Electronics 1: Chapter 4 figs

Alan Robert Clark

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Note that the source code for the figs can be seen by clicking the pic. You will need to use your Browser's BACK button to return to this page.
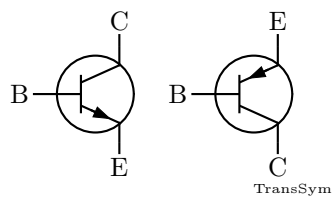
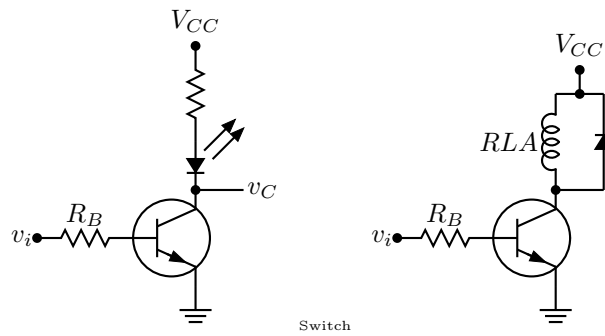Figure 1: Symbols of *npn* and *pnp* Bipolar Junction Transistors
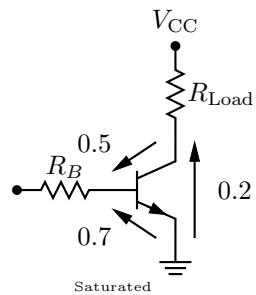
Figure 2: Switching uses of a BJT

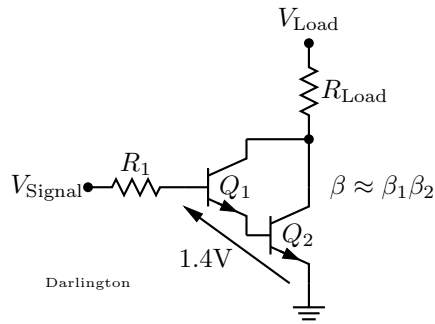Figure 3: Saturated transistor, showing the voltages.

V_{Load}

R_{Load}

V_{Signal} —R_1— Q_1 $\beta \approx \beta_1 \beta_2$

Q_2

1.4V

Darlington

Figure 4: Using a Darlington Pair as a Switch

+5V

$1k\Omega$

$10k\Omega$

$10k\Omega$

−5V

PnpSat
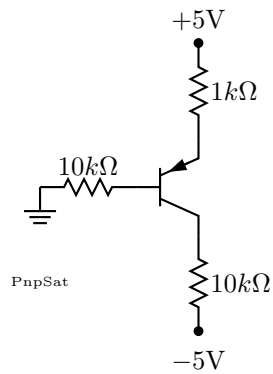
Figure 5: Saturated pnp transistor.

+5V

$10k\Omega$ Q1

+5V

Q2 $1k\Omega$

−5V

Comp

Figure 6: Complementary pair.

+15V

R_C

R_E

−15V

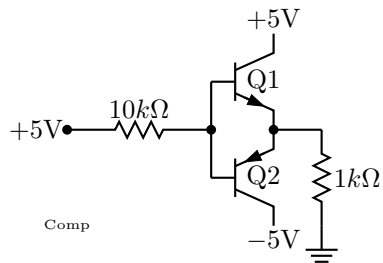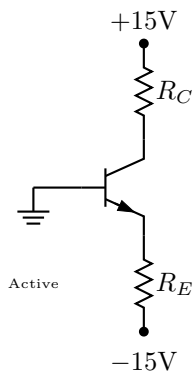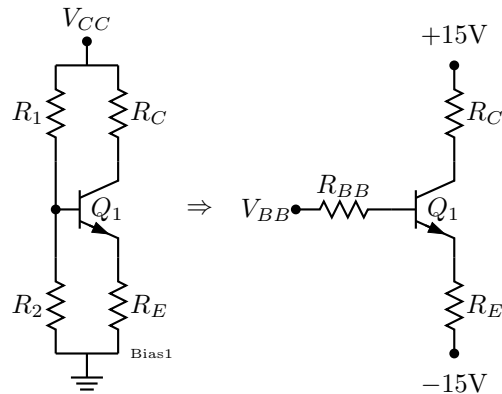Active

Figure 7: Transistor in active mode.
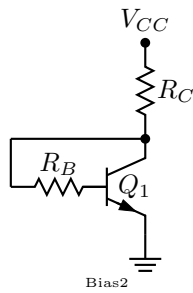
Figure 8: Biasing network with a single ended supply

Figure 9: Even simpler Biasing, but somewhat problematic.