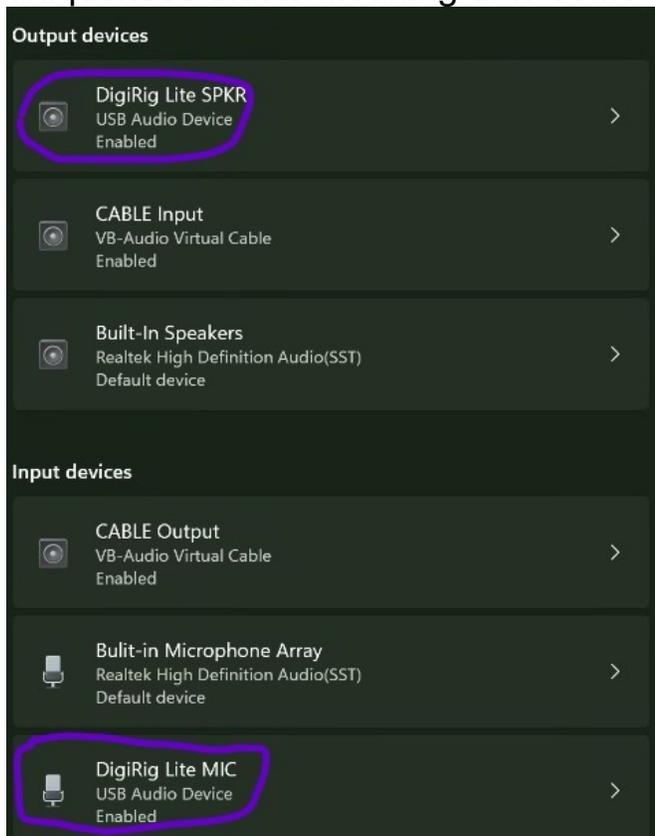


# Configuring VARA FM and DigiRig Mobile For Winlink Express

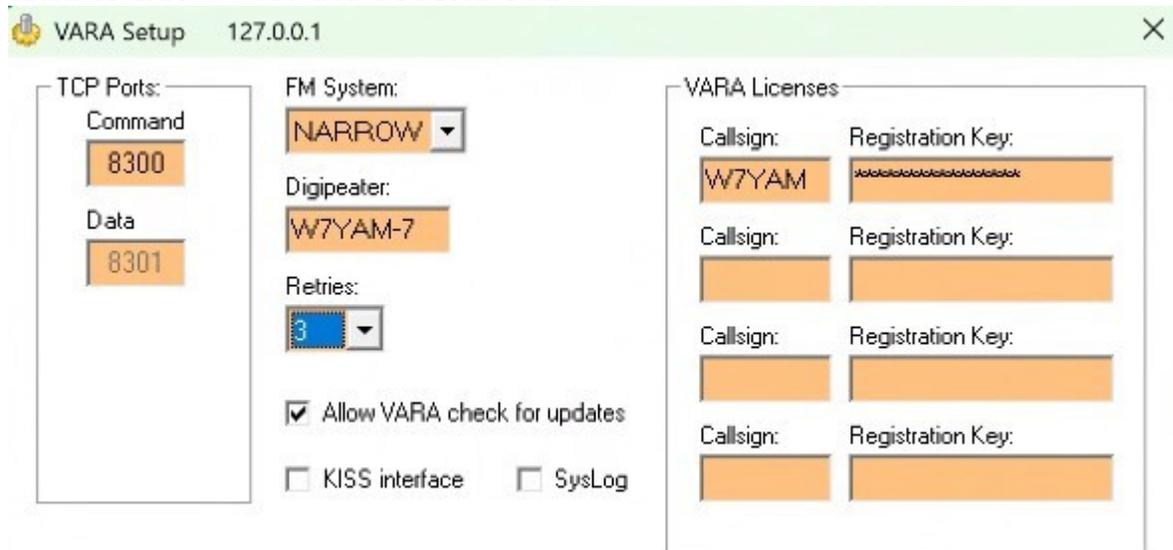
I've made some screen shots for the VARA FM settings I'm using with the DigiRig Lite. Except for the Push To Talk settings it should be nearly identical.

First thing I recommend to all configurations of soundcards is to rename them so they are easy to identify.

Here is a picture of the soundcards on the PC that runs the W7YAM-12 RMS Gateway. Using the properties features of the sound devices I've renamed the output device for the DigiRig Lite as DigiRig Lite SPKR. The Input Device has been renamed to DigiRig Lite MIC. This makes it easy to distinguish between multiple sound cards. If I have two similar devices, I will also add the Radio name. On one gateway I have them named DRA-50 IC802H SPKR and DRA-50 IC802H MIC, for the Speaker and Microphone device names. Be as explicit as possible for the name so you have uniqueness. It is surprising how soundcards can proliferate on a computer supporting radio applications. Try to have uniqueness that is meaningful to someone else.

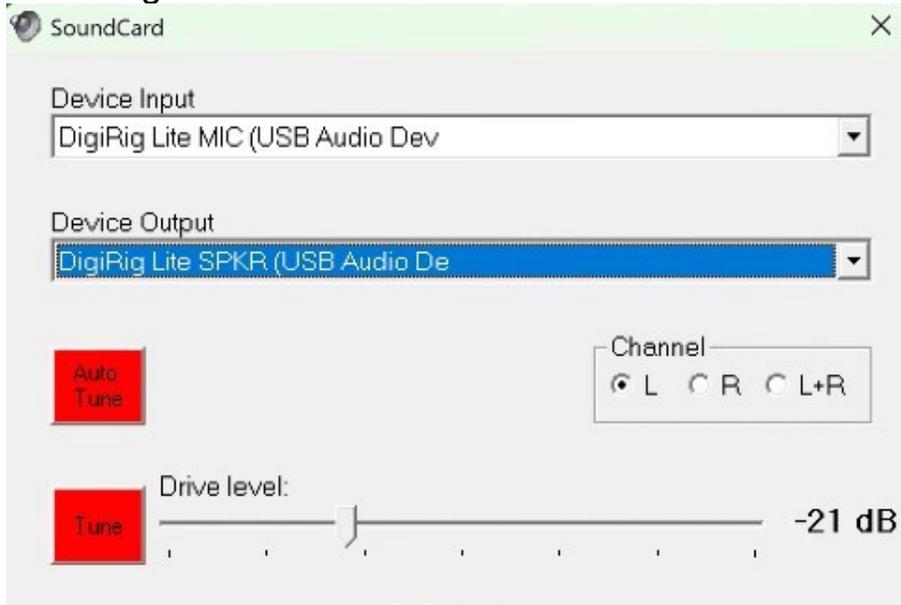


For VARA FM settings, I have the following for the over all settings level. With your system you will also be using Narrow. If you ever want to operate your system as a digipeater, just provide your callsign with an SSID. Anytime you radio is turned on and the computer is connected with VARA FM active your system can be used by other as a digipeater. You will need to apply your call signs on this page. 8300 and 8301 are the default values. If you want to have two instance of VARA running, two active radios such as on a gateway, you will need to assign a different number as these must be unique values on the PC. I tend to add 50 for the second set.



For the soundcard configuration under settings, you will need to pick you input and output devices from the drop downs here is where the names are helpful.

**NOTE** the Drive Level: with SignalLinks and DRA's I usually start at about 75% full scale of the Drive Level slider. I found the DigiRig's sound levels to be hot, so start at around 20%. Once it looks like things are working then run the Auto Tune to get the transmitted volume level best for the Gateway you are using.



For PTT, the DigiRig Mobile was originally targeted for HF radios and expected Serial PTT to be managed via passthrough CAT control via the DigiRig. Since most UHF/VHF radios don't support CAT control, the Mobile will activate the PTT on the DataPort/Microphone jack via a received RTS signal. You will need to use what ever com port your DigiRig show up as on your device lists. I've no used one so I don't know how it appears on the PC. The DigiRig Lite uses the RA-Board process, and the setting for which device is on the SoundCard dialog if you have RA-Board selected.

PTT Via

CAT  COM  RA-Board  VOX

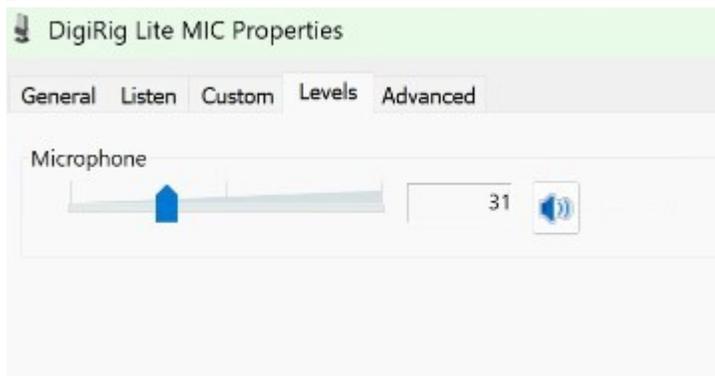
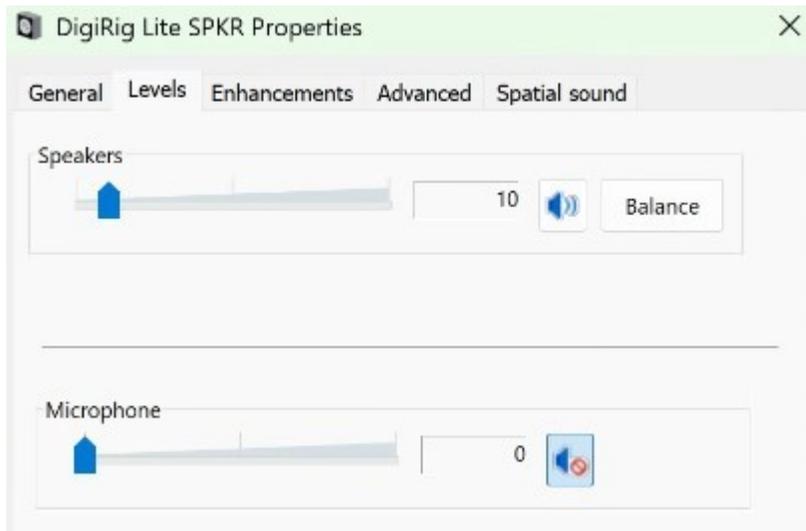
COM Port:

COM1

PTT Pin

RTS  
 DTR  
 RTS+DTR

You will also need to go into your sound settings and adjust the levels for the Microphone and Speaker related to the DigiRig. I would recommend using the settings I have below for your initial startup. The microphone on the SPKR dialog window is for devices that use the same bayonet jack (Like some wired headsets) for both the speaker and microphone. Leave it zero with the DigiRig.



Notice the low levels for both the speaker and Microphone.

With Squelched turned off adjust the Microphone level setting the VU setting on the VARA is bouncing around -10 db. When operational fine tune this with PING.

**NOTE:** If you are using the headphone jack on the radio to get the received sound from the radio. Turn the squelch off on your radio and leave it off. This

will allow you to work weaker stations. The headphone plug turns off the radio's speaker so keep the squelch off.

The sound on the DigiRig is very hot for both send and receive, so much so, that if the volumes are too high the signals will be clipped and or distorted. Unfortunately we don't hear it, but VARA FM won't be able to decode the received sounds or the recipient won't be able to decode if the transmitted signal is too high. I've also found inexpensive radios won't transmit if the microphone Speaker level is too high.

Use the Ping feature and the microphone level to fine adjust to the highest SNR value on you received sound. (Page 30 on the document below)

This coupled with my document at: [https://qsl.net/w7owo/YCARES%20Winlink%20Training%20Documents/YCARES\\_WinlinkSoundCardTraining.pdf](https://qsl.net/w7owo/YCARES%20Winlink%20Training%20Documents/YCARES_WinlinkSoundCardTraining.pdf) should get you started.