

# Repeater Usage

## **What is a Repeater?**

A repeater is a combination Receiver, Transmitter, Control circuitry to repeat a received signal of low power through a transmitter power amplifier of higher of higher power. Radio repeaters are usually placed at a high point in a given area.

## **Characteristics of a repeater:**

A repeater's first response to a signal is with the receiver block. If a received signal is of sufficient power the transmitter is turned on and will transmit a tone or set of tones to indicate it has received a signal of sufficient level for repeating.

This would be simple but a good number of repeaters are located in significantly RF dense areas. These other RF signals could trigger a repeater the repeater and cause it to transmit an erroneous signal This leads to a privacy issue first there was a PL(Private listing) tone that eventually evolved into CCTSS (Continuous Carrier Tone Squelch) system that occupies the lower 300HZ of the 300 - 3K audio band pass of a communication receiver. If the repeater receiver is fitted with a with a CCTSS decoder then it can pass on the specific signal of a certain received signal. The inability of the CCTSS will block the repeating of the modulation carried on the carrier.

The combination of received carrier strength and the CCTSS makes a repeater respond to a carrier but not repeat the modulation.

In amateur radio the modulation is usually someone's voice.

## **Besides this:**

There are certain rules of courtesy that should be practiced.

1. If you hear someone you would like to talk to listen long enough to realize there may be one or more other ham operators in the conversation and make your interruption cautiously.
2. To let other hams know you are available to talk you might listen to a repeater to find out that no-one else is using the repeater and then announce yourself as listening. If someone else is listening and has inclination to talk to you the other ham will respond.
3. You should use language suitable to a large listening group. You never know how many people might be listening when you transmit.
4. It is a good idea if you are in a conversation that each participant leaves enough time between the previous talker and himself so someone may interrupt if someone wants to.