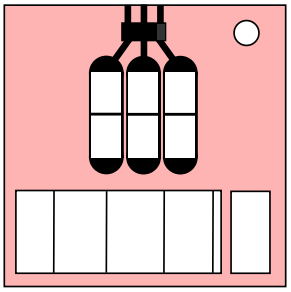
On the Subject of Morsematics



Get it? Because it uses morse and maths! I'll see myself out...

- Every letter of the alphabet is considered to have numeric value equal to its position (A=1, B=2 ... Z=26)
- Numeric values outside the 1-26 range wrap around (Z+1=A, A-1=Z)
- Three unique letters are being received on a loop, shown by the three flashing lights in the middle of the module
- To solve the module, a correct response letter must be sent in morse using the transmit button in the bottom-right
- The small switch at the top can be used to toggle the received letter lights

Take the 4th and 5th character of the serial number, this is your character pair.

Perform each step below in sequence, modifying your character pair progressively:

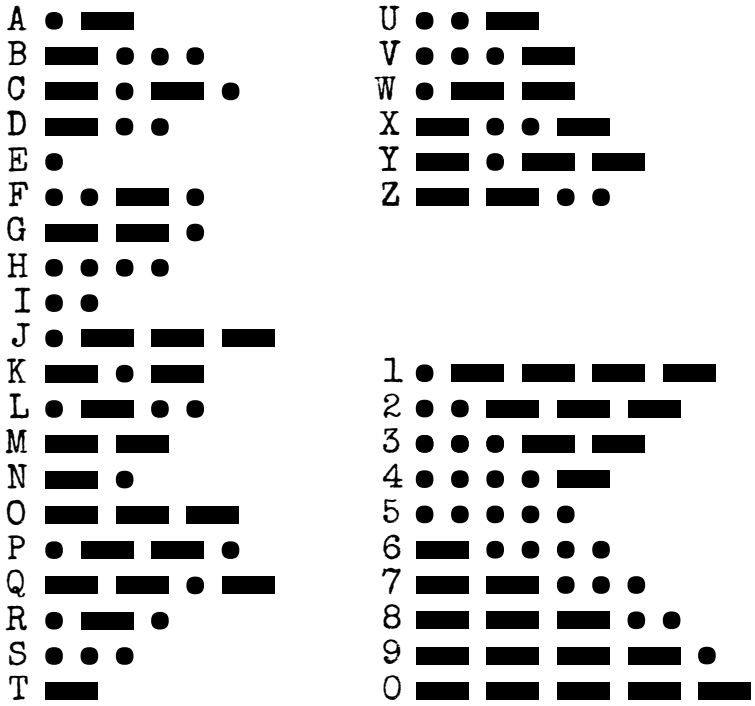
- For each indicator that has a matching letter in the received letters; add 1 to the first character of your pair if the indicator is on, or the second character if it is off
- If the sum of your character pair is a square number, add 4 to the first character; otherwise, subtract 4 from the second character
- If either character from your character pair matches a letter in the name of any port on the bomb, swap the characters in your pair
- Add the largest received letter to the first character in your pair
- Add the two smaller received letters to the second character in your pair
- If any received letters are in the Fibonacci sequence, add them to both characters in your pair
- If any received letters are prime, subtract them from the first character in your pair
- If any received letters are square, subtract them from the second character in your pair
- If batteries are present and any received letters are divisible by the number of batteries present, subtract those received letters from both characters in your pair

After performing all steps, transmit the sum of your character pair.

Note: Transmitted morse is interpreted based on gaps between button holds. Holding for more than double the length of the average gap is considered to be a dash, and a dot otherwise. Additionally, in the case of E and T, they are considered equal.

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	1
B	2
C	3
D	4
E	5
F	6
G	7
H	8
I	9
J	10
K	11
L	12
M	13

N	14
O	15
P	16
Q	17
R	18
S	19
T	20
U	21
V	22
W	23
X	24
Y	25
Z	26