

## **Datasheet for 543csu, describing the proper operation of the circuit known as the AHOT project**

Description of the proper operation of the AHOT project circuit after wiring is complete:

### **TESTING THE STIMULI AND RESPONSES OF THE MANUAL START/STOP PUSH-BUTTON SWITCHES:**

- (1) Connect power sources to the circuit you just wired;
- (2) Turn on the power sources;
- (3) To test the manual start/stop push-button switch-combination (red and green switches, built into the same housing)--first, push the green start-push-button;
- (4) When you first push the green start push-button, relay CR1 should click once as it latches on, and make no sound when you release that green start push-button;
- (5) Next, press the red stop push-button switch, and watch both CR1 and CR2 relays click once as you press it in. The CR1 relay should unlatch, as the CR2 relay activates;
- (6) Then, you should hear only a single click from relay CR2 dropping out, as you release the red stop push-button switch. This will complete the test of the manual start/stop operation. If it behaved exactly as described above, then you have successfully wired the manual switching to the AHOT relay control circuit; and you can move on to test the automatic operation of the limit switches, LS1 and LS2, in step-7, below.

### **TESTING THE STIMULUI AND RESPONSES OF THE AUTOMATED LIMITS SWITCHES, LS1 and LS2:**

- (7) After having just completed step-6, above, with relay CR1 still unlatched, press the lever of the LS1 limit switch (a micro-switch), and observe a single click of CR1 as it latches on again; and notice that there is no second click as you release the LS1 limits switch;
- (8) Next, press the lever of the LS2 limit switch and notice that relay CR1 clicks as it unlatches, nearly simultaneously with a single click of relay CR2, as it activates; and, notice that there is also a second click of CR2 as the lever of LS2 is released.
- (9) If these actions occurred exactly as described, please call your instructor, or test proctor, to come and repeat these tests. Your assessment results will be logged in the gradebook after the verification is complete.
- (10) If proper operation of your circuit was not verified, then you must go back and troubleshoot circuit wiring errors before returning to repeat these two testing phases. You have the balance of your 2 ½ hours of planning, wiring, and testing time to finish all necessary work to make your wiring perfect, and pass both of these tests, with instructor/proctor verification.