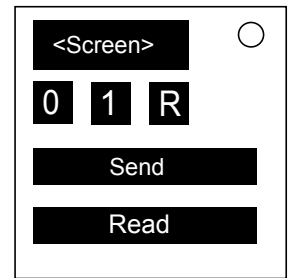


## On the Subject of Cruel Binary

*Only 50% to strike! Oh, wait. Its 99,6%...*

This module contains the "O", "I", "R"(reset), "Send", "Read" buttons and display. On display you will see the "I Message" text. Press "Read" button to see the word. Then, based on your word calculate the 8-digit binary number and submit it. The binary number can be calculated by following these steps. As example word we will take "Above".



**If buttons are not red or screen doesn't show a word, you are looking at a different module.**

- **Step 1:** Convert your word to dots and dashes with morse code alphabet.  
(Example: Above -> .--...---...-.).
- **Step 2:** Replace any dashes with ones and any dots with zeros.  
(Example: .--...---...- -> 01100011100010).
- **Step 3:** Amount of digits in your number must be divisible by 8. If it not, add needed zeros at the end of your number.  
(Example: 01100011100010. Amount of numbers is 14, so we need to add two zeros. -> 0110001110001000).
- **Step 4:** Take first 8 numbers and convert it to decimal. Then take second 8 numbers and do same operation, etc.  
(Example: 0110001110001000. First 8 digits is 01100011 which 99 in decimal. Second 8 digits is 10001000 which 136 in decimal).
- **Step 5:** Add up received digits, modulo 256, then convert it back to binary.  
(Example: 136 + 99 = 235, which 11101011 in binary).
- **Step 6:** Finally submit your number.  
(Example: So if you see the "above" word, you must submit "11101011" number).

**Note that you must submit your code in full format! For example, if you got 110, you must submit 00000110.**

**Appendix C01: Morse code alphabet.****How to Interpret**

1. A short flash represents a dot.
2. A long flash represents a dash.
3. There is a long gap between letters.
4. There is a very long gap before the word repeats.

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