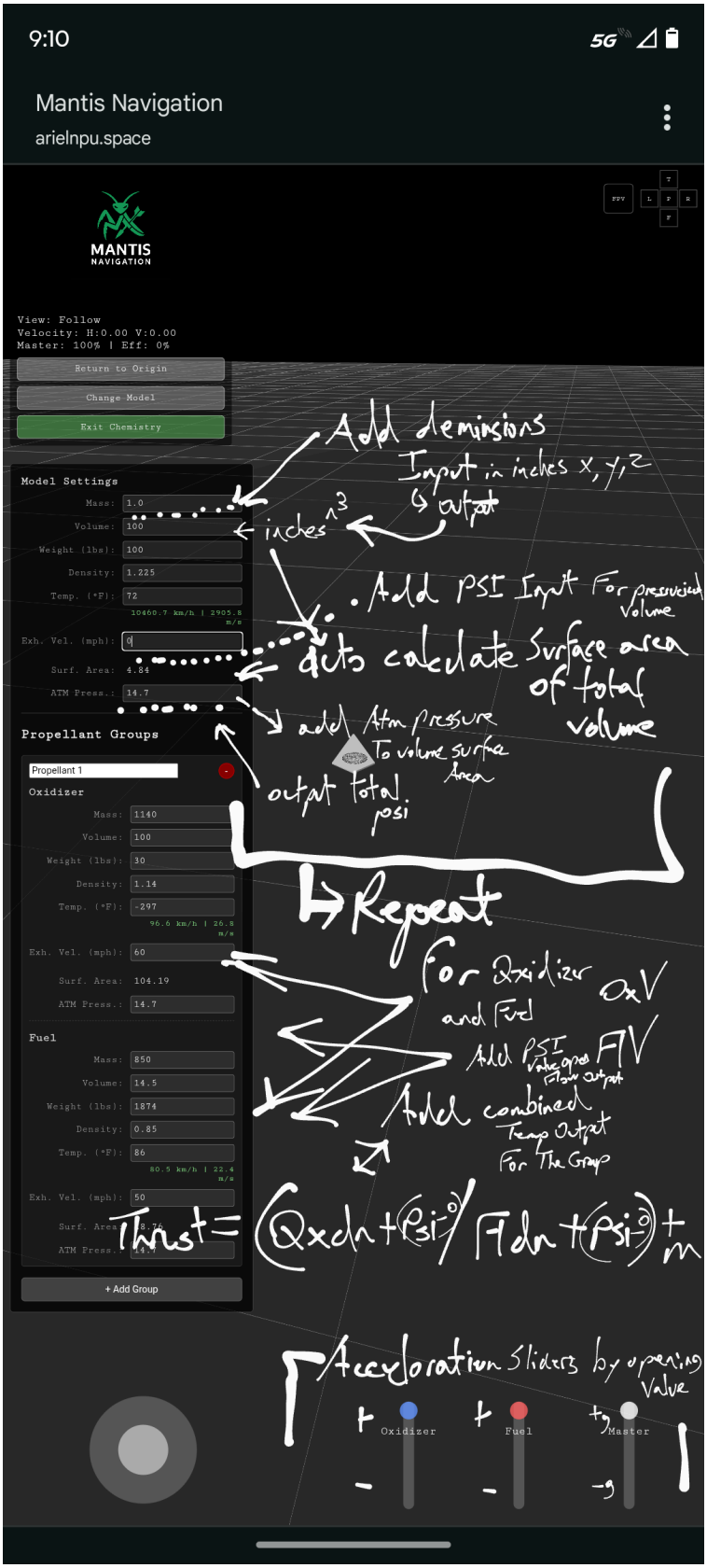
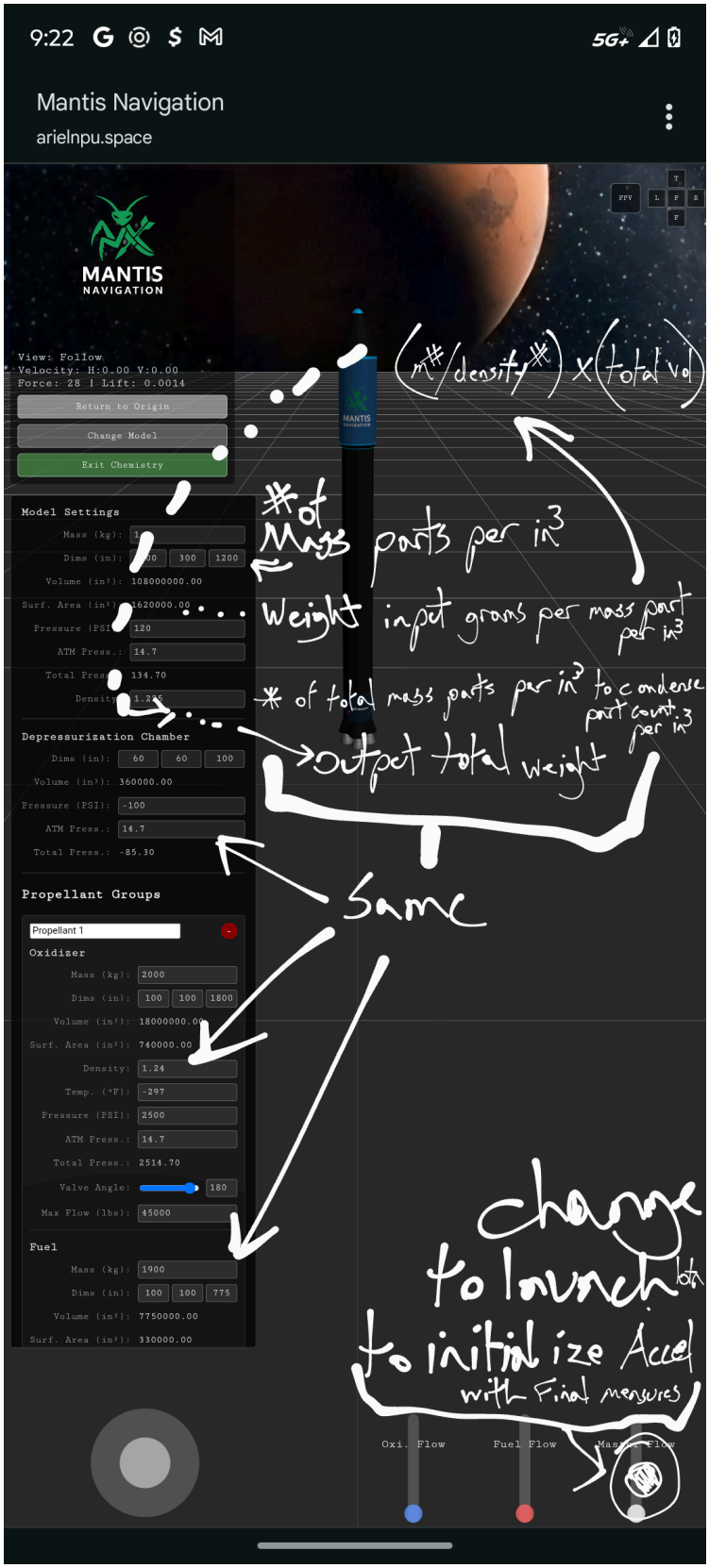
# MANTIS
## NAVIGATION

**v0.0.1**





Mantis Navigation



**Instructions To Gemini 2.5 pro**

[ While insuring my execution logic order and math is explicitly used. ]

Now we want to add the input for each dimension of the volume for the loaded model file the oxidizer and the fuel so for XY and z in inches and then where the volume has an input will just change that to a total output in cubed inches and then we need to add the PSI on the pressurized model the pressurized container for the oxidizer and the pressurized container for the fuel so each of these are going to get the same additions and changes and then we want to take the input for the eight atmospheric pressure and we want to apply that to the calculated surface area from the inputs of the volume we want to automatically have the script calculate the surface area of that volume and they will want to add the atmospheric pressure to that volume and then display the total PSI on the overall volume and surface area for each of these then we want to add a PSI release input to each of these buy an angle of 180° for completely open and and 0° for completely closed this release will go to each of the sliders respectively The release for the oxidizer will go to the the acceleration slider for the oxidizer in the release for the fuel PSI will go to the accelerator for the fuel slider and then the combined PSI release at whatever rate they're released at which will be in pounds will go to the master slider that controls the respective settings as a group and provides acceleration from the combined release measures The the model file will not have a PSI release but the oxidizer will have a PSI release in the fuel will have a PSI release and we'll set this rate with a max lb input so this will be our flow for acceleration and the slider will start at zero pounds and move all the way up to this max pound for each slider The master slider will control both of these together at their current settings and then these accelerations of release speeds we'll go into a formula of oxidizer density plus it's psi pressure minus it's angle or degree in which the valve is open so like follows ((oxdn + (psi-deg)) then the same for fuel: ((fldn + (psi-deg)), so here will have a slider for the oxidizer and its menu panel horizontally and the same for the fuel that allows us to set to the degree between zero and 180 for each of these that way we can set the amount of mass coming out of the valve based on the angle and then goes into the slider for the pound force in which it flows out of the valve and as he's too acceleration sliders are providing pound force based on their position against the valve positions then these final measures will go into the formula earlier and then that result will be the acceleration against the models density, this will give it vertical acceleration and altitude increase and if they move the sliders back to zero positions they will decrease the thrust in the model return to ground position. In the master slider of course will control both of these together from their current settings and positions The valve sliders will be independent and will not be confined to the master slider they're part of the input and output readings that go into the acceleration sliders.