

Amateur Repeaters are a great resource to Hams and are the gathering point for communicators to conduct practice drills, communicate during declared emergencies, or just carry on day-to-day conversations. Most consider our VHF and UHF repeaters a primary means of communicating by voice, but inherently being a “repeater”, it will repeat many other types of signals.

Our 145.150 repeater system is capable of passing many non-voice modes such as Slow Scan TV, RTTY, and even PSK-31! Virtually any mode that is normally sent over the HF bands with a sound card will successfully be passed by the repeater so long as you do not exceed the time out timer of the repeater. Even with some tweaking of your TX-Delay parameters in your TNC, you will probably be able to pass Packet Radio info through the machine, and this includes APRS and VHF WinLink. Just think of how helpful it would be to pass various kinds of info over the repeater during a disaster recovery.

Several years ago the BCRA sponsored a Slow Scan TV net on our repeater, and it was a local success. Some nights we had 20 or so check-ins sharing their latest digital photographs. This did not go off without a few technical glitches. Many people were connecting their sound card interfaces to their VHF rigs for the first time, and many were over-driving the transmit audio, which causes the repeater receiver to clip the audio. It's always better to start with low audio settings and gently increase until you are at the proper levels. Unlike on HF Single Sideband where your TX audio is generating your modulated RF power, on FM you are already at full TX power and inherently have a good signal to noise ratio even with seemingly low audio.

Our repeater uses a PL tone, which means you must be transmitting a 123.0 Hertz tone with relatively low deviation of 400 to 600 Hertz before the repeater controller will pass your signal to the repeater transmitter. When you hear the repeater audio “clip”, this is because your regular audio, either a loud voice or an over driven input from a sound card, causes your transmitter's total deviation to exceed the plus or minus 5 KiloHertz deviation. Essentially what is happening inside the repeater is the PL Decoder circuit can no longer hear, or detect, the 123 Hertz tone riding on your signal because it has been washed out by the over-deviated transmitter audio. By reducing your audio drive, which will cut back your total transmitter deviation, the repeaters PL decoder can again detect the PL tone and will pass your desired audio to the repeater transmitter.

Do not be afraid to experiment with some various modes over our repeater as the Trustee and Control Operators have encouraged this in the past. It will give you experience with what may be a new mode to you, allows Technician's who do not have HF privileges to use a mode that is almost exclusively used on HF, and to experience some of the fun. Pay attention to your audio levels to prevent clipping, and encourage others to join you. Practicing during non-emergency times will help you be that much more prepared if your new skill ever needs to be put into good use during a declared event. Be sure you announce often what you are doing in voice mode so people listening understand what is going on. For Example: “This is KB1UDH sending Slow Scan in Scotty 1 Mode”.

IMPORTANT NOTE: Before you try this on other repeaters besides the WA1DGW 145.150 machine, make sure you get the blessings of the trustee of the other repeater. Many repeater owners will not tolerate squeaky-squawky noises blasting through repeaters. Not all groups will encourage, or tolerate, these types of things on their repeater. The BCRA is not like other clubs, so give it heck and have some fun!