

Application Note:

Testing Emitter-Coupled Logic (A power-off method)

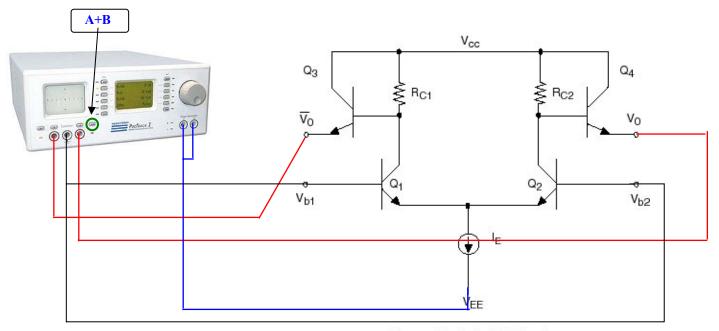


Figure 1 The Basic ECL Circuit

Here is a diagram of how the circuit could be setup on a basic ECL circuit. To see the switch actually happen, the VEE (Pulse Generator input) would have to be a negative DC input (should fire before 10V, depending on circuit). Vary the voltage level from 0V to 10V, while watching the CRT. You will see the Pair Q1/Q3 work and should see the switch. Depending on the circuit, (and especially considering you have two transistors to bias) you may have to jumper the G1 and G2 jacks together (to double the current) and put the lead on the emitter junctions (or the IC pin for VEE)

In order to compare both transistor pairs, set the circuit up to see Q1/Q3 on channel A and Q2/Q4 on channel B with both signatures being shown on the CRT at the same time (A+B mode). The signatures should be identical or very near to it. If the bias point for the two pairs is different (barring a different RC1/RC2 value) then you are seeing a weakened circuit.