

## Conversion of an Aim and Flame Lighter to a Spark Generator

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Many chemical demonstrations require a spark to initiate the reaction. The following is a simple way to convert a common Aim and Flame type lighter into a spark generator.

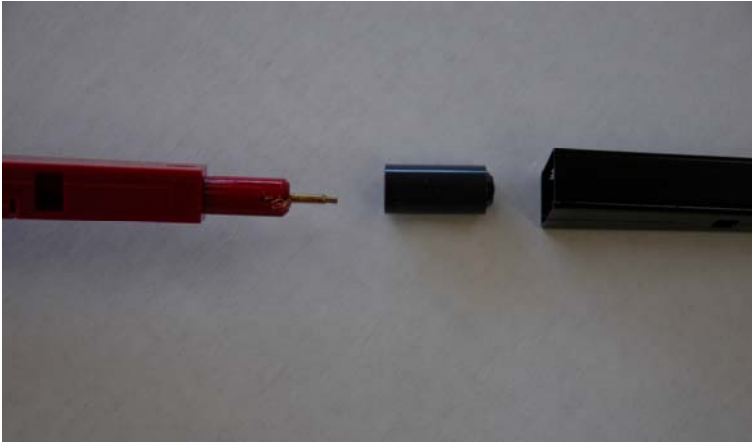
**Step 1:** Get an EMPTY Aim and Flame lighter.



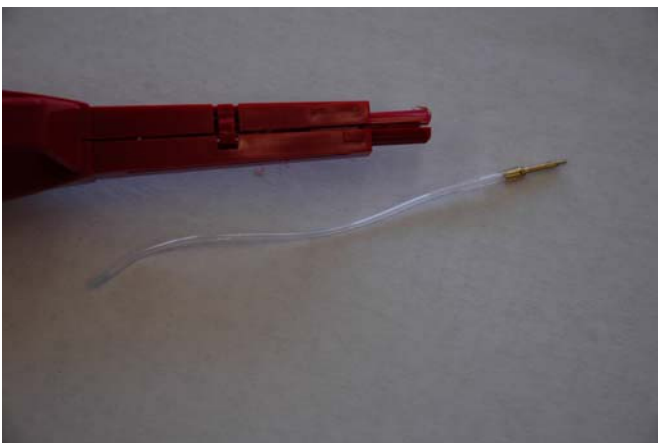
**Step 2:** Remove the black metal sleeve by depressing the red tab and pulling on the sleeve.



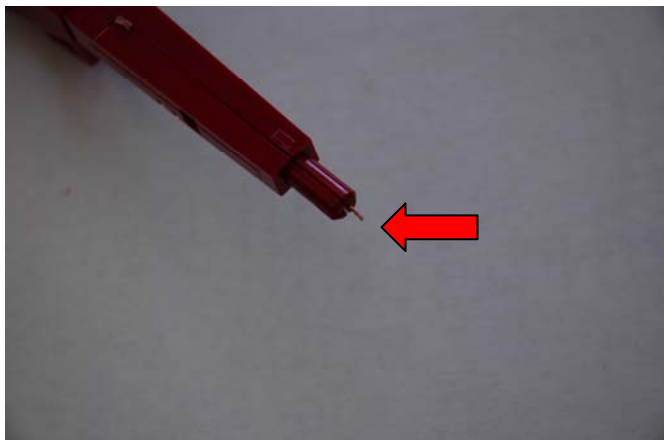
**Step 3:** Remove the inner black plastic sleeve.



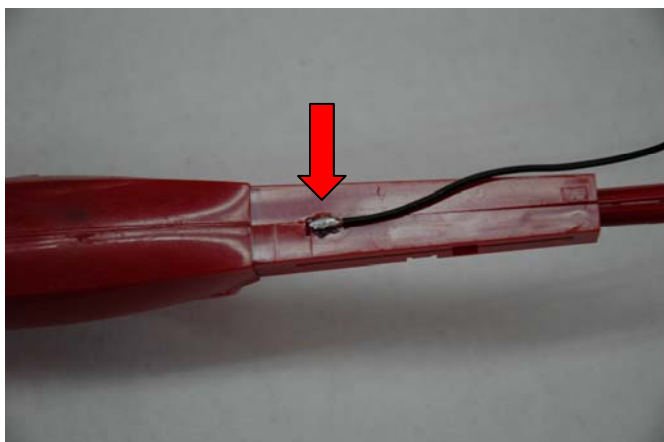
**Step 4:** Separate the two halves of the red stem and pull on the brass nozzle until it pops free. Then snap the red stem back together.



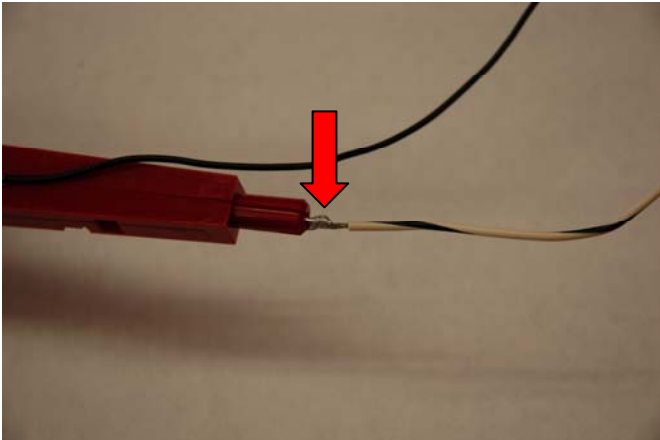
**Step 5:** Locate the two exposed wires, one halfway up the stem and the other at the end of the stem.



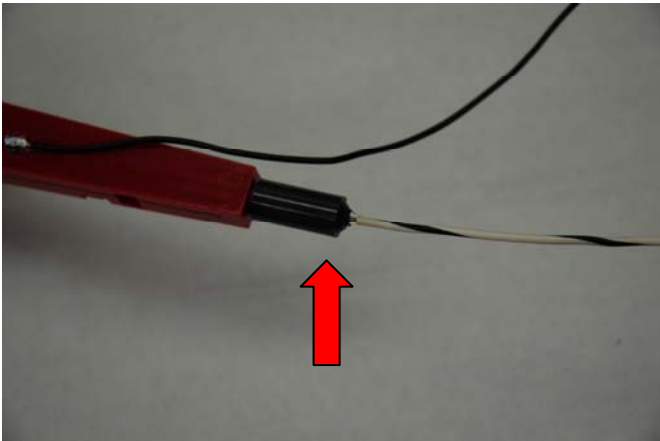
**Step 6:** Solder a piece of wire to the upper exposed wire. Make sure the length of the wire extends a minimum of 10-15 cm beyond the end of the stem.



**Step 7:** Solder a second piece of wire to the exposed wire on the end.



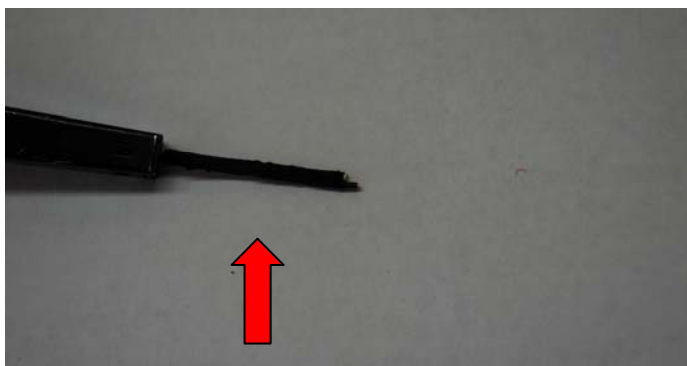
**Step 8:** Slide the plastic sleeve over the second soldered wire.



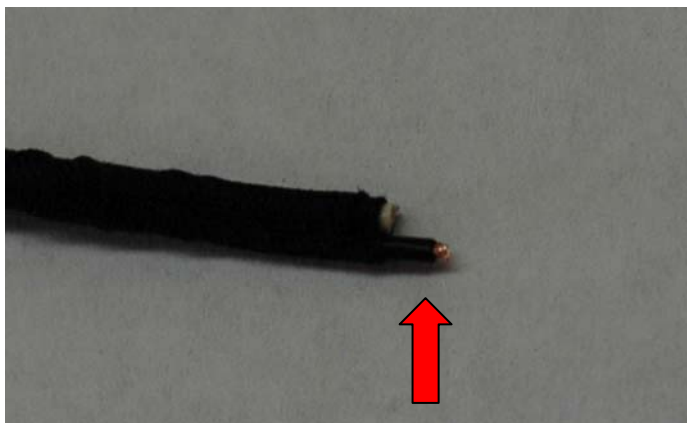
**Step 9:** Slide the long metal sleeve over both wires, allowing the ends of both wires to stick out of the opening at the end of the metal sleeve. Do not let the metal sleeve touch the soldered connection in the middle of the red stem.



**Step 10:** Wrap the soldered connection in the middle of the red stem with electrical tape. Wrap the two extended wires, leaving 2-3 mm exposed.



**Step 11:** Cut one wire so that it is one mm shorter than the other wire.



**Step 12:** When the trigger is depressed, a blue spark will appear between the two wires. This can be used as an ignition point for many explosive reactions.

NOTE: The length of the wire that extends out the end of the Aim and Flame can be adjusted to fit the application.