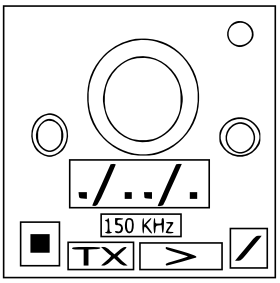
On the Subject of Hertz



Eureka! I got it! Let's make this bomb more difficult by adding a transmitter to decode a message. SO BRILLIANT!

This module displays 2 leds, a transmitter led, 2 screens and 4 buttons. The buttons will be labelled from left to right:

. TX > /

Finding the TX number

To start the flashing, you must transmit the correct number. Move in the shown grid using the table (the grid loops round). The column is either the color of the left and right led for the 1st and 2nd moves OR the amount of on indicators for the 3rd move. When you get a direction, move in that way. Starting point is 466. Use the left led move, then the right led move, then the indicator move.

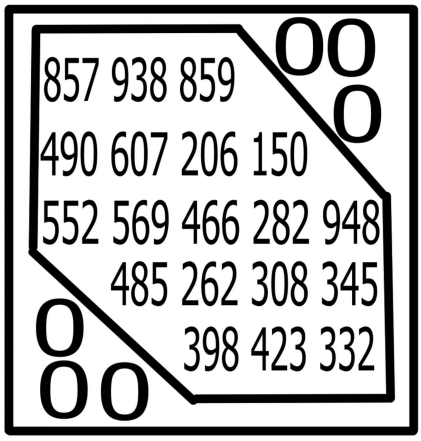


Table	Black/0	Green/1	Orange/2	Red/3	White/4	Blue/5	Purple/>5
Left LED	No move	Up	Right	Down	Left	Up-Right	Up-Left
Right LED	No move	Up	Right	Down	Left	Up-Right	Up-Left
On Indicators	Up twice	Up-Right twice	Right twice	Down-Right twice	Down twice	Left twice	Up-Left twice

After all of the moves, you should get a number. If the number is 0, you have done something wrong. Use the '>' button to switch through the hertz on the yellow screen until your number appears. Press the 'TX' button on that number to begin the flashes. Note that when the flashes start, the '>' button and the 'TX' button cannot be pressed.

The Flashes

The transmitting LED will flash between white, black and orange. A white flash for 1 second equals a '.' , a black flash for 1 second equals a '/' , an orange flash for 1 second equals a pause between letters and and orange flash for 4 seconds equals a pause between repeats. These should be noted down. The flashing will only end when the module is completed.

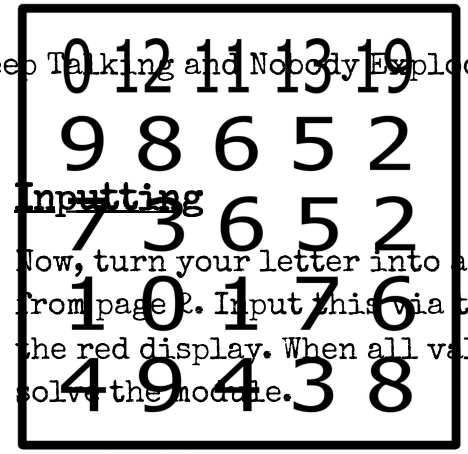
Decoding the word

When you have noted down the dots and slashes, remembering the pauses, find the corresponding letters. If the process was done correctly, you should have a word. This word will be used later

Letter	Result Code
A	././//
B	././/.
C	..././
D	../../
E	/.////
F	.././/
G	././..
H	....///
I	/..///
J	./../.
K	./....
L	./..//
M	...../
N	...///
O	.//./.
P	.//.//
Q	..//..
R	...///
S	.//...
T	.././.
U	../...
V	./././
W	.//../
X	.../..
Y	..../.
Z	./.../

Turning the word into a number

Now that we have our word, we must turn it into a number. Using the coordinates from the previous table, put them into the new table to recieve a number:



Inputting

Now, turn your letter into a code of dots and slashes using the decoding table from page 2. Input this via the '.' and '/' buttons. Your inputs will be recorded on the red display. When all valid inputs have been made, press either buttons to solve the module.

Striking

If the wrong Hertz was inputted or the wrong code button ('.' and '/') was inputted, you will receive a strike. The modules answer will not change but if you got a strike from the '.' and '/' inputs, the red screen will reset and you will have to input the code again.

After you find your number, add 1 and multiply it by one more than the amount of letters. Now using the letters in your word, modify this number. Do these bullet points from top to bottom:

- If there is a vowel (not including y), take away three from your number, multiply it by 2 and take the absolute value.
- If there is one of the letters 'BCDFG', add 13 to your number.
- If there is one of the letters 'LMNPQ', divide your number by 5, ignoring remainders.
- If there is one of the letters 'RWXYZ', add 10 to your number and modulo by 76.

Modulo your number by 26 and convert your number to a letter (where A is 0 and Z is 25). You will now input this letter.