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# Saguaro Construction Note #12

05/04/2023

**Software Update – Rev A.01.07**

This software release fixes bugs in version A.01.06 and adds a few features:

\* A.01.06 uses the RFG control as AGC threshold (CW = 0, CCW = -60) when  
 AGC is on. Note that clockwise is max gain in both modes. When AGC is on,  
 you will typically want to crank the threshold all the way down to -60. This is   
 the max gain that the AGC will allow, so, for very weak signals when AGC is

on, increase the pot slowly until the desired signal strength is achieved.

\* A.01.06 added NBFM. A.01.07 lowers audio gain, which was too loud

\* A.01.06 used larger font for center frequency display

\* A.01.06 allowed right click on certain buttons for backwards motion (not

available using touch of course)

\* A.01.06 eliminates clicks in audio that were most noticeable on CW and USB

\* A.01.07 fixes a bug that caused occasional “buffer underruns” in the audio  
 stream, which could be heard as a short gap in the audio (actually fixed in  
 A.01.06, but came back because of the fix to the clicks!)

\* A.01.07 changes the text color inside the Exit button to bisque for easier   
 readability

To install:

1. Save the zip file to a convenient place on a PC (not Saguaro)
2. Extract the three files (sw\_rx.py, sw\_rx\_globals.py and stream\_sdr\_to\_audio.py)
3. Copy the three files to a flash drive
4. Eject the flash drive
5. Turn on Saguaro
6. Exit the Saguaro program if it is running by clicking “Exit”, then “No”, which takes you to Linux
7. Insert the flash drive into a spare USB port on your Saguaro
8. Linux will see that you have inserted a flash drive and ask you if you want to open it in File Manager. Click Yes
9. In File Manager, navigate to the media you inserted, locate the three files on that drive, highlight all three, right click and select “Copy”
10. In File Manager, navigate to home/dzkit/Saguaro. You should see the same three files (sw\_rx.py, sw\_rx\_globals.py and stream\_sdr\_to\_audio.py)
11. Rename the existing files by adding \_orig to the names, e.g., sw\_rx\_orig.py
12. Paste the new files in that same folder
13. Exit the File Manager
14. Click the “Eject” symbol on the top menu bar
15. When you see the “safe to remove” message, remove the flash drive
16. Start the Saguaro program by clicking the raspberry, then Other, then Saguaro
17. The program will also continue to start automatically when you turn power on.