

CS 3651: Manual H-Bridge Lab (B Groups)

Name(s): _____

Learning Objectives:

1. Learning how an H-Bridge Operates in preparation for building a solid-state H-Bridge
2. Wiring an H-Bridge circuit to allow you to control a motor with the following modes:
 - Forward
 - Backwards
 - Spin freely
 - Brake

Step 1: Using your protoboard, wire up an H-Bridge. Leave a place to plug in the motor. Have two wires to clip the power supply to. You may use actual switches, or simply touch wires to connections on the protoboard to act as switches (If you use wires, make all four "switch wires" the same color, and use a unique color not otherwise used on your circuit.)

Step2: Draw a schematic of your H-Bridge:

Step 3: List which switches need to be closed for each state (Note that some questions may have multiple correct answers:)

1. Forward: _____
2. Backwards: _____
3. Free Spin: _____
4. Break: _____

Step 4- Demo: Bring your circuit to the TA/Instructor who will have a motor and current source. Wire up your power supply and motor to your circuit and demonstrate each state of the motor