHF. It demanded all the skill and combined experience we had in contesting, traffic handling, and high-speed tactical communications. It was something none of us will ever forget, and something the entire amateur community can be proud of.

Early in 1979, the Lake Placid Olympic Organizing Committee (LPOOC) approached the ARRL. They needed experienced communicators to provide reliable communication for the vehicles involved in the Torch Relay Run. The Run had been organized, in an attempt to publicize the coming of the Olympics to the US and to Lake Placid,



Photo A. The beginning amateur operating contingent in Yorktown poses for the obligatory group shot. Standing from left: W1RM, WA3PZO, KB3HF, KA2DBW, WB1ADL (on right); kneeling from left: WB3HWZ, K2AMU, KA2CNN, WB3EOU, WB3LCC, WA2DHF, WB2VUK, K2AV.

s a combined public relations and educational effort. It would be the first time the genuine Olympic flame, kindled in the temple of Hera from the rays of the sun in Olympia, Greece, had been on American soil (the earlier Olympic flames displayed in this country were ceremonial duplicates). Ham radio was regarded as the most appropriate source for trained operators for a number of seasons, not the least of which was the fact that hams, like the athletes, are killed amateurs who sacrificed a great deal of time and money for the thrill of public service contributions and competition.

It was a tall order to fill. Over 75 people in 11 vehicles, some of which would be as far as 100 miles apart, were needed to keep in touch constantly to coordinate their many and varied activities. Each little town on the Relay's route had planned its own ceremony to honor the passing of the torch, and these ceremonies needed to be coordinated with the scheduling, the program, and the safety requirements of the moving caravan within which the torchbearers were to run. This coordination would have been impossible through any medium other than ham radio. Lunches had to be found and picked up, and then the vehicle with the lunches had to find the moving caravan again. Ham radio had to deal with scouting for fuel, with command and policy communications, vehicular repairs, rest-room stop arrangements, and liaison with state and local law enforcement agencies. Literally hundreds of events each day had to be controlled in a coordinated fashion.

Safety communication was our highest priority. With eleven vehicles on

two-lane roads in curving, hilly terrain, allowing vehicles to pass around the caravan became a problem. If the torchbearers stumbled, the entire caravan would have to come to an immediate halt to avoid running over them. Crisp, sharp—and secure—communications clearly were required. Bad weather had to be anticipated—but we were lucky in this potential problem area.

The operators who were chosen to accompany the torchbearers and staff were selected on the basis of their experience in contest operating (which bore many similarities to the type of operating we would be undertaking), traffic handling, and walkathon-and-marathon-type operating. It included many with experience handling communications for the New York City Marathon, including the communications coordinator for that event, Steve Mendelsohn



Photo B. The early-morning arrival of the Olympic flame, during a snowstorm, in a State Department aircraft similar to Air Force One, on January 31, 1980, at Langley Air Force Base.

WA2DHF. The hundreds of amateurs who provided invaluable support communications along the route while the caravan was in their area are regrettably too numerous to be mentioned. The traveling operators were drawn mostly from the upstate New York, northern New Jersey, New

York City, Baltimore, Philadelphia, Wilmington, and southern Connecticut areas.

The runners numbered 52—one from each state plus one each from the District of Columbia and Lake Placid. Evenly divided between men and women, they were chosen from

Literally scores of amateurs and their families along our route helped in various support capacities, performing tasks ranging from repair of broken rigs to transportation of emissary runners from place to place, to donations of equipment for our temporary use, to relay from VHF to HF to maintain our contact with WORAN and Link Nixon in Lake Placid. Although it would be impossible to acknowledge all of those who played important roles in this effort, here are the calls of many without whom the traveling team would have been isolated and crippled.

Maryland, Delaware, District of Columbia

K3AHB	W3BCN	KA3BKW	WA3BPC	W3ENL	W3FA	K3HBP
WB3FOE	WB3GXD	WA3HQX	W3JAC	W3KDD	W3NFS	WB3ENF
K3RA	K3RKU	AE7T/3	W3TCI	W3XE	K3UAV	WR3ABA
WR3AFM/W3RUI				WR3ADH		

Virginia

WA4CCK	N4NK	K8LGA	WR4AAD	W3BBN/4	N4CCF	WD4FTK
KA4FVB	KA4GAV	WB4MAE	K4MU	W4NTG	WA4RBC	WB4SHK
WB4UHC	K4BKX	WR4AFT	WR4BBZ	WB4DNT/R	W4NTG/R	K4VYN/R
W4ZA/R						

Pennsylvania

WA3AOP	N3AYK	WB3ELA	W3NWA	WA3PZO	AG3R	
--------	-------	--------	-------	--------	------	--

and literally hundreds of other hams...

New Jersey

K2ASF	K2ASG	N2BBL	AA2C	KA2CHM	KA2DOH	WB2ZRU
KB2ET	N2GJ	N2GX	AA2H	KB2HM	WB2HON	K2ASF/R
WB2HZR	WB2JHN	K2JJM	AF2L	WB2LCC	WA2MVG	AF2LR
WB2SZI	WB2TZS	K2UL				

New York

N2DU	N2FU	K2GDY	W2GH	W2GN	W2CS	WA2AAU
W2HOW	WB2JDD	WA2JHJ	WA2KDE	WB2NEA	W2ODC	W1BOO
WB2PID	KA2Q	WB2QCJ	K2RJN	WA2RXQ	W2SZ	WB3BPU
KB2T	K2TR	W2TJ	WA1UGE/2	WB2VJC	W1VSA	WB2CFP
WA2WNI	N2YL	WA1ZYV/2	WR2ABB	WR2ACD	WR2ADZ	WB2CJS
K2AE/R	WR2AFS	WR2ALY	W2CXX/R	WA2CZT/R	WB2ERS/R	W2LWX/R
WB2FNV/R	W1KOO/R					



Photo C. One of the Chevy Trans-Sport custom vans used for Ceremonial, Command, and other positions. Having a fiberglass body, it required our own ground-plane metallic base with 19-inch radials attached to the body with duct tape.

among 6000 applicants on the basis of personal interviews, essays, and their running ability. They ranged in age from 15 to 54 years old. They were organized into four teams of 13 runners each, with two teams assigned running duty each day and the two off-duty teams given emissary functions. The emissaries traveled ahead of the caravan making public appearances at churches, schools, and service and social clubs, speaking about the Olympic spirit and the Relay Run itself. Officially, each runner ran between three and five miles each day, but many frequently ran alongside the torchbearer or ran after we stopped for the night.

Like the hams, the runners made the effort required for the run at their own expense, receiving only a uniform, meals, and lodging for the duration of the run and of the Olympics. Additionally, and perhaps most prized, were the Olympic participation medals we all received, along with certificates of appreciation. Runners and hams alike either took extended vacation or leaves of absence from their work

to take part in this rare opportunity. Any distinction between the two groups soon faded in view of the shared excitement and sacrifice and was further eroded as the runners watched the amateurs in operation and the hams watched the runners in all weather, on all terrain, bearing the torch to Lake Placid. A great, solid bond of mutual respect developed after only a few hours.

Following personnel selection, there was a period of discussion and practice. The runners got together in Lake Placid in the summer of 1979 to practice the technique they would be using and to get to know one another better. The hams weren't so lucky where lead time was concerned. After an initial organizational meeting on the hard, cold floor at Rockefeller Center in Manhattan—to which many drove long distances—we practiced with a small group of the runners. This practice was a test of the last day of the Relay Run from Fort Ticonderoga to Lake Placid on the Albany East route, with a day-long recap and critique over the weekend of December 8-9.

This full-scale test was invaluable for the technical and organizational lessons we learned there. Without it, we would have been ill-prepared for the coming trial.

We learned that because of the volume of traffic on the circuits, we would have to plan for two nets in simultaneous operation. We chose 2 meters due to the availability of equipment, although later we were to use 220-MHz simplex for part of the operation. One net would provide a low-power circuit for internal caravan safety and coordination on simplex. The other would provide a circuit for the external group of vehicles (described below), using higher-powered rigs and, where possible, using repeaters. Because of the proximity of the two nets in the same band, there were, inevitably, problems with desense and FM sideband noise.

Luckily, Dick Frey WAZAAU joined the practice group at the last minute. A competent home-brewer and technician, Dick constructed solutions to the desense and sideband problems in the short period between the practice and the real thing. He planned and built a narrow passband filter—a very sharp one—with a bandpass from 144.250 to 144.450 for use with the low-power internal frequency transceiver. Additionally, he procured and critically tuned a resonant cavity setup for use with the external net high-power transceiver, to notch out the 144.2-144.5 band. In use for almost three weeks under very harsh and demanding operating conditions, they performed flawlessly and were the ideal answer to our problems. Without Dick's effort, his advice, oodles of his own equipment (220- and 2-meter rigs and antennas), and

his investment in time, gasoline, and money in this effort, it would not have worked out.

Dick's equipment was used with two UV3s loaned from Drake for the event, both of which performed perfectly in the demanding environment. Side by side, both on 2 meters, just 18 inches and 1½ MHz away from one another, with only 3 to 4 feet separating antennas on the roof of the vehicle, intermod and desense between the two rigs was so insignificant as to be almost unmeasurable. We were very pleased with both Dick's filter setup and with the performance of the Drakes. That company was also generous in the loaning of a TR7 with matching vfo and transmatch for use in our HF setup, described below.

Other companies also loaned various items of equipment for our use. Kenwood generously loaned four of their new TR-2400 synthesized handies with chargers. Tempo came through with four of their dependable S-1 handies with chargers, and Larsen loaned at least a dozen quarter-wave mag-mount antennas for 2 meters. Needless to say, synthesized equipment was the order of the day, and we all brought along what we owned if it could be put to work in the effort. Longer-range vehicles needed 5/8-wave antennas, and they were supplied by members of the team who owned them. Mobile rigs ranged from Heathkit 2036s to Icom, Yaesu, KDK, and Tempo equipment. One Yaesu FT-207R also made the trip in the hands of KA2DBW, and in the police liaison position it performed flawlessly on 75% charge, 200 mW, 15% duty cycle for 8-10 hours.

The eleven caravan vehicles—and their corresponding communications



Photo D. The arrangement of the caravan during a practice, showing the order of the vehicles, with the torchbearers visible in front of the second (Command) vehicle.

positions—all had specific duties to perform. They were organized into an internal and external group. In order of their travel, the police vehicle came first. (We called it "PD" on the air, although we identified every ten minutes, the circuit was so busy that we referred to vehicle designations rather than callsigns.) Usually PD was a state police car in which one of our team members was placed to provide liaison between the caravan and the state police and, through their communications system, usually with local jurisdictions, also. This vehicle changed periodically, of course, not only at state or barracks boundaries, but also as different patrolmen were relieved, since our hours far outlasted their shifts. This fact, and their prohibition against the installation of any electronic gear not under their control, required the use of an op with an HT. In some states, getting the state police to agree to our placement of an op in their vehicles was like pulling teeth. But for both the liaison function—indispensable in itself—and for safety reasons, it was a requirement of the Director of the Run and, ultimately, every jurisdiction agreed.

Usually, the vehicle behind PD was the Pace vehicle. Its personnel were responsible for keeping the pace for the very tight schedule under which we were operating and for navigating the course from a detailed computer print-out. Although the runner set the pace, the personnel in this vehicle could suggest, through their PA system, that the runner pick up the pace or slow it down. They communicated the position by checkpoint number to the Director at every checkpoint and gave speed instructions to the other vehicles. They also were responsible for the calculations of ETAs at upcoming events. All of this, of course, made for a rather high volume of traffic on the circuit both to and from this vehicle.

The torchbearer with his/her accompanying entourage, often including local guest runners and, sometimes, flagbearers (and even the occasional ham!), followed the Pace vehicle. Here a very delicate compromise had to be struck. Barred from Interstates because of our 8-minute-mile pace, we were traveling on two-lane roads. Oncoming traffic, only a few feet to the runners' left, sometimes



Photo E. From left, WA2DHF and KB3HF after about 30 hours as net controls.

passed slowly, rubbernecking, but more often apparently was oblivious to our slow-moving caravan despite the rotating police beacons. We were moving closely together, and off as far to the right as the shoulder would allow, but a great deal of traffic was backed up behind us most of the time. We frequently were pulled off the road by the police (when there was room to accommodate the entire caravan) to allow this traffic to pass, but we had the frequent problem of the maverick crazy driver who decided his need to get around us was greater than his own life's value.

Usually, it seemed, these maniacs pulled out on curves. Soon discovering that our long, tight caravan and oncoming traffic prohibited their passing, they would abort the pass halfway into it and try to squeeze into our group. We could usually accommodate these turkeys with minimum angst; more dangerous were the times when the driver would use what to him appeared to be the only available clear spot in the caravan—which, of course, was occu-

pled by our torchbearer.

For this reason, we kept the Pace and Command vehicles, with the runner(s) in between, as close as possible. This brought up another safety problem: If one of the runners stumbled, the Command vehicle could (and on at least one occasion almost did) run over the people involved. A delicate balance existed. Our best drivers followed the runner, and transmissions on the internal net were kept as short as possible to allow immediate notice of either unauthorized passings or of stumbling runners.

The Command vehicle served many functions. With a customized fiberglass Trans-Sport body on a Chevy van chassis, primarily it was transportation for the Technical Director of the Relay (or, on the Albany West route, the Assistant TD) for whom we provided eyes, ears, and mouthpiece. The two nets were controlled from this vehicle, which contained the two UV3s, cavities, filters, amplifiers (to 100 W for the external transceiver), and HF gear, on a table in the center of the rear



Photo F. The first torch hand-off with full ceremony in a hangar at Langley AFB.

area of the van. The NCS operators sat in what we called the "Hot Seat" for the obvious reason that this was the most demanding of positions. They coordinated the movement of all caravan vehicles, relaying pertinent information to and from the TD, exchanging information and providing relays between the internal and external nets, and frequently (but inadvertently) by necessity acting as the TD in his absence, making snap decisions.

They were assisted by a rather complex home-brewed audio setup through which either op could switch in either or both of the nets using stereo cans. They also used a magnetic chalkboard with "shrimptoats" to keep track of vehicle placement. The hot seat was claimed by five operators for the entire run, who rotated into and out of the different nets. They were WA2DHF, WTRM, K2AV, KB3HF, and WA2SPK. By necessity, they frequently had to stay glued to their positions for twelve to sixteen hours without a break—sometimes longer—and had to be dragged out in burlap sacks and resuscitated with smelling salts.

Big Macs, Whoppers, and

other assorted junk foods also served as first aid on the relay. Hams are, for the most part, notorious for their eating habits, and many diehards on the team refused to partake of the available fare. This consisted of oh-so-healthy vegetables, fruits, soups, lots of prunes, and, above all, "fiber." All of this was, of course, concocted with the needs of the runners in mind and included nary a shred of red meat for days on end. The chant which most frequently broke down net discipline on our circuits was "Junk food! Junk food!", along with the sound of growling abdomens in the background. Luckily, the frequency of the internal simplex net was a closely guarded secret, ostensibly for reasons of avoiding QRM, and this was not heard by the general public. We hope!

Command was, to say the least, crowded. With all the equipment, wiring, papers, and human beings (up to seven at a time), it became the hell-on-wheels of the caravan. There were heater problems in the vehicle, to add salt to the wounds, and the net controllers and staff in the vehicle remained bundled up throughout their shifts. Upon entry to this vehicle, one was imme-

diately reminded of an igloo, smell and all.

Two Pace Arrow RVs served as transportation for the 26 athletes running each day. Although their designations changed during the Relay, they were known basically as the on-duty "Runner" and off-duty "Walker." Each carried 13 runners and took four shifts of on-duty and off-duty time each day. Walker was for the resting runner crew and occasionally would travel in the caravan (behind Command), but usually would go ahead to a designated checkpoint and wait for the caravan to catch up, at which time its designation might change and its crew would go on duty. The communicator in this position had an easier time than most, and it was frequently used as a resting slot for the radio ops. He or she was responsible for the relay of the next team exchange checkpoint, among other minor duties.

Runner was kept busy exchanging running teams with Pace and jumping ahead several miles to the next exchange point. The op in Runner was kept rather busy coordinating personnel exchanges, getting a fresh team ready and out, taking head counts of those coming aboard, keeping the athletes informed about ceremonies and schedules, and communicating with Command during the leapfrogging, for safety coordination.

Walker usually was followed by a tail PD, sans operator, and was sometimes followed by components of the external vehicle contingent temporarily traveling as part of the internal caravan. If there were local hams traveling with the caravan to help provide local liaison and relay on HF, their vehicles would follow the last of the official vehicles and precede the tail PD

escort. This happened frequently, and the help from local hams was invaluable to the effort.

In the external contingent, the Convoy vehicle, another Chevy Trans-Sport van, provided transportation for the Convoy Director and the Food and Accommodations Coordinator. They were responsible for the procurement and conveyance of our meals and the advance work concerned with our accommodations. We were fed well (the above comments notwithstanding) with four square meals or more each day—about one meal every three to four hours—and usually there were lots of leftovers. The fare was difficult for some of us—especially those from NYC used to munching on famous Nathan's hot dogs—but it was thoughtfully prepared and it even, ah, well, it was good! Liking carrots can be learned. And rosy cheeks are cheery. Many of us now have healthier eating habits (and a few of us have even taken up running seriously). Often, the food was prepared by generous residents of the towns through which we passed, organized by church groups, Rotary, Elks, or Lions clubs, or, on some occasions, the military. Sometimes it was purchased by the Convoy Director out of her budget; on only one or two occasions did we have to pay for it ourselves.

Most of the meals were arranged for weeks or months in advance of our arrival. Sometimes we were on such a tight schedule that the lunches were passed in through windows by volunteers running alongside the caravan. The Convoy vehicle became, after a few days, a sea of sloshing soup and vegetables on the inside. Smelly and fun, but it threatened to short out the ham gear in-

stalled there! Hip boots and rubber gloves were in order, especially during the first two days which were non-stop for over 40 hours with no opportunity to clean up until after more than a dozen different meals. The convoy crew, during that first leg from Yorktown VA to Baltimore, affectionately called themselves the "Go-Fer Squad" and almost seriously considered never eating again.

A large European-style touring bus transported half of the running team—the 26 not running on any particular day—to the next day's overnight stop, ahead usually by 85-100 miles. Although for the first day an operator was placed in this position as a communicator, it was found not to be necessary. This vehicle also was responsible for transporting some of the emissary runners to their speaking engagements or ceremonies further up the route of the Run.

The event engendered a great deal of interest by the media, and we anticipated a certain amount of need to accommodate its representatives. What we were unprepared for was the amount of coverage we were to receive. It seemed to be due to the connection the public felt with the symbol of the international Olympic flame and patriotic sentiment, even nationalistic fervor, generated by the USSR's invasion and occupation of Afghanistan and the holding of American hostages in Iran. The media, apparently as taken by surprise as we were, quickly realized the sensational side of this story and it became the content of—and set the tone for—most of the articles written and programs aired. Of course, this was commonplace during the Olympics themselves, especially where it concerned the incredible victory of our hockey team

over the top-rated USSR team, but our passage marked the first expression of this popular ground swell of opinion.

We tried to prepare for this onslaught with another Pace Arrow set aside especially for the purpose of public relations. From this vehicle, which was usually ahead of the caravan by as much as three or four hours, press kits were dispensed, questions were answered, and interviews were arranged between the runners and the media representatives. The communicator here acted as a relay for specific questions directed back to the caravan and the TD on the external net and for relay of ETAs and names of the runners involved at any particular time from the TD to the PR staff. Because of demands from the press passed along to the operator, this position frequently became rather high-pressure and busy, especially in the larger metropolitan areas.

Although many attempts were made to include word of the involvement of amateurs and amateur radio in the event, the PR staff was not sympathetic to our requests for publicity regarding our support. This attitude did not reflect the general sentiment of the runners or the rest of the Relay staff, fortunately, but it did mean that many opportunities for positive PR regarding our role were lost to personalities. There was little notice of our effort by the national or local media. WA2DHF appeared on the front page of the *New York Times* on February 5, but neither the caption nor the story included his function, his role, or his name, or identified that hand-held, funny-looking box with the rubber gizmo. Our uniforms, however, did include the ARRL logo and a large patch produced for the event with "Olympic Torch



Photo G. KA2DBW on the job in her hometown, New York City, on February 4.

Relay Run" on the top and "Amateur Radio" on the bottom in large block letters. All of the vehicles bore "Amateur Radio" placards in every possible window.

Many of the questions the media asked involved the technical aspect of the torch itself. It was a specially-designed instrument constructed specifically for relay runners by an American of Greek ancestry, Jim Kalamaridis. Some 132 of the devices were custom-manufactured for the event. Charged with propane, they had a life expectancy of about 40 minutes per charge, and, theoretically, could withstand a wind of 80 mph. In practice, however, we had frequent flameouts, and the original flame was maintained in a series of miner's lamps, some with a hole drilled in one of the glass panels to accommodate a sparkler to transfer this original flame from lamp to torch. Each lamp had a life of about four to six hours per propane charge, and Jim and an assistant were kept busy almost full-time simply charging and maintaining the torches we used. The flame we saw in Lake Placid, which was trotted up to the huge gas flame bowl at the ceremonial stadium by Chuck Kerr, one

of the torchbearers, was the very same flame lit in Olympia weeks before and carried by our combined team up the coast of the US. If the flame went out, it was relit from one of the backup miner's lamps; we didn't just flick our Bics.

Wondering how to get an Olympic torch across the Atlantic? The Air Force lent one of the aircraft used for Air Force One—a KC-135 (military designation for a Boeing 707)—for use in conveying this most honored of guests to our nation. Inside the plane, sitting in Jim Kalamaridis' lap and on the floor around him, were the six miner's lamps, all burning with the flame lit at the temple of Hera. The plane landed at Langley AFB on the morning of January 31 and taxied to a full multi-service Honor Guard in a huge hangar, in the midst of a snow-storm.

The Torch Arming Vehicle (aka "Torch" on our circuits) was used to transport the torch technicians and their gear for the long and grueling trip. After dark, this vehicle could be recognized by the light of the frequent spontaneous propane flares issuing from the open doors of this Santana van—reminiscent of the aurora borealis. The commu-



Photo H. In gratitude, the amateurs were permitted to carry the torch on the frosty last day, a few hours outside of Lake Placid. Here KA2CNN is carrying the flame.

nicator in this vehicle, besides being preoccupied with seeking air free of the stench of propane, was responsible for notifying the torch technician in case of a flameout or torch failure.

It seemed as though every town, no matter how big or small, had some sort of welcoming ceremony prepared for us. This usually involved a high school band attempting to play the rather difficult Olympic anthem and always botching it. We heard that piece in every possible key, in every possible arrangement—even with a disco flourish. This was followed by speeches—sometimes interminable—from local dignitaries or politicians, and then words from our ceremonial coordinators describing the caravan, the function of each of the passing vehicles (especially helpful for the often-confusing passage of the advance vehicles), and an attempt to educate the crowd about our safety requirements, because the crowds were frequently large and under-controlled and we were coming in in large vehicles.

This usually was followed by a short speech from the incoming or out-

going runner, and then the torchbearer would arrive, make a handoff, the caravan would continue, and, perhaps, the incoming runner would stay to speak a little more as the caravan moved out to the next stop. We had been informed of, and could plan for, about half of these events. The rest had either been organized by groups or communities at the last minute or were spontaneous gatherings of people. Frequently involving many hundreds of people, they were completely without any authoritative control and overran the roadway. The caravan drivers, the TD, the staff, and most of all, the runners, needed to know what they were getting into on these occasions. Somehow, these unplanned crowds had to be quieted, informed, organized, moved back, and opened up for the arrival of our caravan.

The runners had a special need to know what they were getting into because of a phenomenon we did not anticipate. They suffered from a certain amount of "tunnel vision" due to the exertion, the weather, the excitement, and the adrenaline. They frequently needed to be led



Photo I. WB2VUK with Brooke Newell, one of the ceremonial coordinators, at a ceremony site in upstate NY, using one of the Kenwood TR-2400s to mike her as she describes the layout of the ceremony to the TD in the caravan a few miles away. Note the collapsible whip antenna which was used instead of the rubber ducky for added range.

in by another runner at the ceremonial site, or they would trip on a curb or bump into a member of the public in the crowds. Their torch also was a fire hazard, and holding it up high gave a runner an effective height in excess of 9 feet. The job of the ceremonial coordinator was to pre-brief the caravan from an advanced position relative to obstacles, pathway, crowd quantity and mood, clearance, fire hazard, etc. This information was passed along to each driver in the caravan and also given to the runner by PA from the Pace vehicle. Because of the involvement of the ceremonial coordinators with the local groups sponsoring the ceremonies, the job of sizing up the ceremony situation frequently fell to the communicators themselves. The communicator also was responsible for the relay of ETAs to the local groups so they could plan the timing on their stages.

After the caravan and torchbearer had passed through the location of the ceremony, after it was all

over, the ceremonial vehicle driver waited to collect all of the personnel. Then it was off down the road to catch up to the caravan, and—often with a very high-speed police escort—to leapfrog the caravan and make the way ready for it at the next ceremony site. On our busiest day, there were 21 such ceremonies to coordinate. Although not the most difficult position, it was a high-pressure communicating position and perhaps the most exciting, since the op was able to view the ceremonies themselves and some of them were quite well put together.

One problem the personnel in the ceremonial vehicle did not have was that of the visual and psychic effects of day after day of travel at 7 or 8 mph. We all functioned under conditions of great pressure and constant demands. Breaks were few and far between, and we were almost constantly in a state of swollen derrieres and bladders. Hallucinations were one result of the slow movement

of the passing panorama (which also made for prolonged nulls on VHF); some of us imagined having seen trees grow. Radio traffic was constant and exhausting, of a nature only contest operators may be familiar with, or those with military backgrounds. Calls for the particular vehicle for which one was communicating always seemed to come during that once-in-an-hour period of dropped guard. The circuits were so busy that even a few seconds of dead air were cherished as the most precious of gifts.

Because of the unplanned ceremonies, constant changes in plan, variations from the published Technical Manual (TM), and inaccuracies in the TM itself, on the first day out W1RM nicknamed the entire operation "Rollerball." Those who've seen the motion picture will know what we're talking about: It describes a game in which the rules change every quarter, getting tougher and more violent. The entire script of the operation literally was changed from minute to minute. So pervasive was the use of this nickname that WR3AFM, the home repeater of one of our NCSs, KB3HF, changed its ID for us. When we arrived in their area, its CW ID was spelling "Welcome Olympic Torch de WR3AFM." When we were awakened the next morning and tuned in the repeater again, it was signing "de WR3AFM Rollerball." The NCSs referred to themselves after that first 40-hour stretch from Yorktown to Baltimore as "Rollerball Control."

In the December practice, the HF setup received a limited workout with K2CDX, the coordinator for W0RAN, in the Lake Placid area, and it was thought that we would be using HF links directly from the Command vehicle to W0RAN in

Lake Placid during the relay. As it turned out, this equipment was hardly ever used because of the huge volume of tactical and safety-related traffic in the Comm van, the long operating hours, because of Rollerball, and because of the relatively low priority of traffic for HF. Instead, operators from the local area traveling with the caravan or in contact with the caravan on the external VHF net served as VHF-to-HF relays. Dozens of highly competent ops were involved in this particular effort. Without them, the caravan would have been virtually cut off from the LPOOC except for the overworked and extraordinarily unreliable mobile telephones installed in the Command and PR vehicles.

Working the HF link with W0RAN required the patience of old Job. We were bothered constantly by all the many and varied incarnations of the persistent QRMer, from hams who offered to help and ended up hindering (some have to learn to listen more and transmit less unless they're certain they can help), to ops seeking commemorative contacts during traffic operations, to real "sickies" with swishing vfos and persistent strong carriers. The patience, persistence, and experience of HF ops involved did prevail, however, and the traffic was passed.

Warren Gibson WA4CCK provided just one example—perhaps the most dedicated example—of the dedication and sacrifice so many of the local hams offered. Experienced as a traffic handler on many nets, he joined us in Yorktown as the amateur coordinator for Virginia, driving a station wagon full of a rather extensive HF and VHF setup. He accompanied the main caravan for its most



Photo J. Two of the torchbearers on the road, somewhere in upstate NY.

trying days, the first ones, from Langley AFB to Baltimore, nonstop for over forty hours of driving and operating relay, and also the third day, from Baltimore into a grand ceremony on the steps of the Capitol. He left us in DC amid cheers of gratitude from all members of the traveling communications team, having served as an invaluable shoehorn on countless occasions.

We even got some "maritime mobile" operating into this thing. Steve WA2DHF is a radio operator for the Naval Reserve and was chosen to accompany the torchbearer on a seagoing journey aboard a Navy landing craft from Langley AFB to the Yorktown pier—about 2½ hours in the water—using a Tempo S-1 all the way. For the startup of the Relay overland, he joined Pete Chamalian W1RM in the Command vehicle. Also present for the

startup were ourselves; Bob Fern K2AMU; Jeff Young KB3HF; Jim Arnold WB3EQU; our coordinator, Bobbie Chamalian WB1ADL; Steve Shearer WB3LGC; Guy Olinger K2AV; Paul Vydareny WB2VUK; Bob Josuweit WA3PZO; Bob Strickland WB3HWZ; and, previously mentioned, Warren Gibson WA4CCK, in his own vehicle.

Joining in Princeton was Gary Kantor WA2BAU. In Albany, the route was split: Communities to the west of the officially planned route had raised funds on their own sufficient to allow the personnel and vehicles to split after the Albany ceremony, permitting 26 runners to go northwest through the Adirondacks while the "Albany East" team took the other half of runners on the original route. A tremendous ceremony involving thousands

of spectators, with disabled veterans holding the torch with the torchbearer for the last couple of hundred feet, greeted us all in Albany. Governor Carey, following a moving speech of welcome, oversaw the lighting of two torches from the original incoming torch, and two runners left the plaza, one bound northeast, the other northwest, both destined to meet a few days later in Lake Placid.

In Albany, additional vehicles and staff personnel were added to take up the slack and to provide coverage for the scores of ceremonies awaiting us on both east and west routes. The closer the runners got to Lake Placid, the more identification local communities felt with the Olympics and the larger and more frequent the individual ceremonies became. Five traveling operators drawn from the Albany/Troy/Schenec-

tady areas were added to the communications team: Joe Krone WA2SPL; Dennis Connors WB2SPK; Armand Canestraro WA2EQW; Dan Marcella KA2DVK; and Guy Kitchen WA2SPE. Stationary support and east-with-west relay was provided by Dick Frey WA2AAU.

On the last day, during our approach to Lake Placid and facing the prospect of breaking up the group which by this time had built up an incredible bond of solidarity, the amateurs and support staff were afforded a rare privilege. We all were given the opportunity to carry the torch for a few minutes. On a clear stretch of Route 32 south of Saranac Lake, we left our vehicles, one position at a time, and in moments none of us would ever forget, we bore the flame north to the Olympics. The feeling each of us had, holding this sa-

cred flame and running it north, was indescribable. Wonderful. As we ran, the runners cheered us on and our fellow ops took pictures by the dozens.

On the night of Friday, February 9, after rollerballing for nine days and nearly a thousand miles, we reached our goal. The east and west route torches had to meet in downtown Lake Placid at exactly the same instant. Timing was crucial and the circuits began to fill with almost nonstop checkpoint and ETA advisories between the two caravans. One caravan with torchbearer could not be kept waiting at the end for the arrival of the other. The crowd was huge, and the media were out in full force as we played our last hot and heavy round of rollerball. This was the biggest and last task for the communications team, and we knew we had to get it right;

this was the event the participants would remember more than any other; it was our crucial test.

We did it. The timing was flawless, and not a dry eye remained in the entire team, runner, ham, or staff member. We had reached our destination. Looking back, despite some mistakes, some personality conflicts, and numerous technical difficulties, we had performed our job through the most incredible experience of teamwork any of us had ever had. When the two torchbearers met in Lake Placid that night, the elation and feeling of accomplishment that swept through the team made the stress, deprivation, and hardship of nine days on the road well worth the effort. We're looking forward to working together again in 1984 in Los Angeles. Perhaps we'll see you there! ■

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