CTCSS explained.

Continuous Tome Coded Signaling System (CTCSS) was developed in the 1960's to keep the noise from being heard.

CTCSS is an audible tone sent during your transmission, but the receivng radio filters it out so you don't hear it. If it matches what the other radio is expecting, the voice is heard on your radio, or you just use the MONITOR feature, and you will hear everyone on the frequency, including any noise.

It also allows many people to use the same repeater for multiple customers, and they don't hear each other unless they MONITOR the frequency. In other words, they use the MONITOR feature on the radio. Many commercial repeaters work this way as they RESELL time on the same repeater to different customers. It's the old PARTY LINE on a phone. Remember those days?

But, as you might imagine, customer s "step" on each other occasionally unless they MONITOR the frequency to see if it is in use. Many commercial radios use the mic clip to activate the MONITOR function. In other words, you pick up the mic (un-switching ground to the hang up clip), and now you are monitoring the frequency for other traffic before you talk because the repeaters are shared among many users. Many commercial radio providers required this action to avoid this problem.

Motorola dubbed CTCSS as "Private Line" (PL) and "Digital Private Line" (DPL) and GE used "Channel Guard" as their term. They copyrighted those words!

Digital Coded Squelch System was developed to get rid of the audible tone. It sends quick digital packets to open the receiving radio and is also offered in REVERSE mode. So you may see, for example, 051N or 051R. "N" means normal and "R" means reverse. They must match at both ends or nothing will be heard unless you MONITOR the frequency, then you hear everything.

So, if you don't ENCODE the transmission with the proper "PL" or "DPL", you may not "open up" the repeater or the receiving radio. If you don't have the proper DECODE PL or DPL, you will not receive the audio on your radio, or it not "open up".

HOWEVER: using the MONITOR function or just not using CTCSS (open squelch) you will hear all transmissions on the frequency. Remember in ham radio, Part 97, you can’t have a private conversation nor is encryption allowed.

Also, if you utilize CTCSS on a simplex frequency and don’t disable it once you start a QSO, others may be trying to reach you or interrupt you to make a call out, and now you may be interfering with them! Be very careful. CTCSS is RARELY used on simplex channels because of that issue. Remember, we all have to abide by the rules.