

# How it works

Samuel uses international morse code:

<b>A</b> .-	<b>G</b> --.	<b>M</b> --	<b>S</b> ...	<b>Y</b> -.--	<b>4</b> ....-
<b>B</b> -...	<b>H</b> ....	<b>N</b> -.	<b>T</b> -	<b>Z</b> --..	<b>5</b> .....
<b>C</b> -.-.	<b>I</b> ..	<b>O</b> ---	<b>U</b> ..-	<b>0</b> -----	<b>6</b> -....
<b>D</b> -..	<b>J</b> .---	<b>P</b> .-..	<b>V</b> ...-	<b>1</b> .----	<b>7</b> -.-..
<b>E</b> .	<b>K</b> -.-	<b>Q</b> --.-	<b>W</b> .--	<b>2</b> ..---	<b>8</b> ---..
<b>F</b> ...	<b>L</b> .---	<b>R</b> .-.	<b>X</b> -.-	<b>3</b> ...--	<b>9</b> ----.

- The length of a dot is one unit
- A dash is three units
- The space between parts of the same letter is one unit
- The space between letters is three units
- The space between words is seven units

## Explanation:

Samuel requires 2 things before it will do anything useful:

1. A clock input
2. Some text input

To provide text input to Samuel, click anywhere within the text input screen **(C)**, you can then type using your computer's keyboard (until you click anywhere outside of the text input screen)

**Note:** currently only letters A-Z and numbers 0-9 are supported

Samuel treats one unit of time as the time between two clock inputs recieved via the clock input **(A)** because of this, fast clocks tend to work best.

Once you have entered some text, and hooked up the clock input **(A)** to a clock source you can then use the gate output **(H)** to trigger drums, envelopes, Nuclear Armageddon etc.

Knobs **(D - G)** can be used to vary the length of dots, dashes, new letters, and new words. Altering these values will change the characteristics of the resulting rhythms.