

History of the 146.94 Repeater in Waseca, MN

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In the late 60's or early 70's the Viking Amateur Radio Society, the first of several VHF repeaters on the air here in Waseca. The text is summarized from a document that I remember was given to all new member of the club that briefly described the repeaters, and what was considered appropriate operating procedures at that time.

The W0UGR repeater system was somewhat complicated. The 34/94 repeater, sometimes referred to as the "big" repeater, had separate receiver and transmitter sites. The receive site was located at the home of Jan and Gene on the north side of Clear Lake. Gene's call sign is W0UGR, his wife Jan is WA0GKN. The transmitter site was at the Waseca County Emergency Operations Center. This repeater used a 440Mhz cross town link to send the audio from the receive site to the transmitter site.

There was also a second VHF repeater in Waseca. It was a 146.940 receive and 146.46 transmit repeater, which was referred to as the "little" repeater since it was intended for local use only. This machine was located at Jan and Gene's QTH. The antenna and tower for these repeaters are still located there. Jan and Gene were two of at least four control operators for the repeaters that I am aware of, the others possibly being WB0BAM Charlie Coons and WA0WQI Mike Dobson.

During this time, time the FCC required that a control operator be present to monitor the activity on any repeater when it was in operation. This meant that a control operator was supposed to be "on duty" 24/7. If they could not be there to monitor activity, then the repeater was supposed to be turned off, but that very seldom happened.

Because 146.94 simplex was being used for most 2-meter operations since 146.520 was not yet being widely used in this area, a receiver was need to prevent the big repeater from covering up any operation on 94 simplex. That was why there was an inhibit receiver on the 34/94 repeater. As I recall this receiver was located at the EOC, along with the transmitter.

For about two or so years, a 1650Hz tone was used to enable the repeater. This tone is audible unlike the sub audible tones that are in use today. The tone only needed to be transmitted between one to two seconds at the beginning of each transmission. Many operators built oscillators into their microphones for this purpose. I remember taking part in a club construction project night at the Welch's where we built those oscillators in to some microphones. Those that did not have the tone generator in their microphones tried to whistle up the repeater, by starting with a low tone and changing the frequency to higher tones, like the sound from a slide whistle. This made for some interesting conversations if one station did not start transmitting within the five-second period after previous station had stopped transmitting.

Phone patch operation was done by calling either Jan or Gene on the radio and having them place a phone call to the person that you wanted to talk with, and then having them enable the Johnson Viking Phone patch to connect the you to person you wanted to talk to on the phone.