

Introduction

I needed to tie-in a remote repeater site to my Allstar Linked system, but the remote repeater site did not have usable internet, and we were not allowed to do a Ubiquity hop.

When people ask how it was done, I usually just say “bot-radio”, but it is really an ‘Auxiliary-Station’ in full compliance with FCC Part 97 rules.

Following are instructions on how it was done but first . . .

ARRL explanation of Part 97:

[97.3(a)(7)]." There are a few important rules that apply to auxiliary stations:

- 1) All amateurs, except Novices, may put auxiliary stations on the air [97.201(a)].
- 2) An auxiliary station may transmit only on the 2 m and shorter wavelength bands, except the 144.0-144.5 MHz, 145.8-146.0 MHz, 219-220 MHz, 222.00-222.15 MHz, 431-433 MHz, and 435-438 MHz segments.
- 3) When there is interference, licensees are equally responsible for solving the interference, except where one station is coordinated and the other is not [97.201(c)]. Control links should be coordinated.
- 4) An auxiliary station may be automatically controlled and may send one-way transmissions [97.201(d), (e)].

Uses:

- 1) Remote control of a station at a different location (such as a repeater on a mountaintop), where a radio link is used to make one-way transmissions of DTMF tones to change its operating parameters
- 2) Voice links between two or more stations within a system of stations, such as:
 - (a) Point-to-point links from a repeater's remote receiver(s) back to the main repeater site.
 - (b) Dedicated point-to-point links between different repeaters in a "system" of either full-time or part-time linked repeaters.
 - (c) A combination of remote control and point-to-point voice links intended to control and carry the voice signals from the control point to the transmitter(s) of a remotely controlled station.
(This is the equivalent of replacing the wire between the microphone and the transmitter's mike input with a radio link from the microphone to the remotely located transmitter.) This is commonly referred to as an "uplink."
 - (d) Point-to-point links from the receiver(s) of a remotely located station back to the station's control operator(s) at their control point(s).

Ham Monograph

Remote Allstar Node

