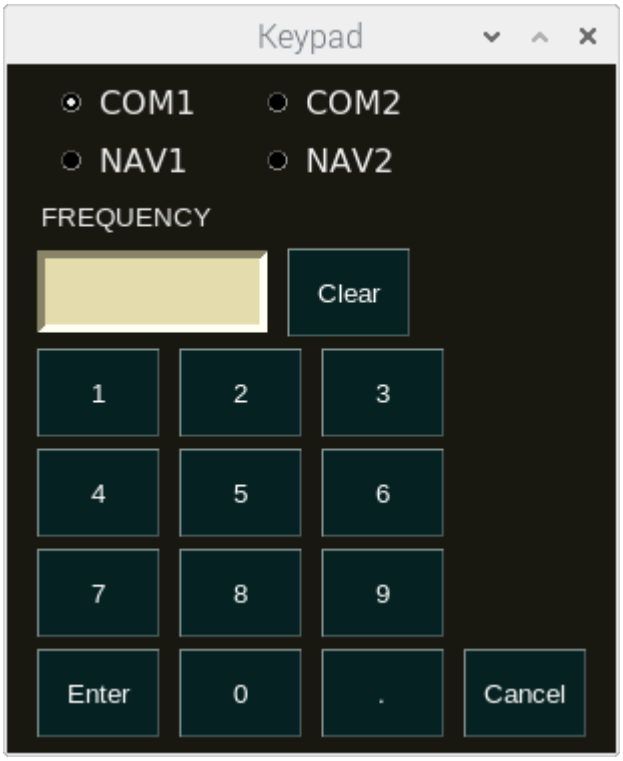
PiStack Manual

Version 0.4.1-beta



Intro:

PiStack is a remote radio interface for FlightGear, that is designed to work with the Raspberry Pi Official Touchscreen and the DC-3. However it should run on other devices that can run Python3. It may operate with other aircraft, however Nasal code could compromise it’s operation.

License:

Dependencies:

- Python 3
- PySimpleGUI

Logic Holes:

- FlightGear needs to be configured and running before PiStack can run.
- PiStack will go out of sync if radio settings are changed from within FlightGear.
- PiStack was written for and tested on/for the DC-3.

Installation:

The below installation is written for the Raspberry Pi, however other devices that can run Python will be somewhat similar.

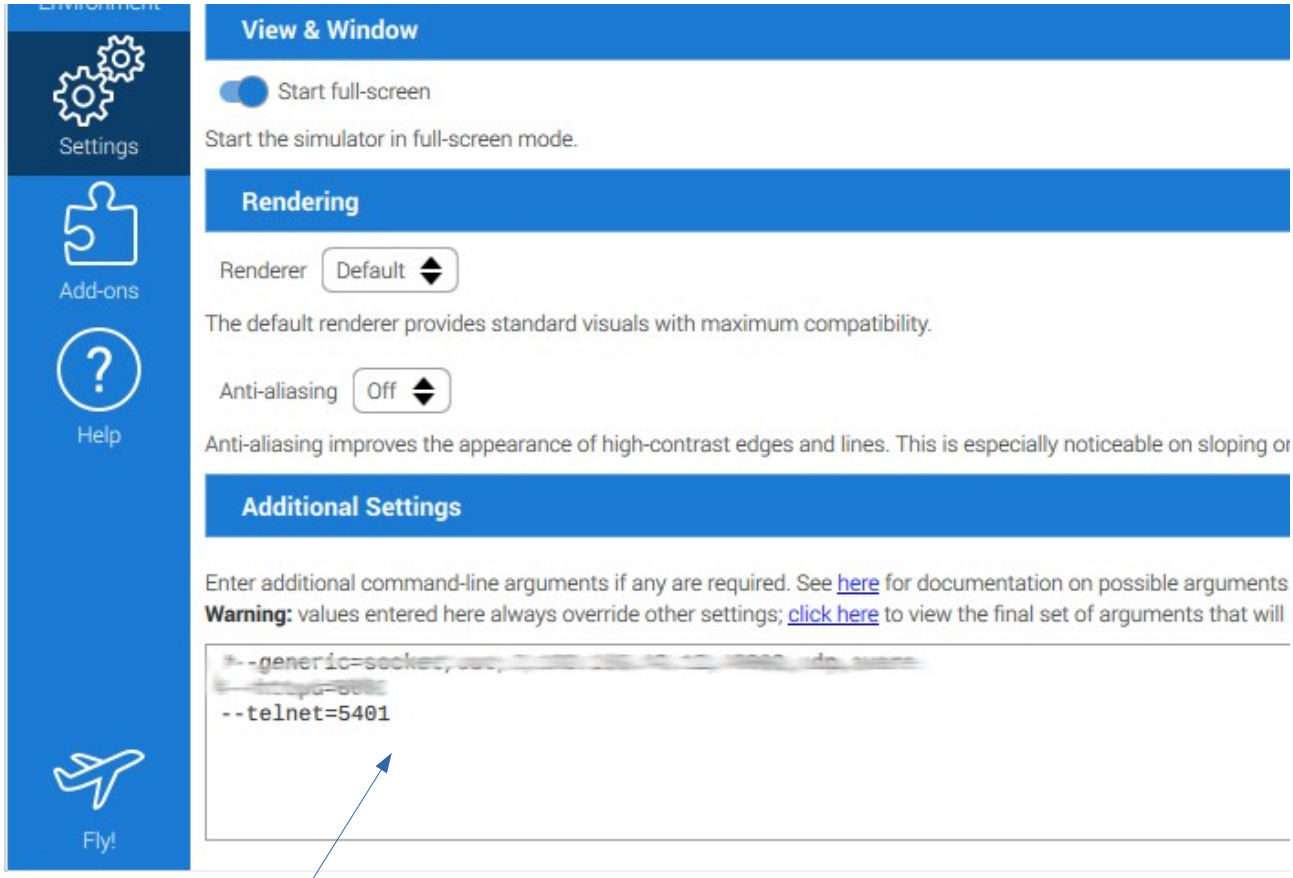
Abbreviated installation:

- Install the Python module PySimpleGUI.
- Create a folder called `PiStack` in your home directory. For example `home/pi.`
- Populate the above folder with `pistack.py and telnet.py.`

More detailed installation:

- Install PySimpleGUI. This can be copied into the below folder with the file found at `https://pypi.org/project/PySimpleGUI/` Look for the `Download files` link.
  - Or use `pip3`. Or something like `python3 -m pip install PySimpleGUI`
- Create a folder called PiStack in your home directory. For example `home/pi/PiStack`.
- Go to `https://github.com/puffergas/PiStack` to find the needed PiStack files and place them into the PiStack folder that you created. The files `pistack.py and telnet.py` are needed.
- In order to make it easier to start PiStack, there is an icon and .desktop file to add PiStack to the launcher menu and or have a desktop shortcut. If used on a different device or if files are located somewhere else, the PiStack.desktop file will need edited.
  - Place PiStack_Icon.png file in to the PiStack folder that you created.
  - Place PiStack.desktop into `/home/pi/.local/share/applications`
  - PiStack.desktop can also be placed on the Desktop, as an option.

Configuring FlightGear:



In the FlightGear launcher, place the command `--telnet=####,` where "####" is the port number.

Configuring PiStack:

At this time the file pistack.py needs edited, in order to configure PiStack. Use a text editor or an IDE to edit the file. Find the below two lines. They should be near line number 25 and 26.

```
25 fg = FlightGear('localhost', 5401)
26 # fg = FlightGear('192.168.##.#', 5401)
```

Notice that on line number 25, that there is no # symbol. That means that line 25 is active (not committed out). In this case, PiStack is running on the same Raspberry (computer) as FlightGear, hence `localhost.` The number 5401 is the port number. This needs to be the same port number as configured in FlightGear.

Below we have configured PiStack to be used on a remote device, via your home network. Notice that line 25 has been committed out and now line 26 is now active. The address `'192.168.##.#'` will need to be edited to match the address of the Raspberry (computer) running FlightGear.

```
25 # fg = FlightGear('localhost', 5401)
26 fg = FlightGear('192.168.##.#', 5401)
```

Don’t forget to save the file.

Bugs and Issues:

- At this time, PiStack has been tested and written for the DC-3.
- Some aircraft Nasal code may interfere with some of the PiStack’s settings. Possible examples may be the volume and On Off button.