

Emergency Communications Special

If bell-ringers outside stores at Christmas-time are your main contact with The Salvation Army, we'd like to introduce you to a branch of the group that relies on contacts via amateur radio—the Salvation Army Team Emergency Radio Network, or SATERN.

Exploring SATERN

The Salvation Army Team Emergency Radio Network

BY ELLEN PORTER*



The Salvation Army is perhaps most recognized for its efforts in treating alcoholism, feeding and sheltering the needy and spreading an evangelistic message of hope around the world. But as many hams know, it is also one of the first organizations to which emergency responders turn in a disaster. The Salvation Army mobilizes volunteers to help with anything from finding a lost hiker to getting food and medical attention to those isolated by a tornado, hurricane, earthquake or bombing. Many of these volunteer responders are

amateur radio operators. The Salvation Army has established a network of specially-trained amateur radio operators to assist in disaster response, which it calls the Salvation Army Team Emergency Radio Network (SATERN).

"We are the official communications arm of the Salvation Army," said Trace Willett, K16DPN, of Sage, California, who is the team coordinator for SATERN Inland Empire, which consists of about 85 amateur radio operators who live in southern California's San Bernardino and Riverside counties.

SATERN Inland Empire is one of many teams serving the Salvation Army. Although it has the largest presence in the

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Photo A— SATERN teams are often deployed to disaster sites as part of an overall response by Salvation Army Disaster Services. This Canadian corps was operating at a school-turned-EOC (Emergency Operating Center) in High River, Alberta, which was struck by flooding this past June. (Photo courtesy of Doug Howard, VE6CID, and SATERN Alberta)

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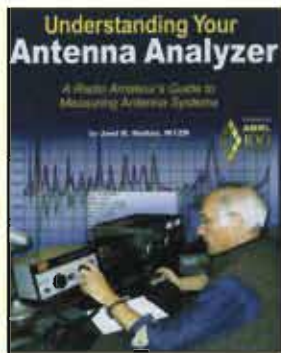
Photo B— Sue, KG6YGL, and Bill, KC6QCR, Runyan operate from their portable station at De Anza Park in Ontario, California. Bill is a long-time SATERN volunteer, and served as net commander during its response to an earthquake in Baja California in 2010.

what's new

Understanding Your Antenna Analyzer

Antenna analyzers are SWR meters on steroids, able to measure not only your antenna system's standing wave ratio but a variety of other parameters as well, such as actual impedance, resonant frequency and tuning characteristics. Recent advances in technology have brought these devices—once only affordable by professionals—into the budget range of many hams. But they are still highly complex devices with capabilities that many casual users may not understand.

The ARRL's new book, *Understanding Your Antenna Analyzer*, is intended to help you get the most out of whichever of these devices you may already have, as well as to help you decide which of the units currently on the market will best meet your needs. Written by former *QST* Technical Editor Joel Hallas, W1ZR, the book retails for \$25.95 and is available from ARRL, 225 Main St., Newington, CT 06111; <www.arrl.org>.



Voodoo Contest Group "Book on the Web"

Now that it moving on to different parts of the world after 19 years of contesting in West Africa (see article, May 2013 *CQ*), the Voodoo Contest Group has decided to update its book, *Contesting in Africa*:



Multi-Multi on the Equator, written by group member Roger Western, G3SXW. However, instead of publishing the new version as a printed book, or even an e-book, the group has decided to simply post the contents on its website. The new "book" is a collection of stories from group members about their adventures, with the addition of many video clips as well.

The updated version of *Contesting in Africa*, in non-book form, may be found on the Voodoo Contest Group website at <<http://voodoocontestgroup.com>>.



Upgrades Available for N3FJP Amateur Contact Log, plus Field Day, VHF Contests and IARU HF Championship Modules

N3FJP Software is continuing to upgrade all of its logging software. The latest rollout is version 4.0 of its general Amateur Contact Log (AC Log) program for everyday use. In addition, new versions of contest-specific software are available for ARRL Field Day (version 4.1), the IARU HF Championship (version 3.1) and both ARRL and *CQ*'s VHF contests (version 4.2).

The AC log program sells for \$25; the specialized contest programs are approximately \$9 each. Upgrades are free to registered users. For more information, see the N3FJP website at <www.n3fjp.com>.

United States and Canada (photo A), SATERN is also active in Europe. A team exists wherever there are both Salvation Army locations and enough amateur radio operators who have the skill and desire to partner with the charity in its emergency response operations.

"In an emergency we will be wherever we are needed. It could be out in the open somewhere, or it could be inside a police station," said Bill Runyan, KC6QCR (photo B), a long-time amateur radio operator and SATERN Inland Empire team member from Fontana, California.

SATERN ensures that each location of the Salvation Army responding to a disaster can communicate with others who are mutually responding. It also can assist members of the public who are concerned with a loved one's well-being after a disaster, and in some cases, can even help law enforcement officers and firefighters with their communications.

"In a real emergency, chances are people would be without cell phone service," said Paul Van Hulle, W6CAD, a SATERN Inland Empire team member from Riverside, California. "How would they communicate? That is what we are about."

During any disaster it responds to, one Salvation Army location (Corps) serves as an Emergency Operations Center. This EOC will assign Salvation Army volunteers to distant locations most greatly affected by the disaster. With SATERN members either assisting in the volunteer efforts, or coming along simply to help with communication, amateur radio becomes an effective tool for keeping the lines of communication open.

The Salvation Army may take a food service canteen to the disaster area to nourish and hydrate both first responders and victims. If this canteen runs low on supplies, or if the volunteers manning it become exhausted, they may have to call the Salvation Army's EOC and ask for reinforcements. The canteen could easily be parked in an area where there is no phone service, thus making radio communication necessary.

Likewise, if the Corps serving as the EOC does not have enough volunteers, its workers don't have to spend time on the phone searching for more. Through amateur radio stations operated by SATERN members, it can contact other nearby Corps. The SATERN volunteers at the EOC can also directly contact other SATERN members who are standing by, waiting to see if they're needed.

The Salvation Army also helps first responders locate people who are trapped or need medical attention. With phone service likely to be unavailable, radio communication is the most efficient way to communicate the need for paramedics or doctors. This is true even if one radio operator on the scene is relaying the message to another radio operator at the Salvation Army's EOC, who is then notifying a local police dispatcher.

SATERN was first organized in 1988 by Major Pat McPherson, WW9E, and became an official Salvation Army program in 1998. In recent years, its members have helped in disaster relief efforts with 9/11, big hurricanes like Katrina and Sandy, the recent Oklahoma tornadoes and countless other hurricanes, tornadoes, earthquakes and fires.

Quake Response in Two Countries

A major earthquake that struck in Baja California, Mexico, on Easter Sunday in 2010 brought a large contingent of southern California SATERN members to the border. The nearest Salvation Army Corps to the epicenter of this quake was in El Centro, a small town just north of the Mexican border.

Bill Runyan was in that southern California contingent



Photo C— Tom Apalanek, WA2IVD; his son, Shawn, KJ6VQC; and Jonathon Marsden, N6JU, man a station at De Anza Park. Shawn, age 13, has been a radio operator since he was 9, shortly after his family moved to California from New York. His parents, Tom and Deborah, N2LZN, went as SATERN volunteers to Mississippi in 2005 to help in the aftermath of Hurricane Katrina.

responding to the Baja earthquake, serving at the El Centro Corps office as the net commander. This meant the Salvation Army had put him in charge of making sure all the requests for help coming through on SATERN radios were responded to quickly and accurately.

"During the earthquake, both of the Salvation Army Corps officers assigned to El Centro were injured, so an officer from San Diego was filling in," Runyan said. "Many buildings in El Centro had been damaged, and the damage in Mexico was even more widespread."

El Centro is part of the Salvation Army's Sierra del Mar Division, so named because it extends from the coast of San Diego to mountainous areas far inland, and to deserts beyond those mountains. Volunteers from all four counties within the division (San Diego, Imperial, Riverside and San Bernardino) were called to assist after the earthquake. This included members of SATERN throughout the division.

Because of the location of the earthquake, Runyan was coordinating delivery of messages in two countries, some of which had to be delivered to the division headquarters in San Diego, more than 100 miles west of El Centro. El Centro is also more than 50 miles north of the earthquake's epicenter, where damage was most severe.

A 24-Hour Drive to Help

Tom, WA2IVD, and Deborah, N2LZN, Apalanek lived in upstate New York back in 2005 when Hurricane Katrina hit the Gulf Coast. Tom (photo C) was active with a SATERN team there. When he learned of a need for volunteers to help provide emergency communication in the hurricane-ravaged areas, he and Deborah loaded their van and drove 24 hours non-stop to Jackson, Mississippi. A Salvation Army Corps there served as the EOC for disaster response in Mississippi.

As they approached Jackson, two days after the hurricane made landfall, they started noticing widespread devastation about three hours north. Although media coverage had focused on New Orleans, the damage in Mississippi looked just as bad as what they had seen on TV.

Since the Apalaneks had brought their own transportation, the Salvation Army sent them out to do "emergency traffic" in Long Beach, Mississippi, a community on the Gulf Coast hit just as hard as New Orleans. They patrolled the Long Beach area looking for people who needed help, and used their radios to communicate back to the Jackson Corps what these needs were. The Salvation Army then sent food, rescue workers or medical professionals as the situation warranted.

"It was an eye-opening experience to see the devastation caused by the hurricane there," Deborah Apalanek recalled recently. "It was heartwarming to be part of the Salvation Army team, and see the ministry put to good use. We also ran into many other people who wanted to help in any way they could. There was such a positive feeling all around us."

Runyan and the Apalaneks have had lots of practice in emergency communications. When they lived in New York, the Apalaneks served as volunteer emergency medical technicians, thus helping professional paramedics respond to ambulance calls. Runyan is an amateur radio instructor, and a long-time SATERN volunteer in California.

Practice, Practice, Practice

In many parts of the country, including both New York and southern California, SATERN teams practice emergency communications drills either daily or weekly through nets at specific times and frequencies. The global organization's net takes place daily Monday-Saturday at 1500 Z on 14,265 kHz.

New Yorkers actually drill with SATERN members in three

other states —New Jersey, Pennsylvania and Delaware—through eight repeaters linked across the state of New Jersey.

SATERN's Inland Empire team has its own net, but with more than 27,000 square miles and almost 5 million residents, its two counties are larger than many states, in both geography and population. It's relying on a repeater atop one of the region's highest mountains, Keller Peak, to bounce radio signals across this region.

SATERN's Inland Empire team has helped ensure coordinated emergency communications by placing radios in each of 12 Salvation Army locations in the two counties. This includes drug and alcohol rehabilitation centers the Salvation Army operates in each county, seven Corps offices in the region's most urban areas, and three offices in the desert portions of the counties. The desert areas are home to about 20 percent of the region's residents but are more sparsely populated, especially in San Bernardino County.

The deserts are also geographically divided from the rest of the two counties by mountain ranges with peaks of more than 9,000 feet. Earthquakes can strike anywhere in the Golden State, but wildland fires are the most frequent southern California disaster that would require large-scale response. These fires typically take place in the mountains, which are not close to any Salvation Army offices. Furthermore, the mountains' sloping terrain, tall trees and other factors can make all forms of communication more difficult, including amateur radio.

Another area challenged by geography is Texas, where 26 million people inhabit nearly 300,000 square miles of land, most of them congregated in the state's largest cities. Only the northern part of the state is served by a SATERN net, but a separate net serves all amateur radio operators in the state. The Texas statewide net was recently able to get help for many victims of the Oklahoma tornadoes. SATERN members in the Texas Panhandle and in the entire state of Oklahoma participated in the Salvation Army's emergency communications after these recent tornadoes.

SATERN uses high frequencies (HF) to connect members throughout the world and within five separate territories serving the United States and Canada. Smaller nets use very high frequencies (VHF) to connect SATERN members within smaller areas, ranging from a single city to four states.

All SATERN nets are designed to

make sure the Salvation Army Corps serving as Emergency Operations Centers can quickly locate team members in an actual emergency, and that those volunteers' emergency communications skills are fresh in their minds.

These nets are directed by a SATERN member the region has designated as the net commander (NCS), and follow protocols established by SATERN. There is variety in how much communication takes place during these nets. All of them include each participating member of a territorial or regional SATERN team checking in and noting their location and availability. However, a net could also simulate communications in a real emergency, provided they frequently identify the radio traffic as a drill.

"We put messages out just as we would in an emergency," said member Jerry Van Hulle of Riverside, California.

"We don't want to be surprised during an actual emergency."

To join SATERN, one must first become an amateur radio operator. SATERN teams typically sponsor events at least once a year to qualify new operators. Many also have members who are instructors.

After obtaining an amateur radio license, SATERN requires additional training in emergency communications. Potential members can request information on the website <www.SATERN.org> or by writing The Salvation Army National SATERN program, Attn: Flo Knox, 615 Slaters Lane, Alexandria, VA 22314-1112.

The website also offers more information about the organization, including the times and frequencies of most nets its members have organized, and photos of some of the emergencies where its teams have served.



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