

- 6. Add a wire jumper that connects pin 1 on the 7400 to zero volts.
- 7. Add a wire jumper that connects pin 2 on the 7400 to zero volts.
- 8. Connect the LED, from the lab kit, between pin 3 on the 7400 and ground (zero volts). NOTE: the LED must be connected with the positive lead attached to the 7400.
- 9. Verify that the LED is lit (it should be lit because both inputs are zero which means the output should be one).
- 10. Move the jumper that connects pin 2 from zero volts to five volts, and verify that the LED remains lit.
- 11. Move the jumper that connects pin 2 back to zero volts, move the jumper that connects pin 1 from zero volts to five volts, and verify that the LED remains lit.
- 12. Keep the jumper from pin 1 on five volts, move the jumper that connects pin 2 to five volts, and verify that the LED goes out.

Optional Extensions (checkmark as each is completed)

- 13. Wire the breadboard as shown in Figure A1.2 (pin 3 connected to pin 12, and pin 13 acting as an additional input).
- 14. Connect the LED between pin 11 and ground.
- 15. Record the LED values for all possible combinations of the three inputs.
- 16. What Boolean function does the circuit represent?