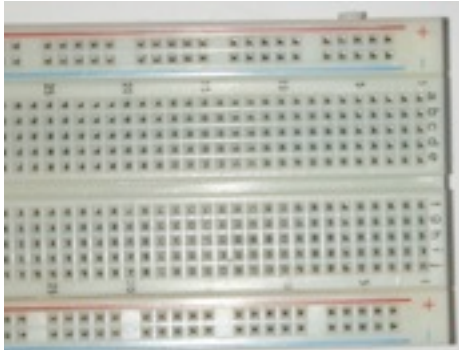


Stop And Go Build Instructions

Parts List:

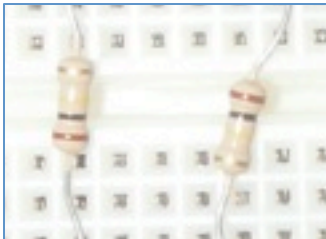
Breadboard, with rails.



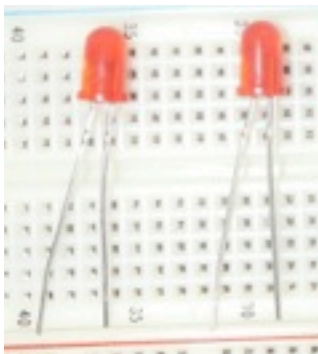
2x 470 Ohm (Yellow, Purple, Brown) Resistor



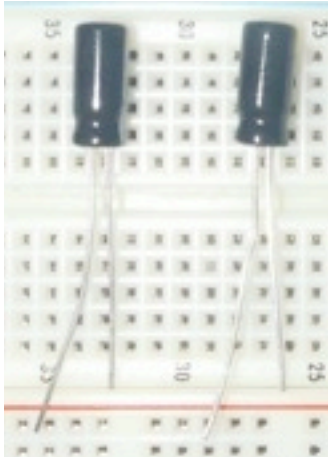
2x 100k Ohm (Brown, Black, Yellow) Resistor



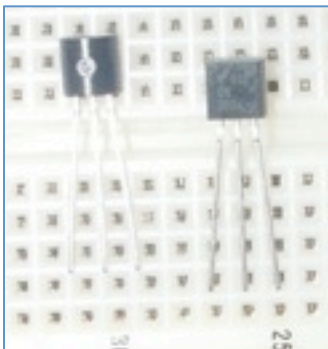
2x Light Emitting Diode (LED)
Polarized, Long Leg Positive



2x Electrolytic Capacitor
Polarized, Long Leg Positive



2x 2n3094 Transistors
Polarized, Round End Up
Collector (C), Base (B), Emitter (E)



Directions:

A text description will be given:

1) Insert 100K Ohm Resistor, from Base (B) of each transistor (Column 4), to Positive (Red) Rail

Then a more concise grid based description will be given:

100K Ohm Resistor A4 to PR

100K Ohm Resistor J4 to NR

Where PR is Positive Rail, and NR is Negative Rail

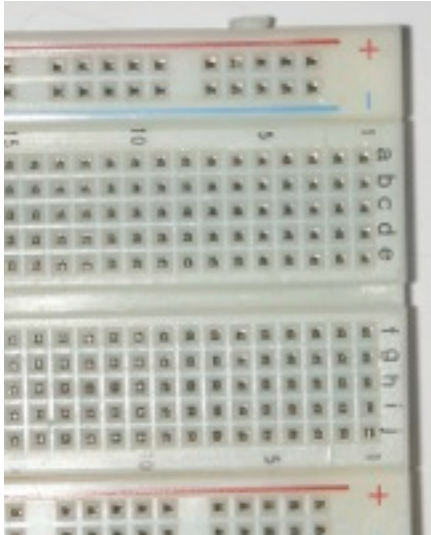
In the case of polarized components, + and - will be used, referring to legs on the component.

LED A10- to PR+

LED J10+ to NR-

In the first case, LED short leg goes into A10, while long leg goes into Positive Rail.

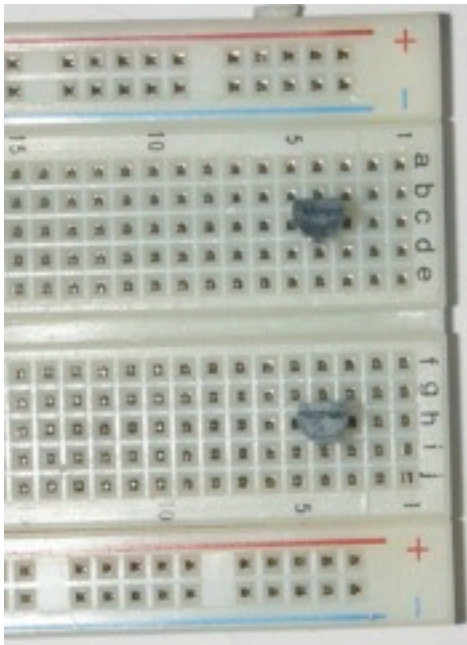
1) Position breadboard with numbers starting on the right.



2) Insert two transistors, flat side facing up (CBE), C in column 5, E in Column 3.

Transistor, flat part facing away from you, C5 through C3

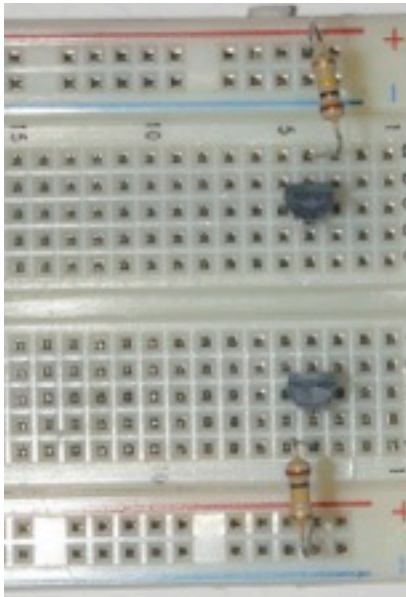
Transistor, flat part facing away from you, H5 through H3



3) Insert 100K Ohm Resistor, from Base (B) of each transistor (Column 4), to Positive (Red) Rail

100K Ohm Resistor A4 to PR

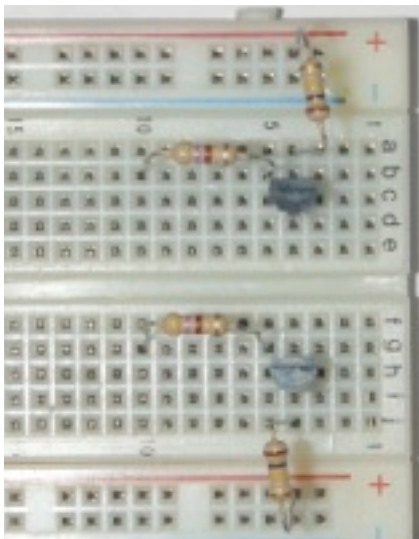
100K Ohm Resistor J4 to PR



4) Insert 470 Ohm Resistor, From Collector (C) of each transistor (Column 5), to Column 10.

470 Ohm Resistor B10 to B5

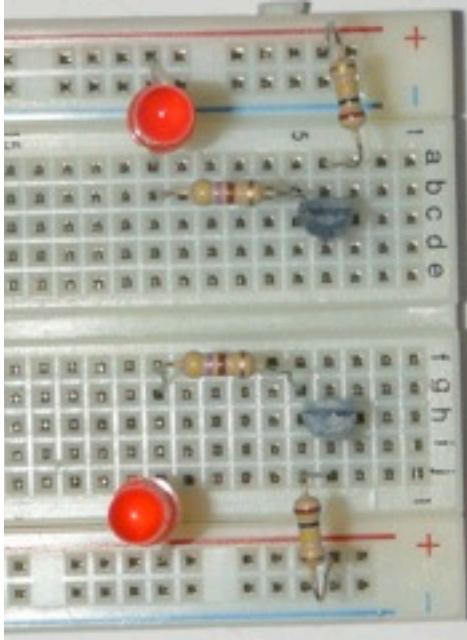
470 Ohm Resistor G10 to G5



5) Insert LEDs from Column 10 to Positive Rail (Red), Long Leg.

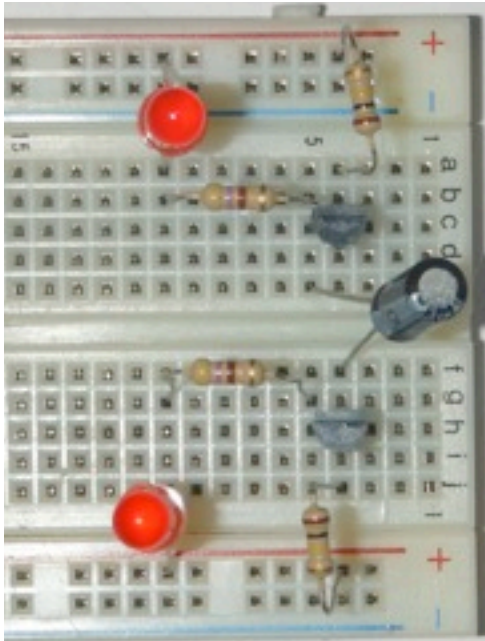
LED A10- to PR+

LED J10+ to NR-



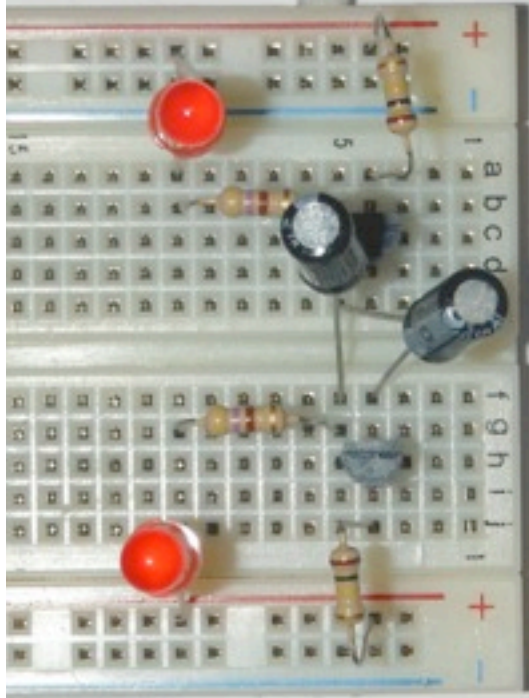
6) Insert capacitor, Long Leg at upper transistor Collector (C) Column 5, Short Leg at lower transistor Base (B) Column 4.

10uf Capacitor E5+ to F4-

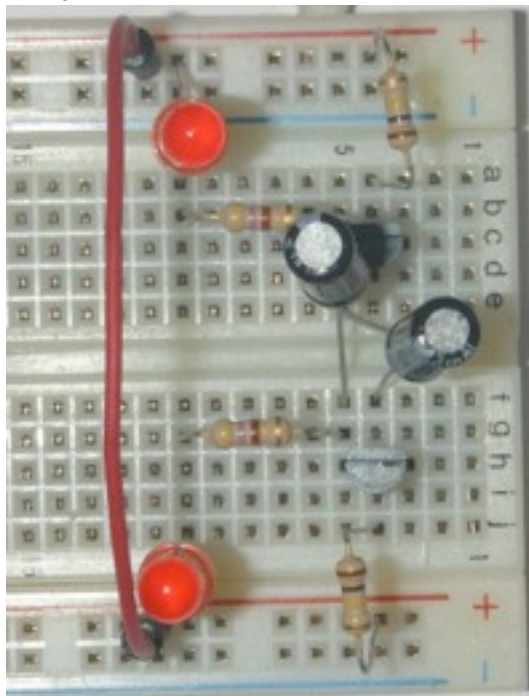


7) Insert Capacitor, Short Leg at upper transistor Base (B) Column 4, Long Leg as lower transistor Collector (C) Column 5. Adjust capacitors so that legs do not touch.

10uf Capacitor F5+ to D4-

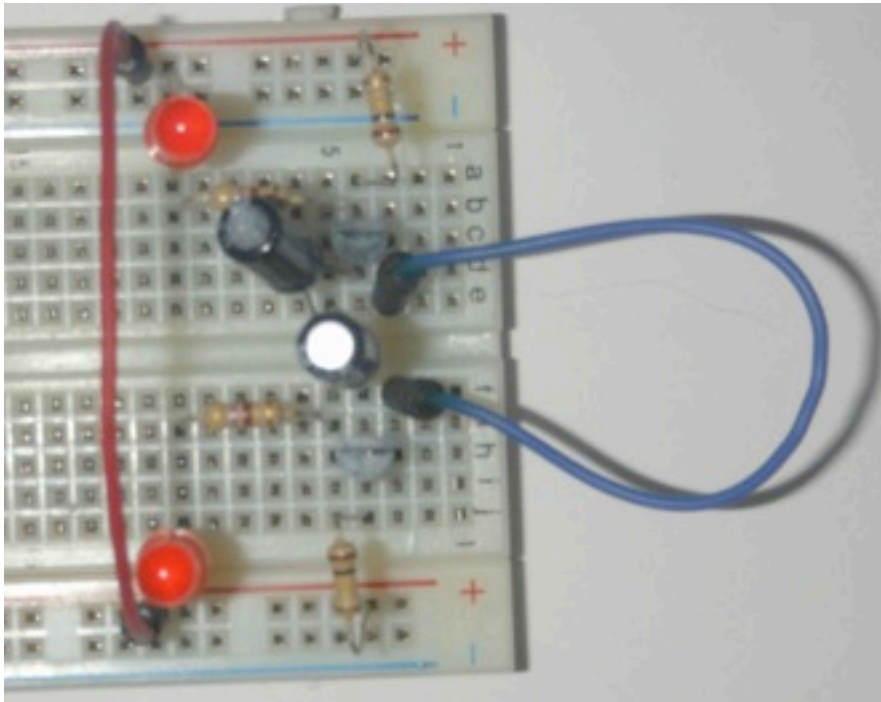


8) Tie Positive Rails together.
Jumper PR to PR



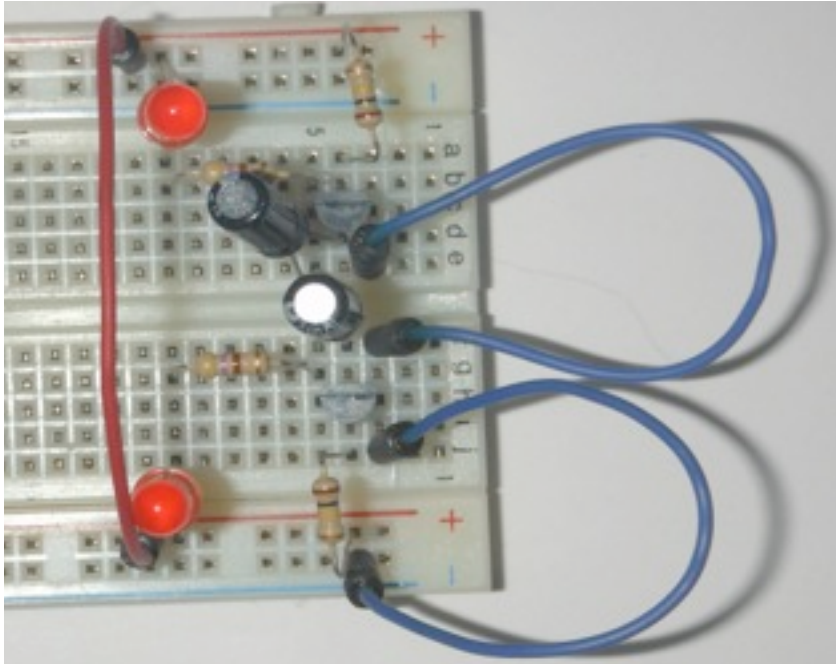
9) Jumper top transistor emitter (E) column 3, to bottom transistor emitter (E) column 3.

Jumper E3 to F3



10) Jumper bottom transistor emitter (E) column 3, to bottom Positive Rail.

Jumper J3 to PR



10 Attach Battery, Ground to bottom Ground Rail, Positive to Positive Rail.
Light Emitting Diodes, LEDs will immediately start blinking.

Battery Positive (red) to PR

Battery Negative (black) to NR

