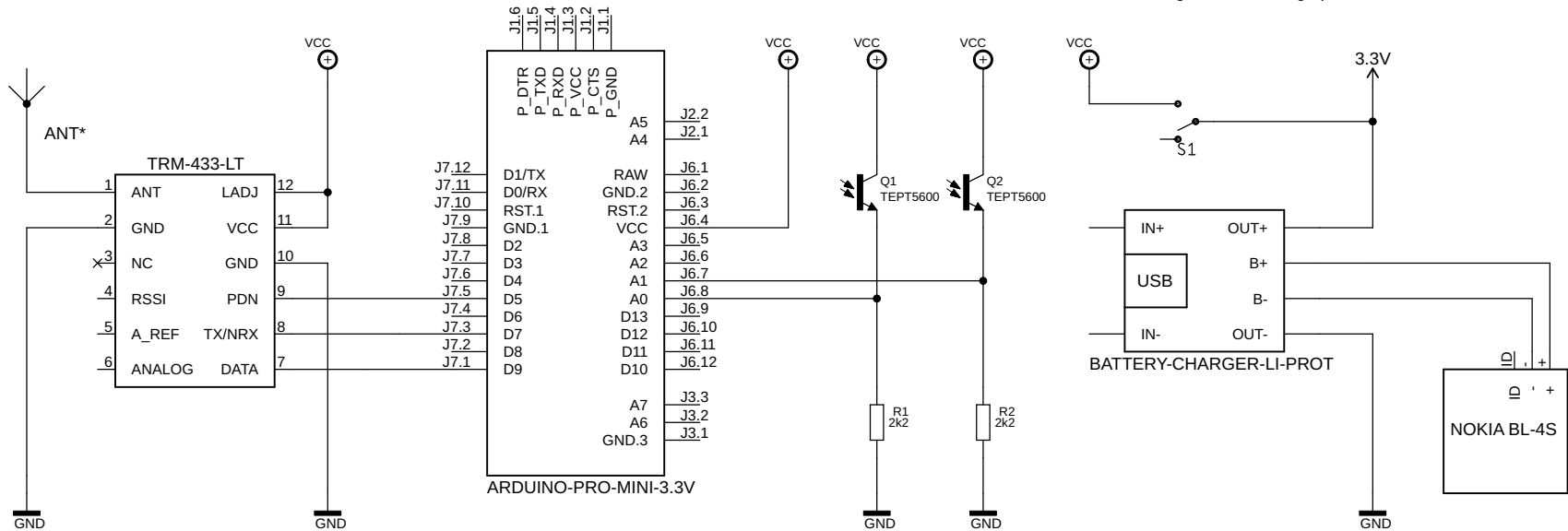


Micromouse Timer Gate Detector

(c) 2019 Peter Harrison

<https://github.com/micromouseonline/micromouse-timer>



Battery management is provided by an ebay module holding a TP4056 charger along with a discharge protection circuit.

The antenna should be a tuned element for the band in use.

For short-range operation, use a simple 1/4 wave wire.

Length= C/4F

Approx 170mm for 433MHz

The start gate uses two sensors. one across the posts and one about 2/3 of the way back into the cell.

Goal gates use only one sensor placed across the posts.

The post sensor is Q1/R1

If the other sensor is not used, omit only the phototransistor and pull pin A1 to ground.

TEPT5600 is an ambient light sensor with a peak response at about 570nm - yellow/green. It is relatively insensitive to IR.

The battery can be any LiPo or Lilon single cell type that will fit.

The Nokia BL-4S has a capacity of 860mA and is a perfect size to fit inside a classic wall.

Circuit power consumption is a few tens of mA at idle.

gate-detector

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