

Test Benches

This is set-up and tear down of 'test benches' including what they are used for.

test benches are referring to a setup that is made purely in an effort to prototype or test some kind of equipment. the more specific the more involved a test bench might be.

Ranging from motor testing to stress testing physical components. Eventually this should also include electrical testing.

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Arm Specific test benches

This is a guide on how to use the test benches designed for the industrial arm project. This is likely to be redistributed to another chapter to generalize once more test benches are planned out.

Test benches for physical parts

Chassis testing:

Stress testing is meant to be destructive testing. It also does not include fatigue stressing for longer term usage.

This testing also can be reoriented in order to get different kinds of stress testing values.

Equipment required:

Digital force gauge: (one variation)

Scale: (for another variation)

Excel:

Mounting points for everything:

Scale variation:

For when we are trying to measure the breaking point of our prototype we are trying to get the weight being applied to the part while it is on top. With the scale in the lab this works with smaller weighted objects. Though not too light because the scale has a physical readout it is not sensitive enough for smaller weights. So this is good for quick and dirty results.

So with the scale a place to log the results (preferably an excel sheet) and a way for everything to rest evenly on the scale as force is applied through the part we can begin setup.