

CS 3651: Motor Driver Current Buffer (Transistor Switch) Lab (A Groups)

Name(s): _____

Learning Objectives:

1. Using a transistor as a current buffer (switch)
2. Powering a (relatively) high load device (motor)

Step 1: Start with a known transistor for which you know the specifications and pinouts.

Step2: You will now make a current buffer using your transistor that will switch a small electric motor. (If your team does not receive a motor, leave two openings to plug one in when you demo.) Assume that you will be provided with an appropriate current source when you demo. Have two wires coming off of your proto-board for the current source to be clipped to. **Connect an output pin on your UBW to the Base of your transistor using a current limiting resistor.**

What ohm rating did you use for your current limiting resistor? _____

What current does this limit your TTL signal to? _____

Step 2 - Draw a schematic of your circuit:

Step 3: 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 turning the motor on and off.