Robo Foucault's Parallel to Motor Wiring

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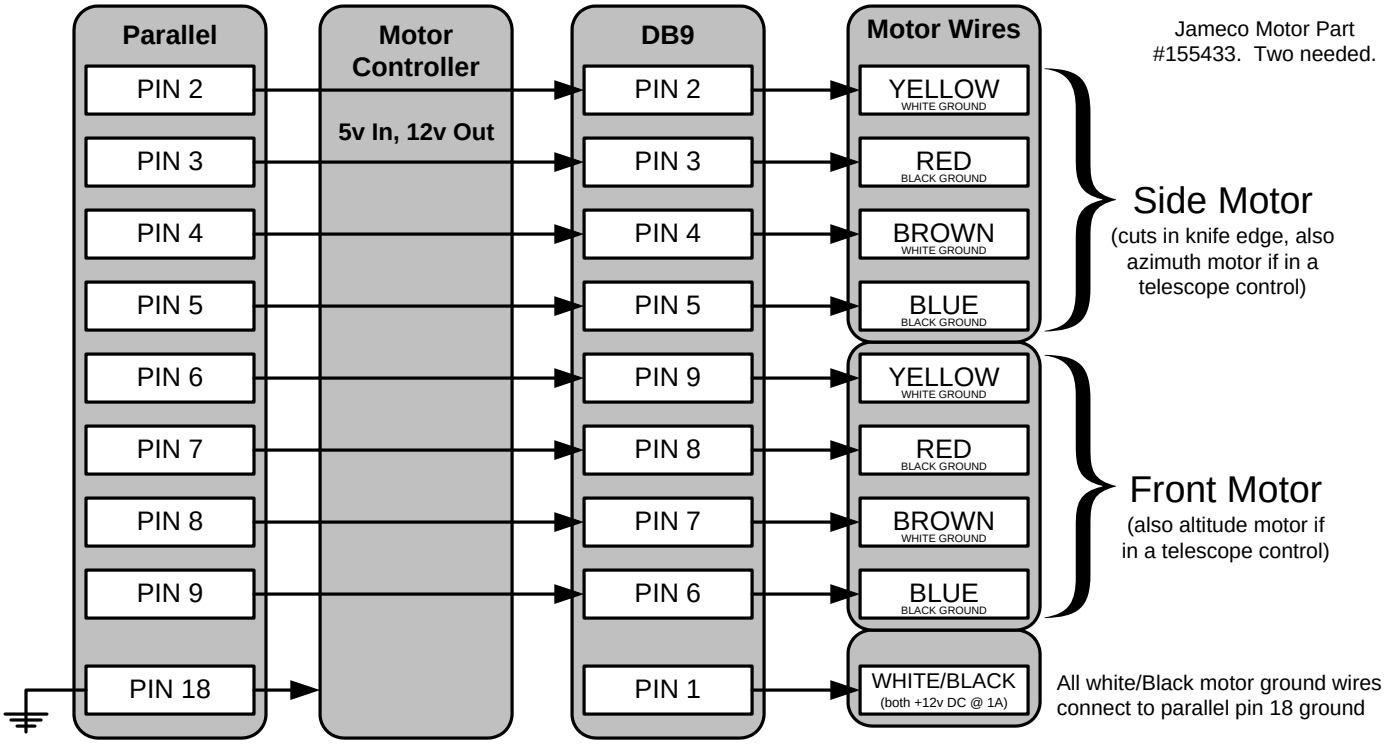
Below is a wiring diagram between the parallel port and the stepper motors. The important thing is that the parallel port pins on the left align with the motor's wire colors on the right. If parallel port pin 6 came out of DB9 pin six (instead of pin 9 like it does) it would still work as long as DB9's pin 6 connected to the motor's yellow wire (other motors use different colors). NOTE: If you are replacing an existing controller then the output must match that controller.



The parallel port's pins 2-9 are controlled by the RTAFT software. When any pin goes high with +5v the motor controller will close the ground and allow +12v to flows on the DB9 pin that it is connected to. This energizes the appropriate motor coil.

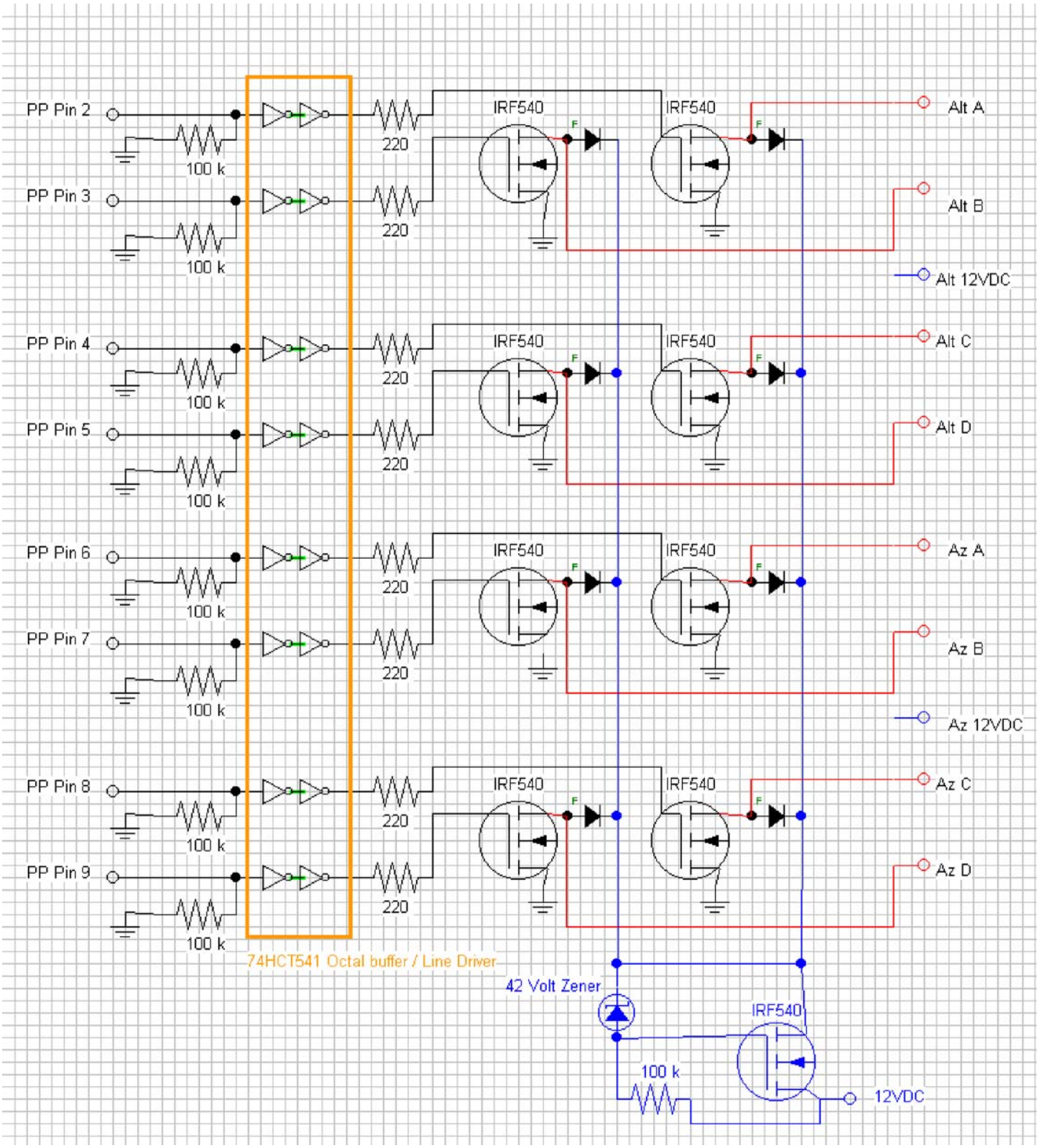
James's original circuit for the stepper motor controller is on the next page. My Eagle drawing of it is on page three.

Note that the 74HC541 requires +5v DC on pin 20 and ground is connected to pins 1, 10 and 19. This works well with a PC or external hard drive power supply that has both 5v and 12v outputs. If you add the 7805 a 5v input is not needed.

The parallel port could be replaced by anything that has eight 5v data pins and a ground that that can send the appropriate signals to the stepper controller.

Robo Foucault's
Stepper Motor Controller Circuit

Check out James Lerch's web page on his circuit here: http://lerch.no-ip.com/atm/MRR/



Robo Unipolar Stepper Motor Controller