

Adjustment of 5 Speed Controller on a Mk1 Racehorse Simulator

1. Introduction and Safety

This instruction covers the adjustment of the 5 Speed Controller on a Mk1 Racehorse simulator, when the speeds have drifted from the initial settings.

Hazard: The machine is required to be turned on at the mains socket whilst checking the speed value, however; the emergency stop should be activated so that the simulator cannot physically move whilst the work is being undertaken. The work area is to be controlled by the person undertaking the task.

2. Parts

New parts:

NA:

The 5 Speed Controller is a wearing part that will require replacement from time to time, dependant on the usage of the simulator, however; this instruction covers the adjustment of the speeds following initial drift, to prolong the lifetime of the controller.

Parts to be re-used:

NA.

Other materials:

NA.

3. Procedure

The 5 Speed Controller is located on the underside of the racehorse simulator at the front (see Image 1).

Ensure that the horse has the emergency stop **off** when you are looking at the speeds. The speed is read from the inverter (J1000) and is shown in red digital text on the display panel.

To adjust the speeds a very small cross head screwdriver is required to adjust the screws numbered 1-5 below (see Images 2 and 3).

Firstly, set Speed 1 to the reference speed (screw 1) (see Section 4 for example speeds) and then continue in numeric order for all 5 speeds.

The screw needs very little movement to adjust the inverter. Keep a record of all settings and changes.

4. Settings

The below table shows an example of the speed settings, however, dependent on the specific gearbox ratio installed in your simulator these may vary.

When running at full speed in Speed 5, the simulator should be operating at approximately 120 cycles/minute, any higher than this will risk damage to the machine.

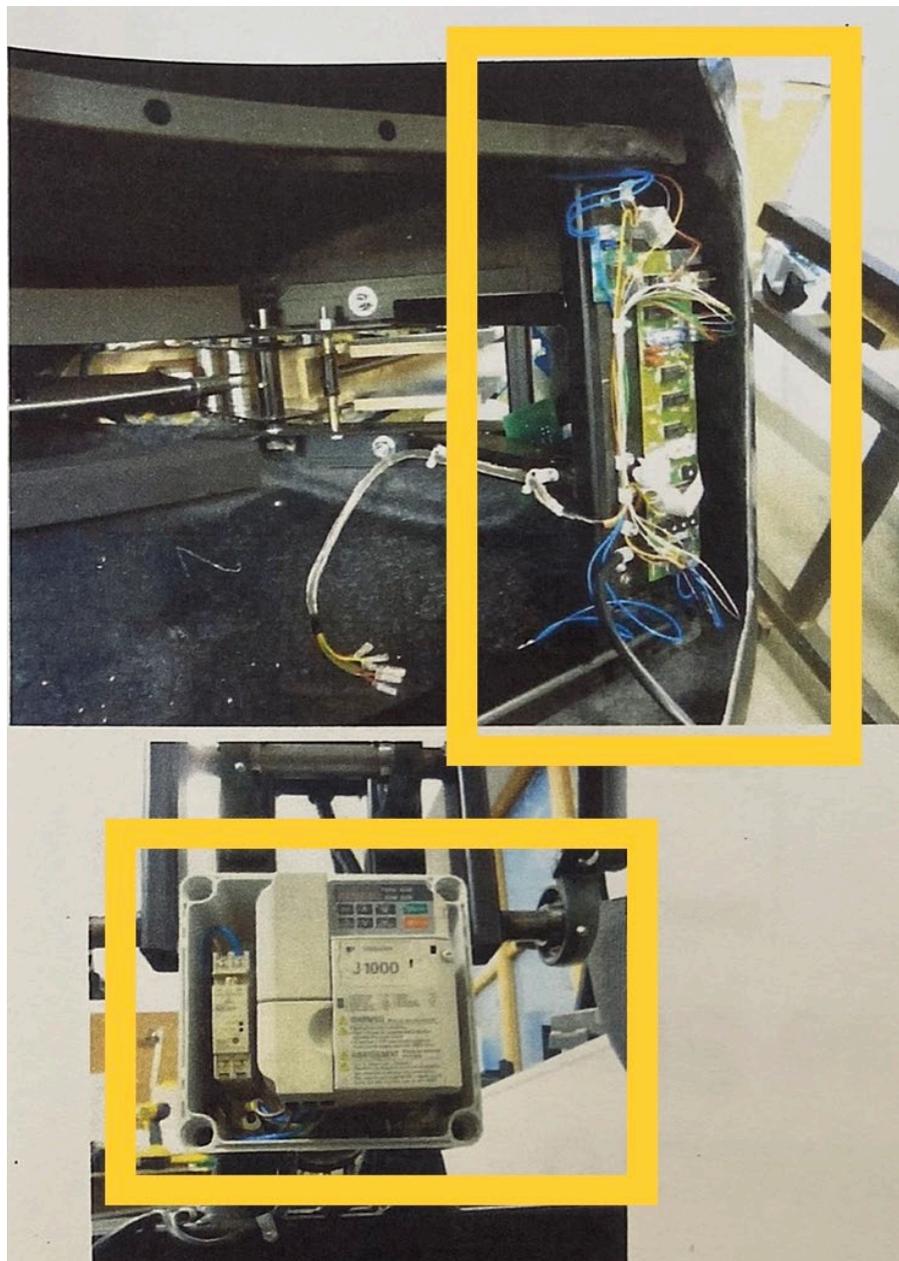
Speed 1 = 33Hz

Speed 2 = 38 Hz

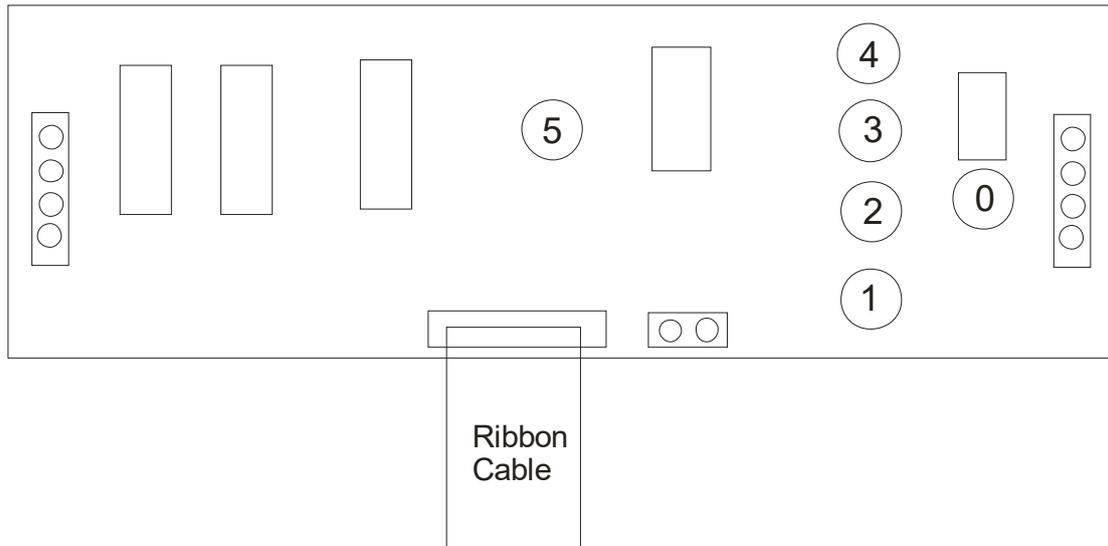
Speed 3 = 43Hz

Speed 4 = 50Hz

Speed 5 = 56Hz



5. Image 1: Location of the 5 Speed Controller (Upper) and Inverter (Lower)



Turn the cross heads clockwise to increase the speed.

Image 2: Schematic of the 5 Speed Controller

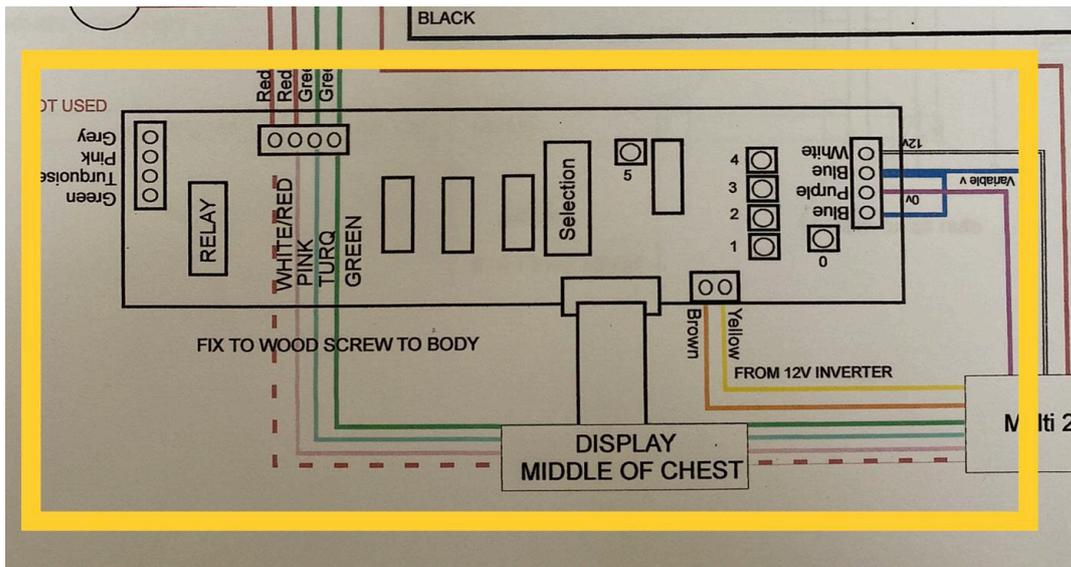


Image 3: Wiring Diagram extract showing 5 Speed Controller