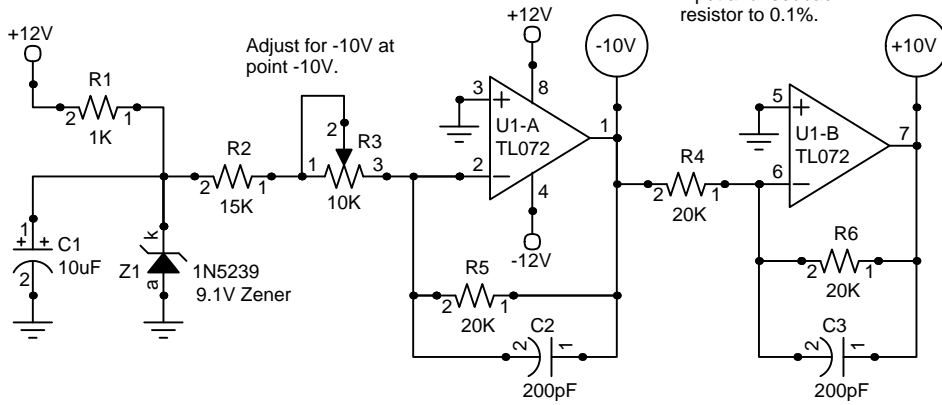


# SIMPLE NPN TRANSISTOR MATCHING SETUP

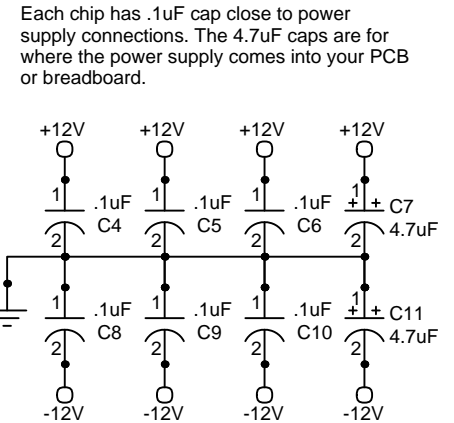
Creating + and - 10V supply for the constant current supply.



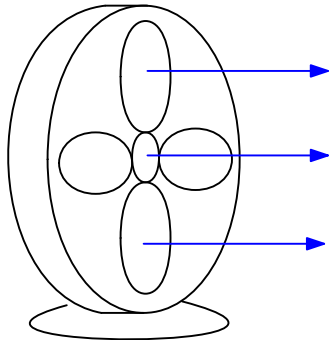
Hand pick and match input and feedback resistor to 0.1%.

You can use +/-15V supply because Z1 regulates the voltage to be adjusted to 10V. The -10V trim must be done if the power supply is changed.

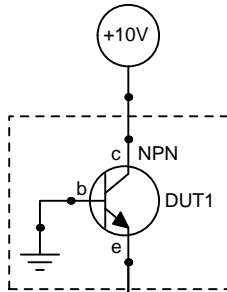
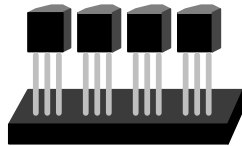
Power supply bypass caps.



Both the transistors waiting to be tested and the transistor under test should be in a stream of moving air that is room temperature. Sticking the waiting transistors in anti-static foam is a good idea.



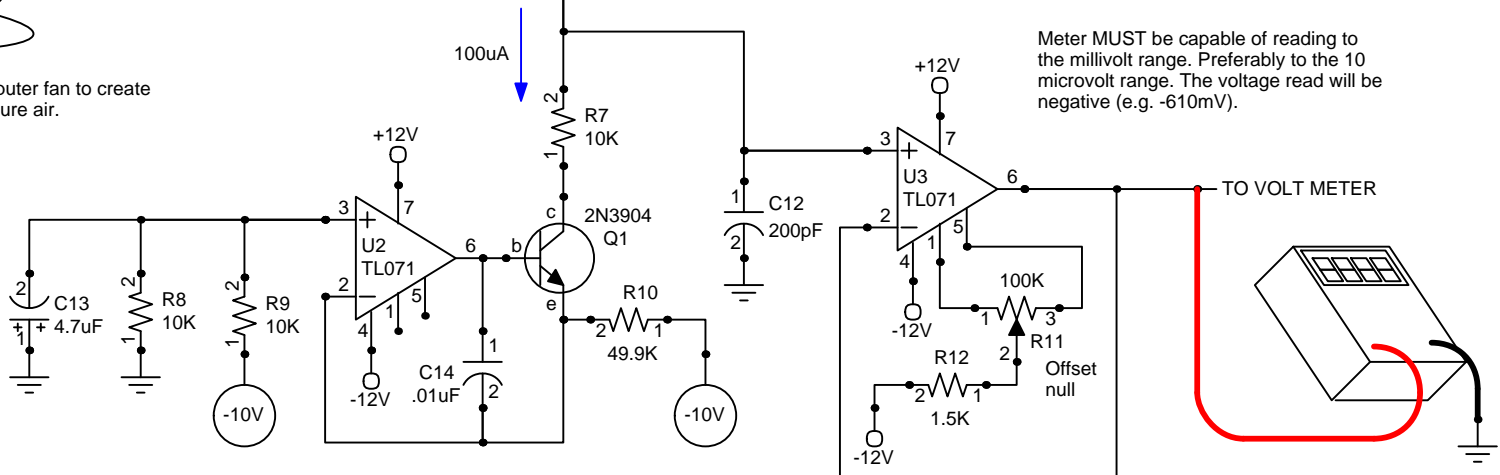
Small desk fan or old computer fan to create a stream of room temperature air.



DUT1 is the transistor being tested for matching.

The e, b, and c of DUT1 transistor should actually come out to a socket.

The goal is to find transistors whose VBE matches to + or - 2millivolt. The typical voltage will nominally be around -600 millivolts or so. Use plastic tweezers to handle the devices because they are VERY temperature sensitive. After they are in the test socket measure the voltage after about 1 minute so the device has time to settle at room temperature.



Meter MUST be capable of reading to the millivolt range. Preferably to the 10 microvolt range. The voltage read will be negative (e.g. -610mV).