UNITED SCIENTIFIC SUPPLIES, INC.

OPERATING INSTRUCTIONS AND ACTIVITY GUIDE

MORSE CODE KIT

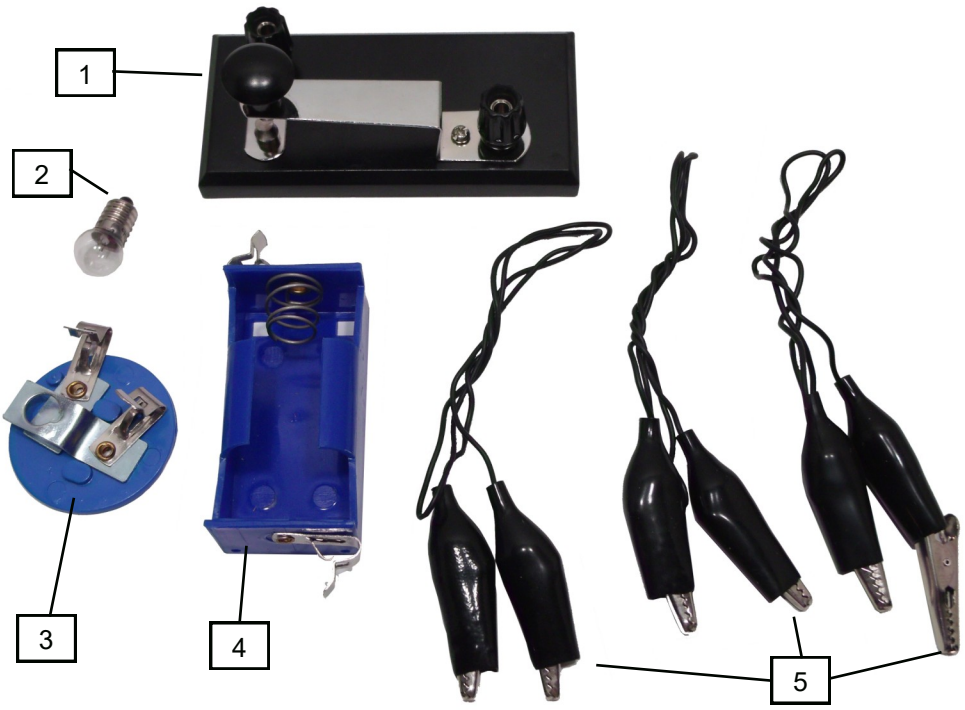

Figure 1

DESCRIPTION

The Morse Code kits allows students to engage with what was once a technological marvel - communicating over long distances quickly and creating a new job market - telegraph specialists. Much like the way technology is rapidly evolving today, with new careers being created all the time, students can re-live the corner stone of our communication era.

The kit allows students to send pulses of electricity to light up a bulb in order to send information.

IDENTIFICATION OF COMPONENTS

1. Contact Key
2. Light bub
3. Light socket
4. Battery holder
5. Three alligator clip wires

PRE-LAB ASSEMBLY

Set up the required materials for each lab station.
Make copies of the Morse Code characters for the students to use.

THE DEMONSTRATION

1. Sending a message with Morse Code

Materials provided: Contact key, battery holder, wires, bulb, socket, Morse code key

Materials Needed: D Battery

Long before we had telephones, the quickest way for people to communicate with each other was to use a "telegraph." The telegraph could not send voice messages, only electrical signals, so a code was needed to interpret the messages. In 1838 Samuel Finley Breese Morse (1791 – 1872) developed a system of short and long signals – "dots and dashes" – to be used to send messages with the telegraph. This system is known as the "Morse Code."

Each letter of the alphabet, as well as numbers and some symbols, was given its own combination of dots and dashes. For example, "A" is "● **–**" and "B" is "**–** ●●●" . When using the telegraph, "●" means you hold down the contact key for just a moment, and "**–**" means you hold down the contact key for a little bit longer, about 1 second.

Prior to the experiment, send a simple "S.0.S" "●●● **– – –** ●●●**".** This way the group can become use to the speed of what one person calls a dot and dash.

- Connect the wires to the bulb holder, battery holder, and contact key as shown in *Figure 2*.
- Place a "D" size battery in the battery holder.
- Screw the small light bulb into the bulb holder. When you press the contact key down, you will notice that the light bulb lights up.
- Try just "tapping" the contact key. This is the same as sending a "●" signal in Morse code. If you hold the contact key down for a little bit longer, it is the same as sending a "**–**" signal in Morse code.
- Using the Morse Code key, write down a short message to "send" to your lab partner.
- If you want, have a contest as to who can accurately translate the code.

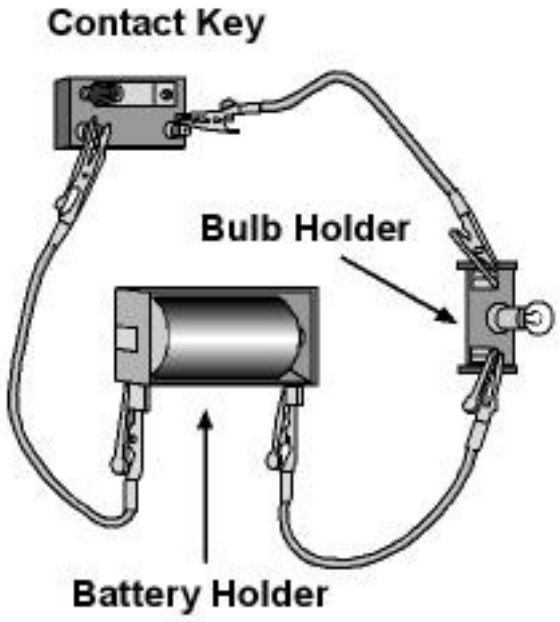

Figure 2