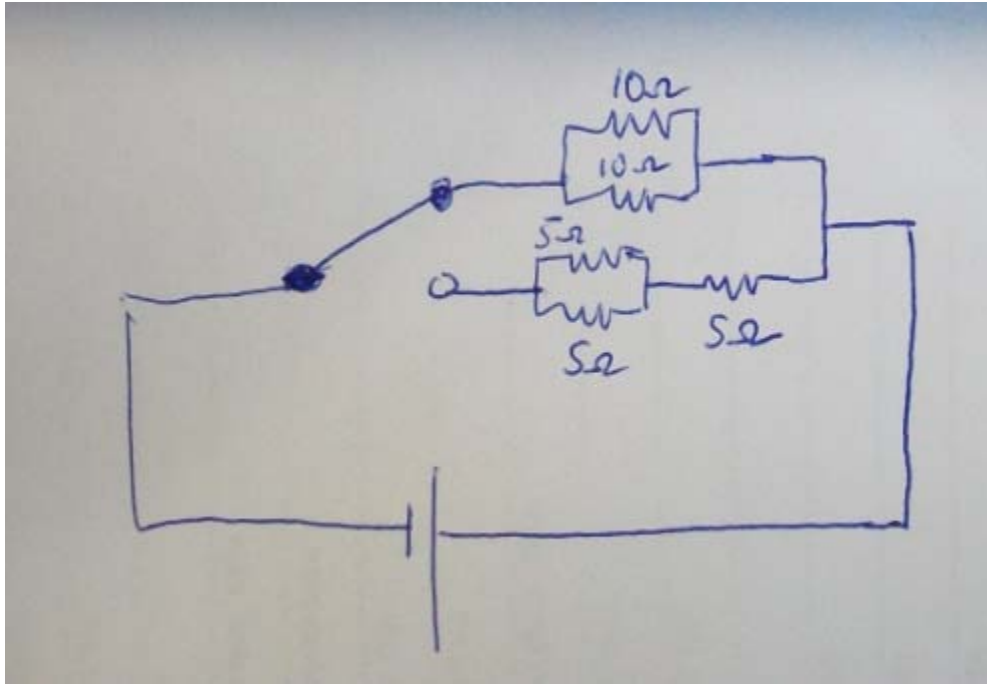


1. a) double pole-double throw
b) to switch from jack and headphones to speakers and jack

2.



3. Remember that you should actually use the second diagram on page 3 of the notes. That diagram shows the switch creating an option (broken line) that is not a complete circuit. That's why it turns it off.

4. a) A circuit breaker
b) The Fe metal bar that's attached to the pivot
c) Using the left hand rule, it's coming from the wire on the left hand side.
d) They put in the right number of loops and placed the iron metal at the right distance so that the electromagnet would be able to pull it in when a certain current flows through.

Flashback

$$4.00 \text{ g Fe} / (55.8 \text{ g/mole}) = 4/55.8 = 0.07168 \text{ moles of Fe}$$

$$\text{Ratio is 1: 1} = 0.07168 \text{ moles of Cu}$$

$$n = CV$$

$$0.07168 \text{ moles} = (0.10 \text{ mole/L})(V)$$

$$V = 0.07168/0.10 = 0.717 \text{ L} = 717 \text{ ml}$$