



January 15, 2024

STANISLAUS AMATEUR RADIO ASSOCIATION

Repeater Committee annual report regarding the recommended operating procedures of club equipment and the state of the club repeater system.

2023/2024 Repeater Committee

Lucian Thomas KF6NPG Club License Trustee and committee chairperson

Mark Price N6ARP club Vice President and committee member

Paul Owen W6UHF committee member

Patrick Dunbar KG6AZZ committee member

This report has been prepared by the Club License Trustee on behalf of the repeater committee.

I would like to take this opportunity to thank our former trustee, Leroy Campbell NV6S, for his many years of devoted service to the club as a member and as the trustee.

The Stanislaus Amateur Radio Association (hereafter referred to as SARA) owns and operates five repeaters and two packet digipeaters.

Repeaters:

145.390 – pl 136.5

145.110 – pl 136.5

224.140 – pl 136.5

440.225 – pl 136.5

51.800 – pl 136.5

Packet digipeaters:

144.910 node name SARA

145.070 node name SARA

The repeater equipment (except for the 145.110 repeater) is located at the club-maintained repeater site on Mt. Oso. The 145.110 repeater is located at the City-County Administration building in downtown Modesto. The digipeaters are in the Bureau of Reclamation repeater building on Mt. Oso. All the club repeaters are coordinated through the Northern Amateur Relay Council of California (NARCC).

SARA maintains two amateur radio club licenses which are registered to the club Trustee through the FCC. WD6EJF is used as the call sign for the repeaters and digipeaters. W6ERE is used for club activities such as field day or special events. WD6EJF is valid through July 30, 2028, and W6ERE is valid through February 12, 2027.

Repeater System General Operating Guidelines

SARA's repeater system is open for use by all licensed amateur radio operators. Users are encouraged to become members of or donate to the club. These member dues and donations are used for the maintenance of the repeater system and most importantly to pay the rent on Mt. Oso and the PG&E electric bill.

All users are expected to follow the rules and guidelines of part 97 of the Federal Communications Commission (FCC) and to be considerate and respectful to others when using the repeater system. Users are expected as much as possible to adhere to The Radio Amateur's Code.

THE RADIO AMATEUR'S CODE (as published by the American Radio Relay League (ARRL) The National Association for Amateur Radio).

<https://www.arrl.org/amateur-code>

The Radio Amateur is

CONSIDERATE...He/She never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...He/She offers loyalty, encouragement, and support to other amateurs. local clubs, the IARU Radio Society in his/her country, through which Amateur Radio in his/her country is represented nationally and internationally.

PROGRESSIVE...He/She keeps his/her station up to date. It is well-built and efficient. His/Her operating is above reproach.

FRIENDLY...He/She operates slowly and patiently when requested; offers friendly advice and counsel to beginners; kind assistance, cooperation, and consideration for the interests of others. These are the marks of the amateur spirit.

BALANCED...Radio is a hobby, never interfering with duties owed to family, job, school, or community.

Patriotic...His/Her station and skills are always ready for service to country and community.

- *Adapted from the original Amateur's Code, written by Paul M. Segal, W9EEA, in 1928.*

Repeater System Equipment Status

Overall, the repeater system equipment is in good working order. There are a couple of issues that the repeater committee will be addressing during 2024. Some will be short term projects and others long-term requiring planning and budgetary considerations. Thankfully the “snap, crackle, pop” on the 145.390 repeater seems to have been resolved. The Yaesu 440 fusion repeater works on analog only. For some reason, the fusion component has failed. We have tried updating the firmware with no success. We plan to reset it and reprogram the repeater this spring.

Tower

The guy wires to the tower have been tightened. The broken 440 antenna bracket has been repaired. Thanks to club member Skylar KO6AZI for his assistance in making this repair.

Mt. Oso repeater building

The building's foundation needed repair and Elias KN6GZW was looking for an Eagle Scout project. He asked if he could take on the foundation repair as his

project. The club board agreed, and Elias went to work. He along with his dad Jason KN6HAG and other scout leaders inspected the building. Elias planned and coordinated the repair under the watchful eye of his dad Jason KN6HAG and four adult troop leaders. Along with the troop advisors, Elias and six other Boy Scouts completed the work in October. As a bonus they cleaned up all the debris from the foundation repair and the old foundation next to our building. It turned out great and the building should be good for another 40 years. Their work is greatly appreciated, as are all the club members who donated money to fund this worthy project (Elias took on the job of soliciting donations for the repairs).

Power

The repeater building is powered by electricity provided by PG&E. There is currently battery backup power for the 145.390 and 440.225 repeaters.

During the previous year we noticed a spike in our power. Upon investigation it was determined that the back power batteries for the 145.390 had failed and they were causing an electrical use problem. Those batteries were removed, and the club board authorized the purchase of a 100-amp Lithium iron phosphate battery for replacement. We also installed a more efficient power supply for the system. With these improvements we noticed a drop in our power use and will save approximately \$238.00 from last year's power bill.

In January there was a significant rain event on the west side of the county, including Mt. Oso. There was so much rain that it washed out the road to the repeater site. We had several power outages and the backup power worked at first. During the last outage, our power did not come back on when power was restored by PG&E. The road was washed out and we could not go up to investigate and it was out for several weeks. Fortunately, a TID employee who is a ham, Robert KJ6HFZ, was able to drive up to the repeater site in his work truck to do some work for TID. We contacted him and he checked inside our building and discovered that a power connection had become loose. He fully reconnected it and power was restored. This power pole connection now has a locking clip on it to prevent it coming loose.

The repeater committee is currently in the planning and evaluation stage of installing a solar system to keep the batteries charged during times of electric power being offline. We will look at powering our site with solar power only to see if that is feasible.

Routine maintenance

We try to visit the repeater least every three to four months unless there is a need to go up sooner. Routine maintenance includes cleaning the repeater building, inspecting the equipment, rodent abatement and weed control.

During this past year we went through old equipment and got rid of what was not needed and took it to recycling. One of our goals next year is to cut down a large bush near our building for fire prevention.

If anyone has questions or concerns regarding the SARA club repeater system, please contact me or any of the committee members.

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