Minimizing VarAC Disconnects

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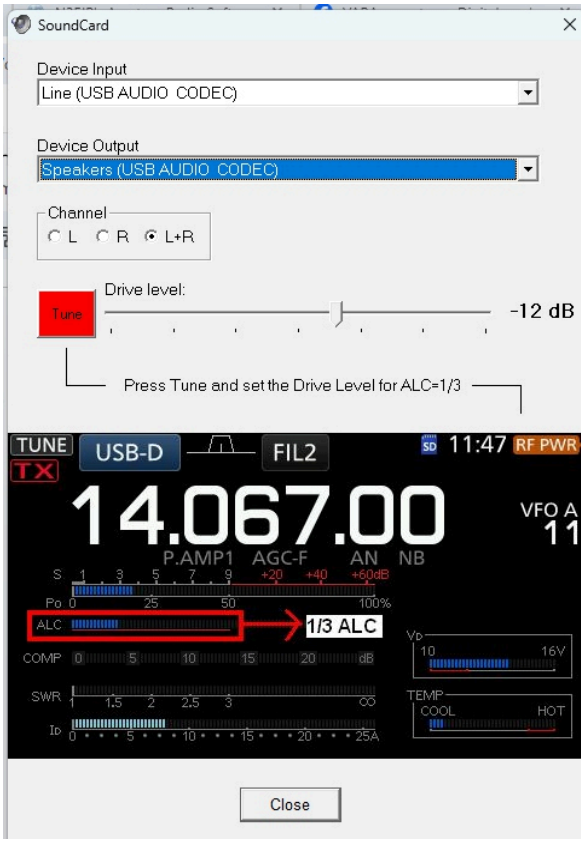
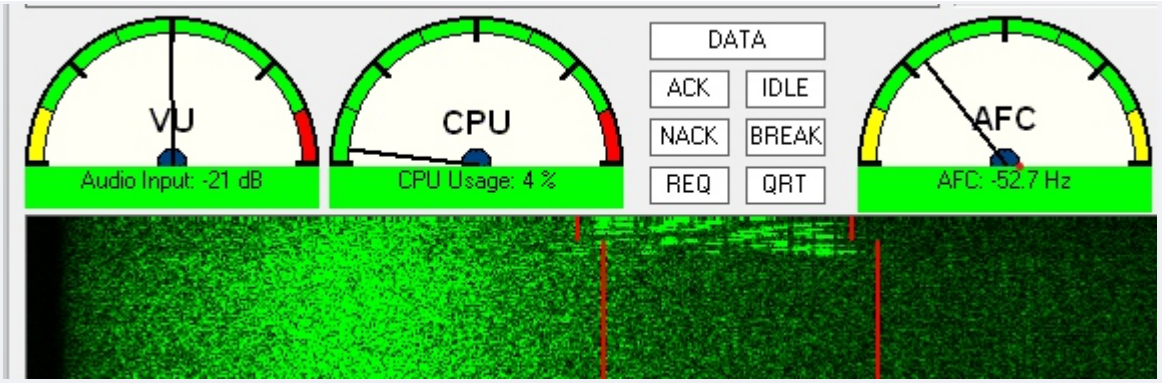
There are many reasons why you might lose a connection when in QSO with another station. The intent here is to give you some ideas about what to look for and to also be able to help your QSO partner in case there's something they should do on their end.

- One of the stations sent a <DISC> command. This happens occasionally at the end of the QSO where the other station has this command in a canned message and sends their "final" before you do. Your "final" will then never be sent.
- There were too many retries due to loss of signal. The default setting for retries is 15 which is generally appropriate but can be adjusted in the VARA HF Settings → VARA Setup menu.
- In VarAC Settings → QSO, there is an Auto disconnect option whose default is 5 minutes. This is normally adequate. It can be set to 0 (zero) if you wish to disable this feature.
- Be sure to carefully follow the instructions for setting the Drive Level under VARA HF Settings → Soundcard. It is important to sufficiently drive the transmitter without creating unwanted audio harmonics.



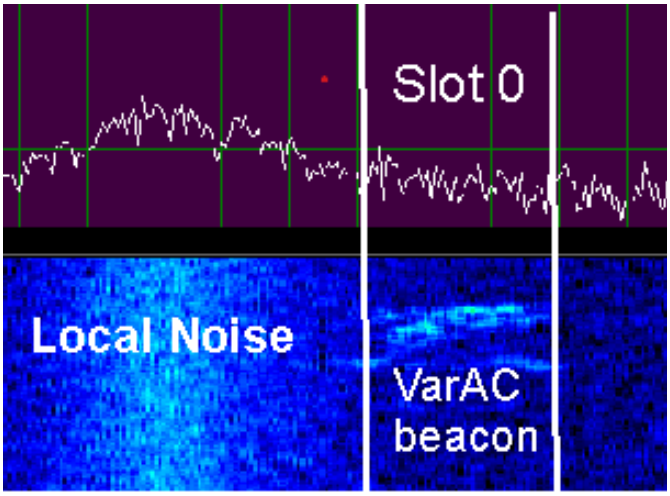
- If the received signal is outside the two red lines in the VARA HF waterfall, one or both of the stations would be on a slightly different frequency. When a VARA HF chat begins, the AUDIO frequencies are adjusted within VARA HF so that two stations appear to each other to be on exactly the right frequency. This automatic frequency correction is reflected in the reading in the AFC meter in VARA HF which should remain in the green regions. VARA FM doesn't have or require AFC.



Here we see that my station and a beaconing station are 52.7Hz apart. The red bars show that VARA HF automatically adjusts so that it appears that both stations are exactly on the same

- The receive level should be well within the green arc of the VU meter in VARA HF. In VARA, adjust the RX level control for about a -10 dB reading on the VARA HF VU meter with just noise on the channel (no one transmitting)
- Watching the S/N meter in VARA HF as well as the SNR(dB) values in VarAC gives an idea about whether the signal to noise ratio might be trending too low for either you or your QSO partner and cause a disconnect. The Graph button in VarAC (blue button below the CQ calls window) will show a history of signal strength for the QSO. Sometimes the band gods are unhappy.
- It's also a good idea to watch the waterfall in VARA HF to see whether an adjacent channel or other type of QRM or interference might be impacting the QSO and potentially cause a disconnect. Also, turning up the audio or the radio from time to time might help to identify interference on the slot.
- Check that the receiver’s bandpass is correct. 600Hz is often suggested for operation at a 500Hz to account for stations that might be slightly off frequency.
- Local QRN from weather conditions or electronic devices is not your friend. This is reflected in the S/N meter in VARA HF.

You’ll notice some local noise just below Slot 0 making Slot 1 not a very good choice for me tonight. This is what it looks like on a SDRplay RSP1A used as a panadapter with my receiver bandwidth set to 600Hz to make sure this adjacent noise doesn’t encroach on Slot 0.



- There appears to be a bug where if both parties in a QSO hit (ENTER) at the same time, it would cause a disconnect.
- Another possibility is that the other station may be operating on an old version of VarAC. You can check their version by using the INQUIRE menu on the right side of the screen when in Advanced Mode (upper right corner).