

The New Face of MARS

Operational integration brings profound changes.

Bill Sexton, N1IN

Anybody coming back after a 15-year absence might not recognize MARS today, otherwise known as the Military Affiliate Radio System. But a year from now, the transformation should be even more profound thanks to decisions just put into effect by the three MARS chiefs. In fact, dramatic enhancements to MARS emergency capability probably will show up during the present hurricane cycle. And coming two years after Katrina, that's pretty much the whole point.

LSI on the Way

Following half a century largely pursuing their own particular on-air activities, the three MARS branches — Army, Air Force and Navy-Marine Corps — agreed to large-scale integration during meetings held at the 2007 Dayton Hamvention®.

Voice operating procedures, emergency net structure and overall frequency utilization will be brought within a single set of standards. Important technological enhancements are also in the works, including a robust MARS version of Winlink 2000 that is capable, if need arises, of operating independent of the Internet.

The ultimate result should be the equivalent of “one-stop shopping” for any emergency response organization requiring quick, dependable backup for long-haul communication (say, from Incident Command Post to FEMA Region). Together, the three MARS organizations are practically everywhere, or can quickly get there. The new operational integration makes for an easy MARS fit into the National Incident Management System whenever and wherever disaster strikes.

The irony is that so potent a force is so little known, especially among first responders. No doubt part of the problem is the clubbiness that's a widespread (and often useful) part of ham radio. Part is the reality that rigorous training and sophisticated equipment do little for a fire department's image if it's never called to a fire (and please be assured that the writer isn't advocating more Katrinas for practice). Nor does division into seemingly competitive branches help with visibility, a handicap that ARES and RACES might join MARS in pondering.

JAMES POGUE, KH2AR



It wasn't Field Day, although it may look like it. For the Defense Department's cross-band test Joseph Lowenthal, W4OVO, and Pat Lane, W4OGQ (AAA9EC), the Army MARS Emergency Coordinator, both of Memphis, set up this forward position at the Corps of Engineers station to prevent interference with colleagues operating on a nearby frequency at the main (indoor) site.

Join the MARS Team!

The Military Affiliate Radio System (MARS) is a United States Department of Defense sponsored program consisting of Amateur Radio operators who provide military communications support in time of need. The MARS program is broken down into separate Army, Navy/Marine and Air Force branches.

More than 5000 amateurs are MARS volunteers. They are issued military call signs with 3-letter prefixes (example: AAA9AC) for their MARS operations. To join the MARS team you must:

- Be 17 years of age or older. (Signature of parent or legal guardian is required when an applicant is under 18.)
- Be a United States citizen or resident alien.
- Possess a valid Amateur Radio license issued by the Federal Communications Commission.
- Possess a station capable of operating on MARS HF and/or VHF frequencies. These frequencies are outside the amateur bands, but many transceivers are MARS capable, or can be modified accordingly. Check with your transceiver manufacturer.
- Agree to accept strict monthly requirements for on-air participation. See these MARS Web sites for more information...

Army: www.netcom.army.mil/mars/

Air Force: public.afca.af.mil/library/factsheets/factsheet.asp?fsID=7037

Navy/Marines: www.navymars.org/





Gary Weatherford, N4LGY (AFA2HB), of Collierville, Tennessee, operating the 14.486 MHz (military frequency) position at Army Corps of Engineers base station in Memphis.



Jeffrey Smith, W4ZH, first licensed in 1976 at age 14, became a federal screener at Pensacola (FL) Regional Airport in 2005. That made him the obvious choice to operate the TSA emergency rig during Operation Sidewinder in March 2007 when the Army MARS Winlink messaging system got its first comprehensive test for airport communications. Airports across the country are being equipped with similar ham rigs for use with the Army MARS network if normal communications are disrupted. Both MARS and the TSA are training teams to operate these stations.

Breaking from the Past

Not all that long ago, the main focus of MARS was handling “morale and welfare” traffic between service members abroad or at sea and their families and friends at home. Operation Desert Storm (1991) is still remembered with immense pride for the thousands of radio messages and phone patches passed by the volunteer hams in MARS. In those days the three services’ distinctive operating style made sense.

The Northridge (CA) earthquake of 1994 changed all that. With phone circuits as well as freeways in shreds, the Pentagon called on southern California Army MARS members for situational reporting. They were ready. E-comm service in that catastrophe — the worst in U.S. history up to that point — fixed a new course for MARS. (Good timing, too, since e-mail and satellite phones soon took over the welfare traffic.)

Then came the September 11 terrorist attacks and hurricane Katrina, and a lot of hard-learned lessons. This spring the MARS chiefs and their staffs went to work applying those lessons.

Here are the main decisions announced in a May 24 joint bulletin signed by Chiefs Stuart (“Stu”) S. Carter (Army MARS), Bo Lindfors (Navy-Marine Corps) and Don Poquette (Air Force):

- **Frequency sharing:** “All three Chiefs agreed to make all [MARS] frequencies available to each service and that the net control station (NCS) can be from any service.”

- **Emergency nets:** “...the three service Chiefs will develop and provide guidance to establish joint regional nets on the best frequencies available for use during emergency operations in a region.”

- **Standard voice operating procedures:** “Each MARS service will select one member to serve on a committee to establish a common voice protocol, which will allow voice nets in all three MARS services to operate the same.”

- **Winlink 2000:** Army MARS assumes responsibility for safeguarding Winlink 2000 software code and upgrading it. Chief Carter said, “The MARS portion will be separated from the amateur side to ensure no crossover of messages and...the architecture is being changed so as to ensure there is always an HF link to and from each mailbox.” Plans for a WL2K hub at Army MARS headquarters at Fort Huachuca, Arizona also were announced. Carter estimates the new architecture will be completed well within 2007.

With these enhancements agreed, Navy-Marine Corps MARS signed on to participate in the new messaging system. Chief Lindfors indicated his intent to establish a headquarters WL2K gateway.

A separate meeting brought MARS leaders together with Steve Waterman, K4CJX (AAA9AC), Victor D. Poor, W5SMM (AAA9WL), and Stephen Hicks, N5AC, of the Winlink Development Team. In addition to planning the software upgrades, they completed work on the document providing MARS access to the WDT’s source code.

- **MARS-ALE:** At the main conference of leaders, Navy-Marine Corps MARS affirmed readiness to oversee the Automatic Link Establishment project previously under Army sponsorship, and to replace the Army MARS frequencies in the ALE pool. It was

agreed, however, that “members of all three MARS services will continue their support of the MARS-ALE Software Development Team.”

Lindfors, N9UH, whose Navy-Marine Corps membership numbers just over 1600, had barely returned to his Williamsburg, Virginia, headquarters before initiating change. He noted that the hurricane season was only two weeks away.

“I ask that all Region Directors [on the Atlantic and Gulf Coasts] immediately contact their Army and Air Force counterparts to coordinate frequencies,” he messaged. “We won’t be able to promulgate a new policy in time so I trust your judgment to set up a system that works.”

For Don Poquette, Chief of Air Force MARS since last year and Equipment Custodian before that, this was the final meeting before retiring after 26 years’ USAF active duty. He expressed optimism about the changes (and won a round of applause at the annual membership forum held in conjunction with the Hamvention).

“Yes, full interoperability is in sight,” Poquette said. “Hopefully within one year, if everyone keeps working at it. ALE is already interoperable. The VHF networks are interoperable; we just have to get four sets of frequencies established.

Stu Carter, with 2600 hams in Army MARS, was making his debut at the Chiefs’ conference barely six months after assuming the post at Fort Huachuca. It had been a period of dynamic change (some would say dynamite change). Headquarters staff was realigned, an advisory board appointed;

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regional commands were established, a top-to-bottom public information campaign was launched. And the new e-comm partnership with the Transportation Security Administration went into action.

Exercise Sidewinder, the joint MARS/TSA exercise on March 28, gave the Winlink messaging network its first comprehensive workout under (simulated) emergency conditions. TSA and MARS deployment teams tested long-haul communications backup from commercial airports along a fictitious hurricane’s swath from Miami toward Houston.

As a demonstration of the potential for operational integration, Sidewinder proved exemplary. An Air Force MARS member, Michael Green, WA4ZVW (AFA2MY), put Miami International Airport on the air. Jim Burrows, N4RLM (NNNØSYH), of Navy-MC MARS helped set up the Army MARS-licensed station at Pensacola FL Regional Airport.

At Fort Myers, where the government station was still being installed, Army MARS member Terri Lane, KI4MGF (AAR4BO), jumped in to file three reports by voice from her home station.

The operation was evaluated by TSA and MARS officers monitoring at Tucson (AZ) International Airport. Amateurs there included MARS headquarters staffers Grant Hays, WB6OTS (AAA9O) and Dewayne Smith, KK7VE (AAA9F), as well as regional members Al West, K7JUB (AAR9ED/T), Jim Wooddell, K7WFR (AAM9RT), and Larry Collins, K7DMB (AAT9CB).

“The TSA/MARS deployment capabilities were fully demonstrated and performed without error,” the federal agency’s evaluation team reported from Tucson. “Very few problems were encountered during the exercise and all members operated professionally and were able to successfully demonstrate the objectives.”

Decades of Progress

A far cry, that high-tech operation, from Amateur Radio’s first involvement with the US military.

That happened back in 1925 when Capt Thomas C. Rives of the Signal Corps invited hams to help train soldiers in what was the

brand-new technology of radio. His volunteers in the Army Amateur Radio System went on to assist with research and development as well as training. By 1941 the AARS had 5600 members, roughly a fifth of whom saw wartime service in some capacity (including combat).

Amateur Radio was silenced by World War II, but 1946 brought reactivation of the AARS. After the US Air Force was created in 1947, it promptly gave birth to a separate branch of the renamed Military Affiliate Radio System. Navy-Marine Corps set up the third branch in 1963.

All three MARS organizations operate under the same Defense Department mandate to provide emergency communications support for government, but they are independently managed under regulations promulgated by their parent armed force. This year’s moves toward operational integration foreshadow no change there.

Among MARS old-timers, one past change brought a lot of grief. The excitement and fulfillment of handling MARSgrams and phone patches they experienced during the Korean and Vietnam Wars and Desert Storm never materialized in Afghanistan and Iraq. Instead, fighting men and women found the Internet available almost everywhere (though a handful of MARS members in the US and Europe have kept the channels open looking for traffic to relay).

Army MARS budgets (primarily for headquarters personnel and gateway stations) took an immediate and continuing hit after the Gulf War. With resources totally focused on warfighting, MARS got limited attention. At one point, as the Army’s Stu Carter told the MARS open forum at Dayton, it was really a case of “the lights were out, the doors were locked” as recently as six months ago.

“But all that is different now,” he said.

In the new circumstances, Carter’s to-do list includes a commitment to expand the concept of operational integration beyond MARS.

MARS-Ham Communication Tested Annually

A unique annual event called the “Armed Forces Day Cross-Band Test” has been dem-

onstrating for just short of 60 years how well hams and the military can work together. On that one day a year, operators from the two realms listen on each other’s dedicated frequencies and exchange QSL cards. It’s quite a show — on May 12 this year Army stations tallied 1317 amateur contacts, Navy-Marine Corps 1147 and Air Force 500 and counting.

Yet a gray area looms where MARS can — or should — be interacting on a continuous basis with the Radio Amateur Civil Emergency Service and the Amateur Radio Emergency Service, sponsored by the ARRL.

There’s already plenty of informal interconnectivity through individual members belonging to two (or all three) entities. That wasn’t enough, though, to scratch the full potential of Amateur Radio during a Katrina-scale catastrophe.

Yet two years later there’s still no concrete guideline for meshing civilian Amateur Radio’s unmatched local agility with the unique capacity of MARS for delivering emergency traffic over long distances, as obvious as the match is. Carter’s staff is working on a fix.

Summing up the weekend’s work, Navy’s Lindfors offered this benediction:

“I have attended Tri-Service MARS Chiefs meetings since before I took over as Chief in November 1997. This was the first meeting that I felt we actually accomplished something and broke the inertia of ‘we’ve always done it this way.’

“Rather than coming home frustrated,” Bo said, “I actually came home from Dayton energized to take the necessary steps to move forward instead of having to explain why we couldn’t do something.”

Bill Sexton, NIIN, is a retired newspaper editor and foreign correspondent. He serves as volunteer Public Affairs Director of Army MARS, but any unattributed observations above are his own. Bill was first licensed in 1991 after many years of wishing it were easier to learn CW, which he finally did in time to get his Amateur Extra ticket two years later. He has been an Army MARS member since 1992. Handling MARSgrams for the troops was still a mission of pride then. With emergency communications now in the forefront, Bill is a regional alternate NCS for SHARES. His Northeast Coordination Net was on the air during both 9/11 and Katrina. You can contact Bill at PO Box 428, Richmond, MA 01254; nlin@arrl.net. 

