



*Roger Gregory, W4RWG
119 Royal Oak Drive
Union, SC 29379-9710
w4rwg@sera.org*

From the



President's Desk

Hello South Carolina,

It has gotten cold in South Carolina. Got up this morning and it was 24 degrees. I need to pick a warmer day and get up leaves. December 19 Kathy and I will celebrate 50 years of married life. Time sure has gone by too fast. I wish I could do it again. Some things I would change but not much.

Repeater Owners / Builders, a Hobby, or a way of Life?

For the last three years or so I have been working with SCHEART to have a repeater in Union. The SCHEART network was the brainchild of John Crockett, our former SC Director who's untimely death left a void in the SERA, SCETV, and Amateur Radio in SC in general.

We already had a 180 tower, DB 224 antenna, duplexers and poor man's hardline already installed and ready for the repeater. After about a year of waiting for approval, SCETV sent up their crew out of Columbia to get us "online" SCETV only hires Amateur Radio Operators and they have a grace period to obtain at least a General License. I quickly discovered they were the best bunch of guys I ever dealt with. They are very knowledgeable, very dedicated and most willing to go above and beyond, especially Brandon, Bobby, Shaun, and Mike. These dedicated Men quickly became friends and I could plainly see they were just as determined to make this work as I was, maybe even more. They brought up a Motorola MSF 5000 repeater programmed to a pair I had coordinated for Union. Everything worked well in the daytime, but when the temps cooled down at night, noise started.

I communicated with the "King" of repeaters Danny Hampton and played him a recording of the noise. He said he had encountered this a few times over the years. He said some he fixed, some he didn't. He made some suggestions and still no luck.

We decided to sweep the feedline and antenna. It showed an increase in SWR at night when temps dropped, but not enough we thought to cause a problem. Then we thought about the possibility of some outside source causing noise. We rode around for hours at night on several different occasions with a spectrum analyzer looking for noise. Found a few street lights the needed replacing that were arching and a few tree limbs touching power lines. We called two different power companies that owned the lines and got that repaired. We thought, "we got this now". Next night the noise was back.

So we decided to start changing equipment out. We changed the entire repeater, duplexers, power supply, put a heater in repeater shack, added more cans to duplexer, of course, we changed the IRLP box and router. Nothing seemed to work. We finally had to turn it off because we were causing interference over the whole State when linked. Those SCETV guys didn't give up, especially Brandon and Mike. This was a good location so they said, with better than average coverage and great internet connection, so they wanted us in the Network. A couple of months went by and a Motorola Quantar Repeater became available. After replacing the repeater things improved greatly. We felt like we were on the right track for the first time in three years.

We only heard just a little noise every now and then. I was told that the Quantar is designed different than the MSF 5000 and the power drops if high SWR was present. Noise was now almost to the point we could live with it. No problems checking in training nets, Etc. Then we decided it might be a good idea to change the poor man's coax to real hard line. We felt this would complete the "fix". We hired a tower to change out the coax to hardline. The "repeater money" was just about gone now. Would you believe more noise than ever! Off goes the repeater again. Brandon said well, better feedline picks up the problem more. At this point we determined we had changed everything but the antenna itself! A 1000.00 DB 224 doesn't go bad, or does it? So we put up a non-commercial all directional antenna about 30 feet in the air, ran plain old coax and ran it for over a week with no noise at all.

We have now purchased an old stock new Com Pro antenna and waiting on a warm day for tower guys to change it out.

By the way, the location of this tower is the same location of the old hanging grounds from the 1800's. I am wondering if that has anything to do with it! I sure hope the new antenna will finally complete the project. It has become more than a repeater install to us, it is now a "quest"

On another note, South Carolina needs a Correspondent to write news for South Carolina for our online Journal. One would need to communicate with Clubs in SC and write an article to include what the Clubs are doing in the State. This would be an appointed volunteer position. Anybody interested present a resume to me or the SC Director Matthew Littleton. I did this for about 15 years and can tell you more about it if you are interested. Send me an email.

73 Roger W4RWG

w4rwg@charter.net