1. Simple USB is the radio configuration.
   a. This is normally part of first-time setup. I prefer to set manually in ***'12-simpleusb-tune-menu'***
   b. Radio select? Click <default>. <ok>.
   c. EEprom = 0 <no>
   d. Rxboost = 1 <yes>
   e. Carrierfrom = usbinvert Use carrier detect? <yes>. Invert COR line? <yes>
   f. Ctcssfrom,=no <no>
   g. Invertptt=0 <no>
   h. Plfilter=yes <yes>   ;improves tone removal
   i. Deemphasis=no <no>
   j. Preemphasis =<no> ; may improve Tx quality
   k. Rxaudiodelay = 3 <ok>

2. Know audio values? <yes> see #5below.

3. For changes to take effect: Configuration needs *Asterisk restart*. Node needs *system Reboot*.
   a. Do Putty, if necessary

4. *Admin Menu* allows selectively running setup sections. Black CLI screen appears.
   b. *1 Perform UPDATE*. Do regularly.
   c. *3 Change primary Node number*. Goes through AllStarLink re-setup. Password cannot be special characters.
   d. *12 Run simpleusb-tune-menu*. Allows individually to change configurations.
   e. Plug in Simplex cable and radio or RF-less cable with powered speaker and mic.

5. Audio adjustments are a pot on the board and digital software in '*12 simple-usb-test-menu*'.
   a. Steps help set-up levels for Rx coming in and Tx going out.
   b. Rx audio to the interface board depends on a hardware pot and software digital volume settings.
   c. Set the Rx pot (R9/R12) CCW to near cut-off. Rotate slightly a few degrees as shown below.
   d. Set the Rx voice level. These are starting points. Adjust for your mic, voice, and where you hold the mic.
   e. Simplex with Baofeng UV: Rx = 200, Txa = 55, Txb = 0, pot about 9< o'clock.
   f. RF-less with Alinco EMS-57 & Bose amp: Rx = 500, Txa = 500, Txb = 0, pot about 12> o'clock.
   g. Knock-off EMS-57 type mic & cheap speaker: Rx = 900, Txa = 500, Txb = 0, pot about 12> o'clock

6. '*12 simple-usb-test-menu*' sets audio levels.
   a. Select P to print current values.
   b. Select *E) Toggle Echo Mode* to hear audio play back. Toggle off when finished.
   c. Select *2) Set Rx voice level*.
   d. The display has a marker for 3kHz and 5kHz deviation.
   e. Transmit a tone or speak consistently from mic or simplex radio.
   f. The display should show greater than 3, but less than 5 kHz.
   g. Enter new value. Several <enter> strokes are required. Continue until sounds about right.
   h. Select *3) Set Txa voice level*.
   i. Listen on another node or the cellphone app. Adjust Tx as needed.
   j. Select *4) Set Txb voice level*. Set to 0.
   k. *W) Write, 0) Exit*.

7. If you get reports of your mic being too hot, on Simplex turn down the receiver volume knob slightly.
   a. On RF-less mic, you may need to readjust the pot down or go into the menu to reduce digital volume.
   b. If you see COS toggling on and off, but you do not hear a signal, then the Rx settings are also too hot.

8. *Admin Menu*, *'11 Run Asterisk CLI'* displays the status of the Asterisk software.
   a. Each tone, hang-up, and command is shown in plain language.
   b. Hold down the PTT key, select the switches, transmit the tones from the mic. They are not audible.
   c. They will display in CLI. If not showing, tweak the levels using the above sections.
   d. If you dial the tones too fast, the tones will not have time to process.
   e. <exit> or <quit> will leave.

9. You are on the air. Check it with another node or phone app.
   a. Phone cannot be on same network, switch it to cell.
   b. Alternately read the article for multiple nodes operating on one LAN.

10. Life is good. Enjoy!