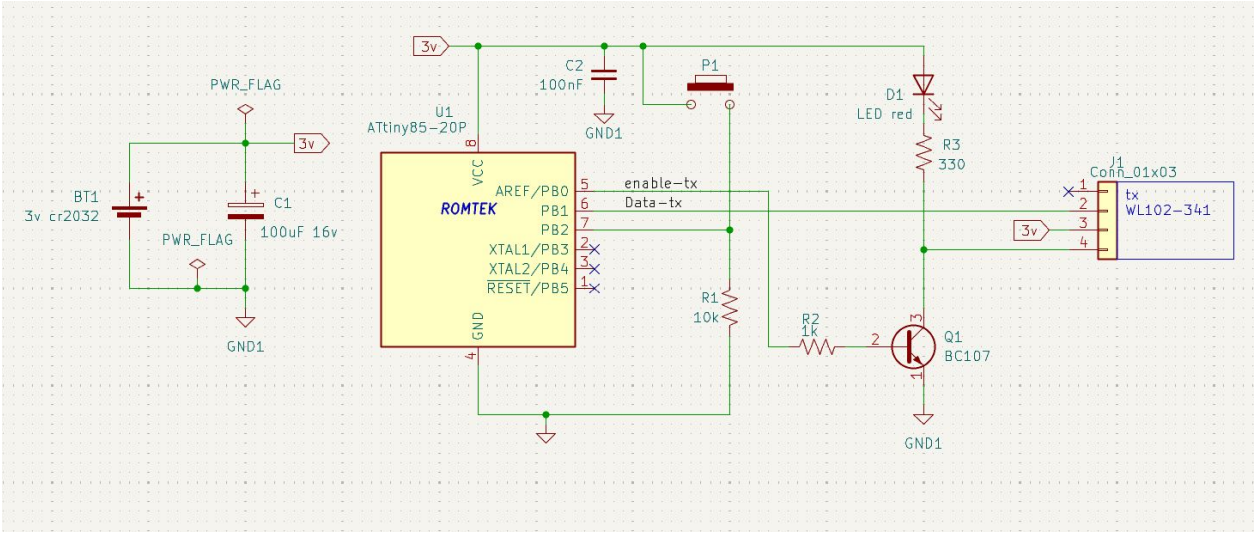
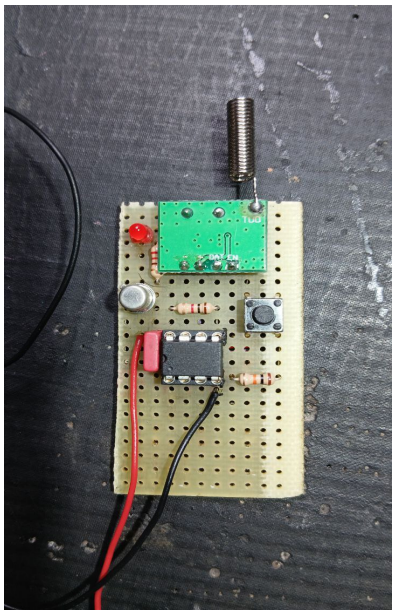
Example of an ask-ook transmitter and receiver

The purpose of this project is to demonstrate how to use ask-ook transmission using the low-cost WL101 and WL102 modules, with ATTINY85 microcontrollers.
The project is divided into two parts: the WL102 transmitter and the WL101 receiver.
The modules operate at a frequency of 433 MHz in ask-ook mode.

The transmitter is powered by a 3-volt battery.
Until the button is pressed, it is in very low power consumption. When the button is pressed, the microcontroller activates transistor Q1, which groundes the pin of the WL102 TX module, powering it and the LED. Then, again from pin 6 (Data-TX), it sends the string, then returns to standby.

Transmitter diagram.





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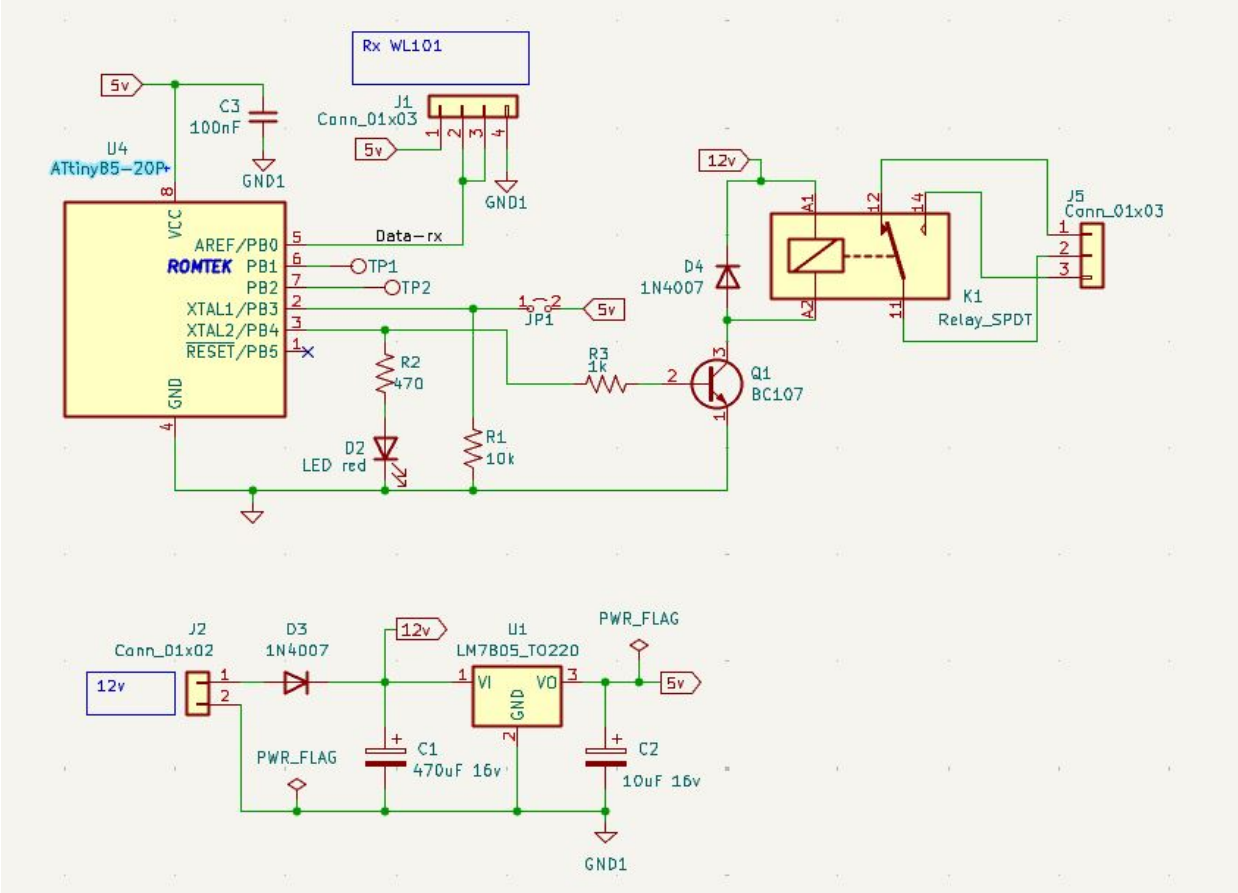
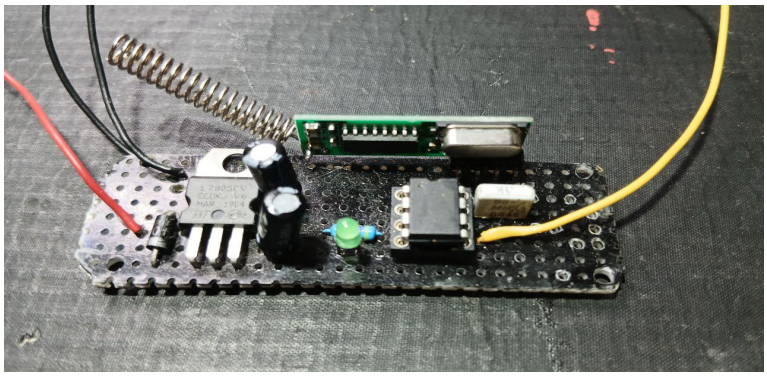
The receiver operates at 12 volts via a voltage regulator that reduces the voltage to 5 volts.
When the transmitter sends the string, the receiver lights the LED and triggers the relay.
In the actual receiver circuit, I didn't place the relay as shown in the diagram, simply because this is just a demo.

The receiver





Notes and improvements:
The receiver schematic includes a JP1 that I didn't use, but is intended for future use as a bistable configuration.
It can certainly be improved at the firmware level, but this is just an example that anyone can start from.
Caution: Remember the FUSE configuration, see the code.

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