

BISHOP AMATEUR RADIO CLUB MEETING MINUTES for August 9, 2016.

Meeting was **called to order** promptly at 7 pm, by President John (AD6NR).

Attendance/Introductions: 13 members at start, another member and guest a little later. Randy (N6BXP) managed to get out of Inglewood long enough to attend a meeting. His last was a very long time ago. Missing were the Lone Pine contingent due to a new forest fire at Horseshoe Meadows, and Jeff (AA7GK), handling communications demands on numerous fires.

Treasurer's Report: Treasurer Terry (K6UN) arrived a little late (other business to attend to en-route to the meeting), and did have a comprehensive report covering July 12 to August 9. The only income was \$17 from the 50/50 raffle. \$46.45 went to the electric bill, \$78.74 to Ed (K6END) and \$249.22 to John for reimbursement of expenses agreed to at the last meeting. Total checking balance (general and equipment accounts added) was \$1,608.19. Terry was interested in seeing the difference in power usage due to the addition of CACTUS Intertie to our building. There will be some more substantial charges to the account by the next meeting. We may need some serious donations as some of the more serious site improvements are worked on.

Minutes: Secretary Jon (NW6C) had a printed copy to review. Approved as published.

Activities: John went over some.

1. 80M net on 3950 KHz, Sunday mornings a 8 am, although it starts gathering participants at 7 am. Also, 3947 KHz Thursdays at 7:30 pm.
2. A 2m (144.2 MHz) USB net is taking shape on Saturdays, 7:30 pm.
3. There is a 10 GHz contest coming up on August 20-21. Gathering suitable equipment for this can be a challenge.
4. A presentation at next meeting will be done by Marti Woll (N6VI). He has a selection of topics for us to chose from, so members will have to make a selection before the next meeting. He regularly checks in to the 3950 net.

Break and Raffle? Consensus was to keep going with the meeting.

CACTUS Intertie: John gave a thorough explanation of progress on the CACTUS system. This involved getting together with two of their communications experts (Robin and Ken) to evaluate the suitability of the Silver Peak site, including a complete site analysis, corrections/modifications as needed, and if deemed satisfactory, installation of their equipment. This had been a really major full weekend project.

This CACTUS system is a major part of Amateur emergency communications (RACES and ARES) in California, and this Eastern Sierra area has long been a void on the communications coverage map. Its main purpose is to provide a port for emergency communications throughout the State, but is otherwise available as a closed (members only) amateur radio facility. Formal membership is \$150 a year, and only if the new prospect is sponsored by an existing member in good standing. This is a complex system and requires trained and disciplined operators. Anyone is welcomed to listen in on the activities. John has been a member for years. Contact him if you are indeed interested in joining the operation. To connect Silver Peak to the rest of the system, a full duplex link to the Mount Potasi site was initialized. Motorola CDM radios were utilized.

Some examples of the test equipment analysis were circulated at the meeting, including a printout of a spectral display of our 146.94/.34 repeater, before and after the antenna filter. That filter really works and it really has a lot to contend with at the Silver Peak site. John also provided copies of site

parameters that they had measured on Silver, Mazourka, and the link. Then he explained the relevance of the measurements. A pleasant surprise was that Silver had a really good 4.5 dB noise floor for this type of site (makes it easy to hear weak signals), especially compared to the 20 dB we saw not long ago. Somewhat disappointing was that a similar noise floor was measured on Mazourka. Small solar powered sites are generally quite a bit quieter.

A major setback occurred Saturday afternoon. As they were doing the final testing on the new Cactus equipment, interference suddenly racked the system. A nearby digital television transmitter had come on using UHF TV channel 20. They ended up having to remove some of the freshly installed equipment and replacing it with a more conservative back up arrangement. This resulted in a very long day, with more future work needed to improve the operation. This was not something new, as they were facing a similar problem at another one of their sites.

Mazourka measurements were made as the installers headed south out of the Valley. There a problem was found in the repeater duplexer alignment. Improving the alignment brought the power to the antenna up from about 4 Watts to 12 Watts.

We were advised to move the link frequencies from the 440 MHz part of the band to a correct 420 MHz area, then get the frequencies coordinated with the Southern California users. They volunteered to help us with that coordination.

California Office of Emergency Services (OES) net was Monday, 1830 hours. The CACTUS works! Agencies in range of Silver Peak can now check in on the 440 MHz band.

BARC Repeater System: John added a Repeater / Remote Base System diagram handout to the meeting. It had illustrations of the Silver, Mazourka, and Tonopah operation. Current control codes were added, except for the accidental omission of the Packet on Silver. 05# down and 05* up were missed. Mammoth linking is not in the immediate plans. What was the packet node control code on Mazourka has been “re-purposed” to control the repeater link radio.

Incidentally – there is a link delay time in the system to cut down on interference. If you want your first word to be heard at the other end of the link, key up the microphone for half a second before talking.

Mazourka site work: Bill (KK6HTM) offered a summary of the latest work at the site. All of the mounting steel that was bolted to the building was removed. John showed one of the square tubing solar panel braces, and how the tubing penetrated through the outer aluminum skin, allowing the tubing to funnel water into the building insulation. This structure is a mobile modular type, with outer and inner aluminum skins separated by a mystery separator and insulator material. Lifting eyes are on all eight corners. The lower eyes are connected to fence “T-posts” to anchor the building. Bill and Jim (K6JNX) cleaned the perforated areas, then fastened custom cut aluminum sheets over the holes, attached with epoxy and sheet metal screws. John 3 (K6MWK) has volunteered to fabricate new solar panel mounting frames that will keep the lower edges of the panels out of the snow and anchor to the upper lifting eyes. No more holes through the roof! A protective coating still should be applied to the entire roof.

John added that the 6 m antenna, not being used at present, has electrically failed. The 2 m repeater antenna is looking kind-of bad, but still functions. Working on it would mean accessing the top of a spindly and weathered pole, with no climbing steps, about 20 feet in the air. Doing that safely with a ladder or climbing spikes seems impossible. A personnel hoist would work, but having one handy at the top of the peak is hard to envision. Terry volunteered to check with his volunteer fire department associates to see if they might have a practical solution.

Volunteer License Exam: Phil (new call WA6PH) reported that 5 volunteer examiners showed up and one examinee. Phil, Mike (KA6HII), Gordon, Jon, and Terry were the VEs. Norm Wilder passed the Tech portion with points to spare, then gave the general a try. Not quite there yet on the General. Phil

had Gordon (KD6TLE) take the lead on the test, so we could have another examiner familiar with the total test procedure. Phil was really worried about getting the new Extra class question pool tests before the exam. We had at least one prospective candidate for this test, that unfortunately couldn't get to the exam. ARRL VEC did indeed get the last of the test material to him on Saturday morning. The test was at noon.

Member Events: As the volunteer exam material was stressing Phil, another matter didn't help. Plumbing issues started to crop up at his residence that were tracked down to a large tree growing directly over the pipes. The solution at hand is to remove the tree, but that is his only permissible support for his HF antenna. This story is to be continued.

Phil had other more encouraging news. He had convinced two of his grandchildren that it would be worthwhile to talk to Grandfather by via radio. Not only were the grand-kids challenged by that plan, but Phil's son was actually seeing it as a good endeavor.

Randy, our inner city school teacher, had some interesting if not so encouraging experience in getting students interested in two way radio.

Silver Peak: The roof needs to be coated before winter. Any volunteers?

Motion to Adjourn made and seconded at 8:45 pm.

Randy had brought two boxes of Sees candy to the meeting as an incentive prize for the raffle. As the raffle was skipped in favor of continuing the meeting, the candy was still on the counter. Paul (KK6BAF) was the one to come up with a solution – open a box a sample a few pieces. The boxes were empty before the room was closed. Thanks Randy.

Phil and ED donated \$5 each to the equipment fund, even without a raffle prize.

NOTE: Long time and loyal club member Earl Gann's (KI6AIK) funeral services are this Saturday, 10 am, at the Grace Lutheran Church in Bishop. This is at the far north end of Fowler Street. Years of working as a mining engineer at the Pine Creek mine and its associated radon gas took its toll. When not working underground, Earl liked to do bird watching. He always had eager answers to any on the air request for information about the Valley's birds. An amazing knowledge of them. He also supported the BARC in any way he physically could. Earl will be missed.

Jon Patzer, NW6C, Secretary, Bishop Amateur Radio Club, Inc.