

Helping Hams

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Amateur radio operators can be handy in a crisis

In a worst-case scenario, a natural disaster — a fire, an earthquake, a flood — could shut down communications capabilities across the county, including cellular coverage, leaving emergency personnel unable to reach residents in danger and incapable of communicating with each other.

Never fear.

Amateur radio operators — otherwise known as hams — are here.

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And they aren't just a bunch of bearded old guys sitting in a dark corner talking on short wave or in Morse code, said Eric Lemmon, secretary and facility manager of the Satellite Amateur Radio

Club at Vandenberg Air Force Base. "We are real people with real lives," said Lemmon, who is known



Eric Lemmon, who goes by the call sign WB6FLY, points to an EME (Earth-moon-Earth) antenna, which can bounce radio waves off the moon, and then back to locations on the other side of Earth, June 23 during the annual Field Day exercise, in the photo above. At left, Daniel Brim, 14, who goes by the call sign KI6FBU, chats with a ham operator in Arizona during the Field Day exercise.



by other hams as the call sign WB6FLY (that's "Whiskey-Bravo-Six-Foxtrot-Lima-Yankee" to hams, who use the phonetic alphabet typically used by the military to ensure clarity).

The Satellite Amateur Radio Club's 35 members include a couple of 14-year-olds who got interested in radio technology through computers. They also include active-duty and retired military, members of the civil service and contractors who work on base.

Several other clubs operate on the Central Coast, too, between Paso Robles and Santa Barbara, including San Luis Obispo, Santa Maria, Lompoc and Santa Ynez.

Local ham operators from the Satellite Amateur Radio Club proved their role last weekend when they took part in Field Day, an annual exercise that tests their emergency preparedness capabilities.

Hams from North and South America take part in the 24-hour event, which requires groups to set up in 24 hours or less and work 24 hours straight, making as many contacts as they can with other hams around the world under emergency conditions, using only generator, solar or wind power and makeshift antennas.

"It's as if we were making an emergency deployment of communications capability," explained Lemmon.

The Satellite Amateur Radio Club

made around 850 contacts in Morse code, voice and digital, during the 24-hour period, which lasted from 11 a.m. June 23 to 11 a.m. June 24.

Field Day is an exercise in emergency communications capabilities, which Lemmon sees as one of the primary responsibilities of ham radio operators.

To that end, many hams, including Lemmon, become trained and certified members of the Amateur Radio Emergency Service, which qualifies them to respond in emergency situations.

In the late 1970s, Lemmon was on hand when the Santa Ynez River flooded into Lompoc. He and other hams augmented police communications by helping direct traffic and keep crowds under control in the flood area.

Several years ago, during a fire near a hillside in Vandenberg Village, amateur television (ATV) — a hobby some local hams have picked up — showed its importance in responding to local emergencies.

According to Lemmon, a ham who owned a private plane rigged an antenna to it, flew over the fire area to take color photos of what

was happening on the ground, and transmitted the images back to the incidence commander.

"He was blown away the county didn't have any such resources," said Lemmon. "That made a huge impact into the way the county viewed ham radio operators."

During the same fire, Lemmon

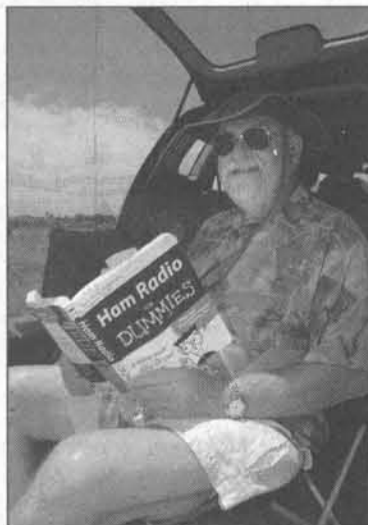
said, a hill behind Vandenberg Village burned, shutting down communications towers, turning off cellular communication, along with the communications capabilities of local sheriff, fire and police forces.

Amateur Radio Emergency Service members positioned hams with patrol cars at each major intersection in the area so the police could communicate back to their dispatchers.

In addition to helping in emergencies, hams work around the county to provide communication support during events.

For example, ham radio operators provide communication during the annual Santa Maria Elks Rodeo parade, and during large-scale bike tours that ride through the county.

During the bike tours, ham operators are stationed in trucks used to transport riders and at rest stops where riders are taken. Using Automatic Position Reporting System (a type of GPS location-tracking capability), the location of the trucks can be seen, so if a fallen rider is reported, the hams can quickly identify



Larry Brim (KI6FBU) brushes up on some basics.



Photos by Mike McAndrew/Staff

Brent MacDonough (call sign K6BTM) roughs it in his camper, June 23 during the annual "Field day" exercise. Below, Rich Gerardi (AA6VX) uses Morse Code as he talks with New Mexico.

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which truck is closest to them to respond. "This is a huge benefit," said Lemmon.

Ham operators also monitor the regular tests Pacific Gas and Electric does on the sirens at Diablo Canyon Nuclear Power Plant. During the tests, hams are stationed at each siren to report to PG&E whether they're working.

Plenty of hams are also radio operators for recreation. "You don't get paid to do these things, so you have to really enjoy doing it," said Lemmon.

Hams participate in contests throughout the year that keep them racking up contacts through different modes of transmission, including short-wave, UHF or VHF and digital.

Some strive for awards like WAS (worked all states) for contacting someone in each of the 50 United States. Proof is gathered through QSL cards, postcard-sized cards that ham operators traditionally exchange with each other after making radio contact.

Others try to make it into the DX (Distance Expedition) Century Club, which is achieved by making contact with 100 distant stations.

Satellite Amateur Radio Club member John Maetta (call sign N6VMO) recently made such a contact with some extra-terrestrial help. Maetta built a moon-Earth station that's capable of bouncing a signal off the moon right after it rises so that the signal returns to the Earth on the other side of the world.

Maetta recently tried a "moon bounce" for the first time with a couple of fellow hams there to witness the experiment. Immediately, Lemmon said, someone from an island near Majorca, Spain, responded.

"It was his first moon bounce and it was absolutely perfect," said Lemmon.

It also put Maetta closer to a WAC (worked all countries) award, which is a tricky achievement considering the changeable nature of countries in some parts of the world.

Some hams embark on their



own DX, or distance expedition, by getting permission to set up a station in a remote part of the world that has never before been contacted. "Once the word is out people come out of the woodwork trying to get in touch with you," said Lemmon.

Lemmon has seen videos of hams embarking on a DX as they set up their station and begin transmitting. The challenges of setting up in a remote location are plenty, he said, and range from curious penguins to blistering heat and rabid mosquitos.

Others take their ham radio skills to sea, sailing around the world and testing their radio capabilities from the open water.

Indeed, it is possible to make contact with anyone, anywhere in the world via radio, which is what keeps many hams in the game.

"You don't need 10,000 watts of power to talk to somebody around the world," said Lemmon.

All you need is a good radio and a correctly positioned antenna, he added. "And — this is the big part — Mother Nature needs to cooperate," said Lemmon.

The sun, for example, greatly affects the way radio waves reverberate around the world, explained Lemmon.

Meaning an operator can't count on making the same connection twice, even if everything in his control is replicated. It also means operators are frequently delighted by sudden surprise connections.

"You may try for weeks or

months to contact a certain station," said Lemmon. "Until suddenly, one night, you tune across and this guy comes booming in and you're able to carry on a conversation."

"You may have been waiting for years to contact that station," he added.

Lemmon's most memorable contact came just after he set up his own at-home station in his Vandenberg Village attic. He was going up and down the bands trying to make a connection with an operator in Japan who was experiencing a "pile-up" in which a plethora of operators were trying to contact him at once.

On his last try, he got through. "It was a perfectly clear contact," Lemmon said, adding that connections are not always filled with the scratchy static ham operators on television and in the movies experience. This one, he said, was as clear as a phone call, and lasted three to four minutes.

Hams usually exchange call signs, discuss the equipment they're using and compare antennas. They also often exchange map coordinates so they can pinpoint each others' locations. If they find they have a lot in common, they may arrange a time to talk again. Some make connections with locally based hams and arrange to meet in person.

"Pretty soon you've got almost like a family," said Lemmon.

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