**Front Panel Design Brief**

The front panel is attached to the front of the enclosure via the top and bottom panels. Most of the user I/O is accessible on the exterior of the front panel. The remaining control electronics will be mounted on the interior of the front panel. To facilitate this, a PCB will be designed to house the control electronics and the I/O interface, while the I/O components themselves will be mounted directly to the aluminium panel. The exact I/O components are not fully determined, but they will likely include the following:

* TFT LCD
* 4x4 matrix membrane keypad
* Rotary encoder(s)
* Toggle switch(es)
* Low-current binding posts (with high-current binding posts located on the rear panel)
* Piezo buzzer

The exact thickness of the aluminium plate used for the front panel will need to be determined based on the size of components such as rotary encoders. The spacing necessary between the front panel and the enclosure will need to be determined based on the final height of the PCB stack as well as the control electronics. As a starting point it will need to be at least 80mm.

The arrangement of the front panel should be roughly as follows:

|  |  |  |
| --- | --- | --- |
| LCD | KEYPAD | ROTARY ENCODER |
| POWER BUTTON | MISC BUTTONS | BINDING POSTS |

The arrangement is subject to change as specific components are chosen.