

# MATRIX

## WIND TUNNEL 125

### Touch Screen Starter Guide



# WIND TUNNEL 125

## Home Screen

On the home screen, the display shows the angle of attack, fan power in percentage and wind speed. It also then shows the readouts of lift, drag and pressure from the sensors (if connected).

To turn on the wind tunnel to generate air flow. Push the 'speed' button.

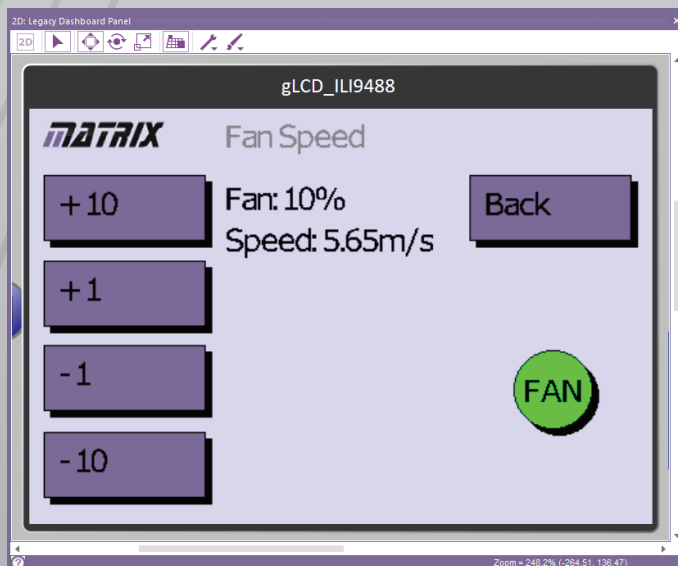


Then push the required amount of percentage change. If you want 10% more power, push the +10, then you'll see the fan percentage change accordingly. The speed is automatically generated from calibrated factory data. However, this can be recalibrated and entered for on site data.

If the user wants to go back to the home page, push the 'Back' button.

The Fan red/green button is an electronic e stop, when red the fan isn't on. When green the fan is running. By pressing the green button the fan will stop and the button will go red. Another press and it will return to the previous fan power setting and the button will be green.

Once the setup of the sensors has been done by the user, the sensors can be zero'ed out to start the experiment from a known position by the using the 'Zero' button. This will make the lift, drag and pressure readouts zero.



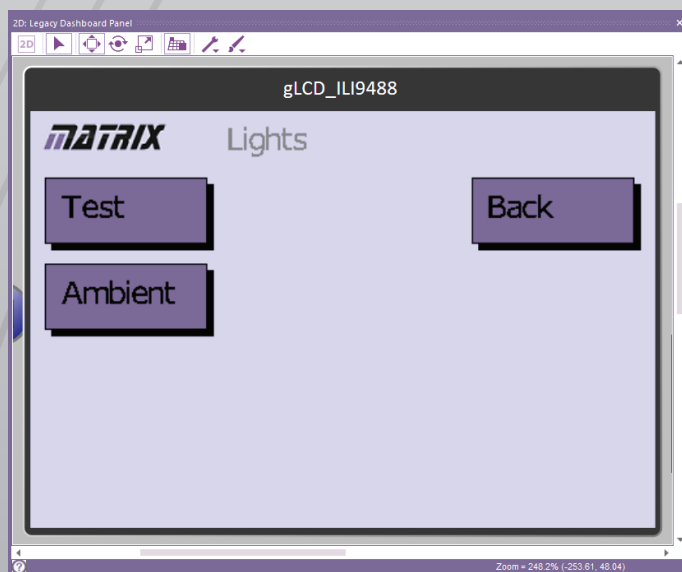
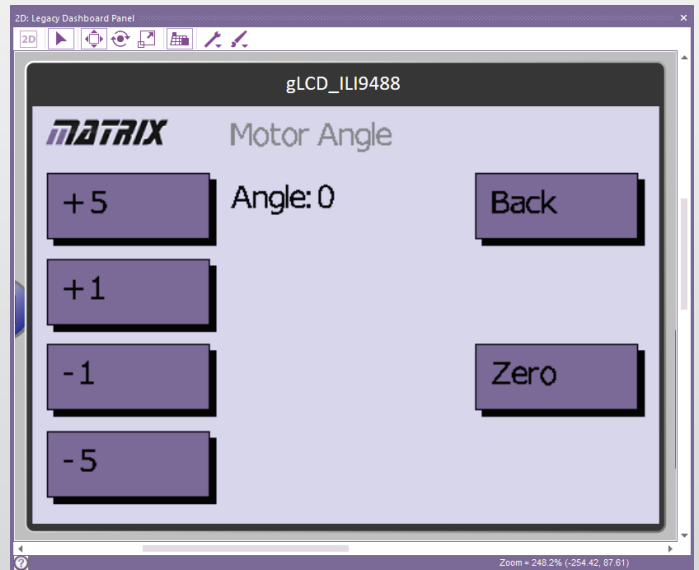
## To change the angle of attack

Once the 2 force component module is connected, the angle of attack can be numerically controlled by the touch screen.

On the home screen push 'Angle'

Then push the desired incremental change of angle which will be displayed.

To zero out the angle of attack, move the object and angle of attack to desired position, then simply push 'Zero'



## The LED's

To change the LED settings push 'Lights'

This will then display a menu for 2 options. 'Test' will control the LED's in the test section of the wind tunnel. 'Ambient' will change the settings for the LEDs underneath the tunnel. (the ambient lights do not effect functions of the tunnel)

# WIND TUNNEL 125

The test section has a few modes to choose between.

'Off' is no lights in the test section

'Static' is a constant light, displayed in the colour chosen with the 'colour' button which cycles through a prescribed set of colours. Bright colours work well for illuminating the smoke.

'Strobe' flashes all the LEDs' rapidly on and off. Giving a stop frame effect for the smoke patterns.

'1:20' matches the speed of the wind tunnel air flow in m/s but at 1/20th of the real speed. This is great for slow motion camera videoing of the smoke patterns.

'1:1' is the real time representation of the air flow speed through the through.

