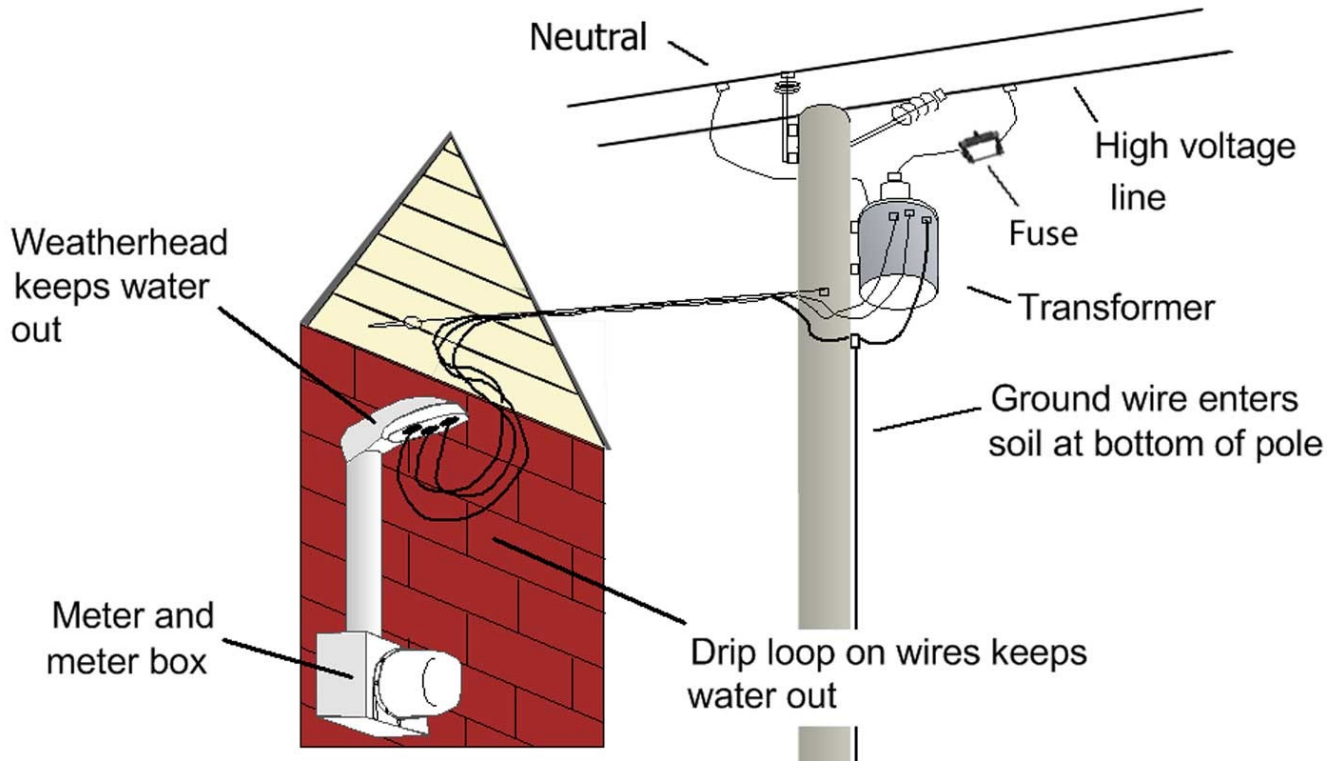


## Section 18.7 Household Circuits

1. Your house is connected to two "hot" wires, one red and one black, and a neutral wire.



2. One of the hot wires is at a positive 120V and the other hot wire is at a negative 120V in relation to the ground state. The hot wires go through to the electric meter and then to the circuit breaker panel.



3. Electricity is distributed throughout your home in individual circuits. A typical circuit has 15A and 120 V.

4. A circuit current capacity can be exceeded if there is a large enough load. Loads are produced by things you plug into a circuit via an outlet.

5. The circuit wire will heat up if the current is exceeded resulting in a potential fire. Circuit breakers protect circuits by turning the circuit off before a fire starts.



6. Ground fault circuit interrupter (GFCI) are very sensitive circuit breakers, they detect very small amounts of current difference between outgoing and incoming current.