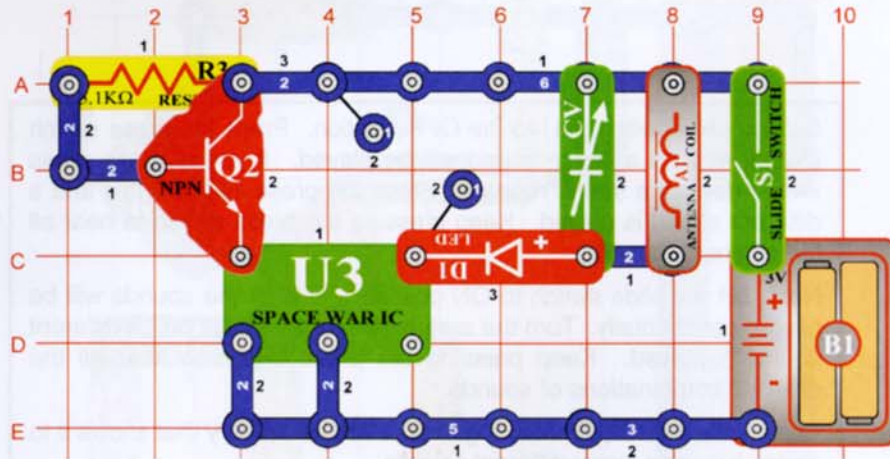




## Project #122



## Space War Radio

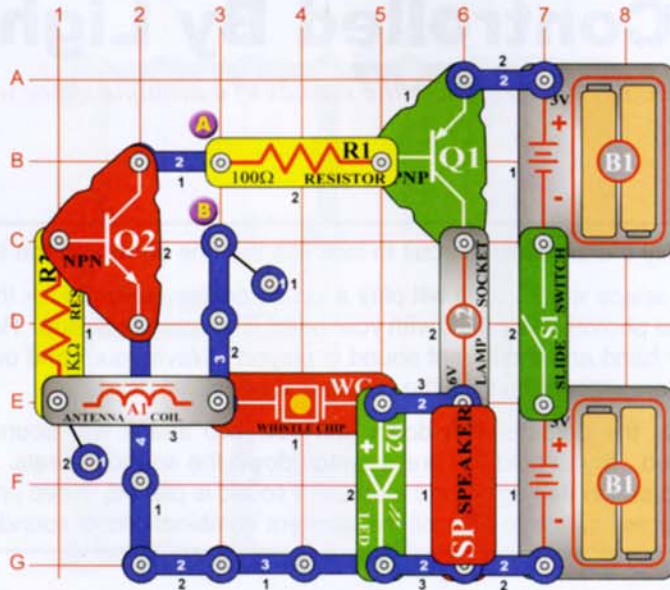
**OBJECTIVE:** To transmit Space War sounds to a AM radio.

Place the circuit next to an AM radio. Tune the radio so no stations are heard and turn on the slide switch (S1). You should hear the space war sounds on the radio. The red LED (D1) should also be lit. Adjust the variable capacitor (CV) for the loudest signal.

You have just performed the experiment that took Marconi (who invented the radio) a lifetime to invent. The technology of radio transmission has expanded to the point that we take it for granted. There was a time, however, when news was only spread by word of mouth.



## Project #123



## The Lie Detector

**OBJECTIVE:** To show how sweat makes a better conductor.

Turn on the slide switch (S1) and place your finger across points A & B. The speaker (SP) will output a tone and the LED (D2) will flash at the same frequency. Your finger acts as a conductor connecting points A & B. When a person is lying, one thing the body starts to do is sweat. The sweat makes the finger a better conductor by reducing its resistance.

As the resistance drops, the frequency of the tone increases. Lightly wet your finger and place it across the two points again. Both the output tone and LED flashing frequency increase, and the lamp (L2) may begin to light. If your finger is wet enough, then the lamp will be bright and the sound stops - indicating you are a big liar! Now change the wetness of your finger by drying it and see how it affects the circuit. This is the same principle used in lie detectors that are sold commercially.