

## **Production FW GUI Documentation and Troubleshooting Guide**

# **Revision Table**

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| **Changes** | **Authors** | **Version** |
| [2021/04/2] Document Created | Heimerl, Justin | 0.1 |
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# **Troubleshooting**

**Issue: Program crashes when opening COM port**

Fix: If the COM port selected in the top box is correct, but the program is still crashing, find the COM port manually by following the steps [here](https://answers.microsoft.com/en-us/windows/forum/windows_10-hardware/how-to-identify-com-ports-in-windows10/2591ed8b-805e-4e66-9513-836cdd49ed80). When this is done manually input the COM port into the programming by opening app.py in a text editor. In the set\_com\_port function go ahead and set the port variable to the string “YOUR\_COM\_PORT” where YOUR\_COM\_PORT is the port found in the hardware manager. Other possibilities to find the COM port if this does not work are to use common serial programs such as PUTTY or TeraTerm, and look at what they detect.

**Issue: Program crashes after attempting to read/write data over successful COM connection**

Fix: Ensure the serial cable is plugged in correctly, and the board is powered. A serial connection will successfully estable with power provided, but data with not be received due to the mismatched serial pins. If the problem persists try again with a different board.

**Issue: Program crashes after running script**

Fix: Ensure all script arguments are valid. Valid script arguments can be found at the bottom of this document.

**Issue: Setting a GPIO and reading it immediately after setting does not provide the expected value**

Fix: Confirm the GPIO you are attempting to read is configured as an output, otherwise it will not be readable. Same logic holds true for GPIO’s that are not configured as inputs.

# **Scripting**

The Production GUI gives the user the ability to script inputs to the firmware. This is done by pressing the select script button, and selecting a text file. Commands should be entered in the form: “ Command argument ”, for example a wait command (in seconds), followed by setting a GPIO looks like:

wait 1

set\_gpio K7\_Relay 1

The valid arguments and their results are listed in the table below.

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| Command (argument) | Result | Example |
| wait (argument in seconds) | Program sleeps for the amount of time in seconds. | wait 1 |
| read\_gpio (argument in human readable form) | Program returns the GPIO state over the serial connection. | read\_gpio Fault\_Sig4 |
| set\_gpio (argument in human readable form) (State) | Program sets the GPIO. | set\_gpio K7\_Relay 1 |
| read\_adc (argument in human readable form) | Program returns the ADC value. | read\_adc I\_DC\_Leg1 |
| Set\_pwm\_control (argument in human readable form) | Turns PWM on or off. Control of duty cycle/frequency NOT included in this revision. | set \_pwm\_control PWM1 |