Bot 2024

Building

Build all targets, and run the simulator.

```
./gradlew build
```

Deployment

Run the following command to deploy code to the roboRIO

```
./gradlew deploy
```

If it gives problems, cleaning the project could help. The `--info` option could give more information too.

```
./gradlew clean
./gradlew deploy --info
```

Other Useful Terminal Commands

Useful Commands to Understand

```
./git status -a    //Shows the status of all git branches
./git checkout .   //Resets current changes on the branch
./git checkout new_branch_name    //Switches branches to new_branch_name from a diffe
./git pull //Pulls new code onto the branch
```

Simulation

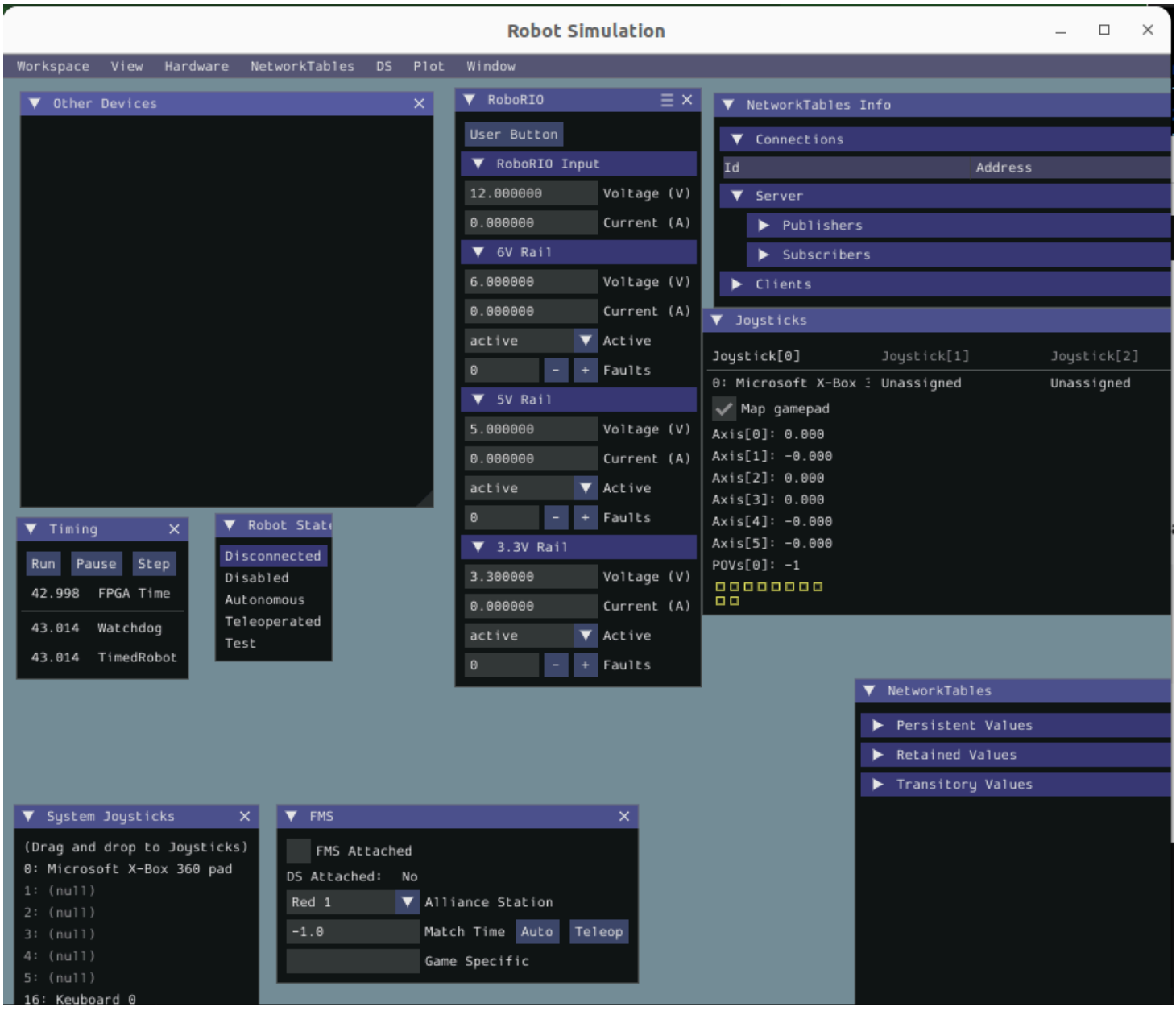
Bot simulation is available in a few ways...

IMPORTANT: The `Map gamepad` in the controllers list must be checked to mock the real bot.

Basic Simulator

This is the data-based simulator panel.

```
# run this from the command line to start the basic simulator
./gradlew simulateNative
```



Extern Sim With Real Driver Station

```
./gradlew simulateExternalNativeDebug
```

or

```
./gradlew simulateExternalNativeRelease
```

Feedforward and Feedback Control

Picking a Control Mechanism

Driver Station Tuning & Deployment

- Flashing the OS
- Deployment Info
- Driver Station Best Practices

Example Code

FRC provides several examples of how to utilize WPIlib on GitHub. It is easier, and faster to copy and paste from these rather than generate new projects all the time.

- All cpp Examples

Differential Drive Help

- PWM Controllers
- Drive classes