

Swamp Blimps Startup Tutorial

Basestation Instructions

- Connect to the same Wi-Fi as the Raspberry Pi
- Run the main.py file

Vision Instructions

Connecting to Raspberry Pi

- Run the command "ssh pi@192.168.0.10#" where # is the Raspberry Pi ID

Pushing code to Raspberry Pi

- Run the command "./copyCodeToPi.sh 192.168.0.10#" where # is the Raspberry Pi ID

Check bash shell script of the Raspberry Pi

- Run the command "nano ~/.bashrc"

Two ways to run the vision code on the Raspberry Pi

1. Start the program on the Raspberry Pi

- Run the command "ssh pi@192.168.0.10#" where # is the Raspberry Pi ID
- Navigate to piStereoVision/build
- Run the program by executing the command "./piStereoVision"
- *Potential Error*
 - Error Message "can't open camera by index" means that it is likely that the camera is not plugged in. The program will not run without a camera. Plug in the camera.

2. Start the program from laptop running Linux

- Run the command "./restartProgram.sh 192.168.0.10#" where # is the Raspberry Pi/Blimp ID
 - Note: Make sure you use **both** arguments, first is IP of Raspberry Pi, second is Blimp ID

Stream from the Stereocamera

- Run the file server.py from a computer connected to the correct Wi-Fi
- SSH into the Raspberry Pi and run the piOffboardStereoVision executable

Additional Notes

Blimp IDs

- Raspberry Pi's get their local IP address and use it as their Blimp ID, by default.
- If desired, you can pass in an optional argument to the Raspberry Pi's code, which will override the blimp ID.
- Example - Default ID

- `“./piStereoVision”` or `“./restartProgram.sh 192.168.0.10#”`
- Example - Override ID
 - `“./piStereoVision [ID]”` or `“./restartProgram.sh 192.168.0.10# [ID]”`