

BISHOP AMATEUR RADIO CLUB Minutes for meeting on July 9, 2013.

Meeting called to order by President at 7:05 PM.

Self introductions were not done by request of the meeting's program presenter. He said tracking names and call signs would be part of his presentation.

Treasurer's Report: Treasurer (N7RAP) not present due to illness, so report given by Mike (W6HDV). Starting balances, expenditures (\$28.24 for power), revenue (\$250 Ultra-marathon donation and \$17 from 50/50), and ending balances were given.

Minutes: Published minutes accepted as corrected – N1NM should have been N1MM.

Program: Marty Woll (N6VI), Vice Director of ARRL Southwest Division, gave his presentation on "Sharpening Your EMCOMM Skills".

Marty started out in Amateur radio as a very enthusiastic contester, then later adapted many of the practices used for competitive contesting to more effective public service communication. Copying accurately what you hear (including entering it into a log) and the correct use of tactical call signs was his starting point.

To drive home this task, everyone was given paper and something to write with, then instructed to write down all of the names and calls of the attendees as they announced their information around the room. I logged 21 calls and one guest with no call. Pace, enunciation, and accurate legible writing are all very important. Speaking more slowly and distinctly, along with proper letter phonetics if need be, will often result in faster information delivery because of reduced errors and repetitions. New operator efficiency can be improved by just listening to some HF contests while logging as many call-signs as possible.

Tactical call signs were explained, as was the need for everyone participating in an emergency communications effort to know what those call-signs are prior to their picking up a microphone. For an additional exercise, attendees were instructed to break up into groups of four. After deciding on tactical calls, two of each group were instructed to go to distant parts of the room (one reporting back about "damage assessment" and the other from the "shelter") as directed by the selected radio operator "command", then verbally asked to relay their information back to their command location. A third, the "scribe", was to make a written record of the information. This was a sample of dealing with organization and verbal QRM. Radio operators are usually relaying messages delivered by other people. Practice drills, preferably with the agency/agencies to actually be served, are very beneficial. There are three basic controlled nets - resource, tactical, and traffic. The "net control" has to keep track of the activities. Keeping order on the radio frequency is very important, and good headphones are recommended for reducing "interference" at the site. All volunteers need to be able to "engage helpers" and "offload tasks" if possible.

NTS (National Traffic System - for relaying message "traffic"), ARES (Amateur Radio Emergency Service), and RACES (Radio Auxiliary Civilian Emergency Service) are all used in California.

RACES is affiliated with government or corporate agencies.

Marty answered many questions from the club members, then stayed after the meeting to discuss local operations and answer individual questions.

Formal program concluded at about 8:37.

Activities: Transmitter hunt scheduled for July 20. Keith and Rich have site selected for hunt. Starting point is still at Red Hill, 10 AM. Club breakfast at Denny's, 8 AM. Breakfast attendance independent of T-hunt.

80 meter net is every Sunday on 3.985 MHz. Simplex awards: John, K6MWK winner, followed by Keith (KJ6IXM), then Bob (W7WOW). A \$25 gift certificate went to winner.

Field Day results: 219 GOTA, 1,554 Phone, 777 CW (thank you Kurt), and 1,330 bonus (thank you Olin). Overall total was 6,232 points.

Recommendation to join BARC online group set up by Hank Garretson (W6SX).

ARRL Centennial Convention will be in July 2014 in Connecticut.

SET (Simulated Emergency Test) exercise will be in October – time to make plans.

Kurt (W6PH) is getting ready to order up more T-shirts for the club. Let him know about what you are interested in.

BARC meeting adjourned at 9 PM.

Notes from NVIS presentation prior to meeting:

BARC invited interested participants to a before the Club meeting dinner at Las Palmas in Bishop, where Marty Woll (N6VI) gave a presentation on NVIS (Near Vertical Incident Sky-wave) radio. Marty made an excellent presentation in spite of the video projector being plopped on a meal table, window blinds that could not be closed, and the use of a bed sheet for a screen.

Marty started with the observation that in a typical regional crisis, temporary communication needs to be established to a still normally functioning communications system. Odds are that this would be closer than 300 miles. With this premise, a NVIS antenna deployment would be the method of choice. Amateur radio stations are usually optimized for more interesting DX (distant) communications, where their antenna's maximum field is directed toward the horizon (low angle of radiation). This antenna configuration, combined with selection of the highest useable frequency, makes for a very shallow angle of reflection of the ionospheric F layer. Unfortunately, this type of signal literally skips over closer stations. NVIS configurations are meant to maximize the signal straight up, where the F layer reflects it back near the point of origin. This was method was re-discovered by the military (Navy takes credit) during the gulf war, particularly where a mobile unit couldn't talk to a counterpart just over the horizon. Communications range was better when the mobile whip was stowed (the top pulled down to the vehicle for travel) than when the antenna was in its "correct" upright position. By using lower (HF) frequencies, and pulling the whip horizontal, over the horizon communication was vastly improved. Continuing on with a bit of antenna theory, Marty then showed some propagation patterns from a dipole mounted at selected height over the terrain. To have a major vertical component, the dipole should be less than three eighths wavelength above ground. His home antenna is a dipole mounted about 10 feet up, allowing good propagation while still allowing room to walk under. Then a bit was discussed on the ionosphere. The F region reflects signal below a certain energy/frequency, which varies with season, time, and solar flux. Higher frequency signals continue through. In the day time, the closer D region builds up, which unlike the F region, absorbs radio signals. Graphs were displayed showing propagation vs. frequency (illustrated by color bands) for various times and seasons. The general conclusion for effective NVIS operation: 40 meters for daytime, 80 meters at night. Emergency service HF nets are organized with this in mind.

Marty then illustrated some practical NVIS antennas. Vertical antennas have virtually no vertical antenna field. The finishing image was a table showing open HF emergency service nets involving Southern California. BARC's net, as promoted by Grant (W6NTK sk), was on that table, with a thanks from Marty for having it start early enough to avoid conflicts with other nets.

Jon, NW6C.

