# On the Subject of N&Ns

There's some M's in this house! There's some M's in this house!

If the status light is not in the top-left, you are looking at a different module.

Press the correct button in each of the 5 stages to solve the module. Pressing any button incorrectly will incur a strike and reset the module back to stage 1. The stage the module is currently on can be determined with which button is colored cyan.

Throughout this manual, the buttons are associated with the numbers 1 to 5 based on their position from left to right.

#### Stage 1:

For each number k in the set of numbers 1 to 5, count how many of the kth characters of each button are Ns. Press the button that is the position of the value of k for which there is a unique number of Ns.

#### Stage 2:

Treat N as a 0 and M as a 1. Each button will contain a binary number that can be converted to a letter using AOZ25. These letters spell out a scrambled word from the following word bank, with one extra. Press the button with the extra letter.

ATOM	BIKE	CELL	DASH	EGAD	FONT	GYRO	HIKE	ICED	JACK	KIND	LONG	MOON
NEWT	OXEN	PACK	QUIZ	RUST	STAN	THAW	USER	VAPE	WEST	XYST	YULE	ZINC

#### Stage 3:

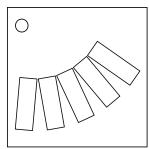
In this stage, each button will have a unique color.

Take the serial number, but ignore one character, based on the color not present:

- Red: 1st character
- Green: 2nd character
- Orange: 3rd character
- Blue: 4th character
- Yellow: 5th character
- Brown: 6th character

Treat the remaining characters as base-36. If the first character is even, the first bit of your "target sequence" is an M, and an N if it is odd, and so on. If all bits are identical, invert the middle one.

Treat the set of all letters on the module as a 5×5 torus (it wraps around in all directions), with button 5 giving the top row, button 4 giving the 2nd row, etc.



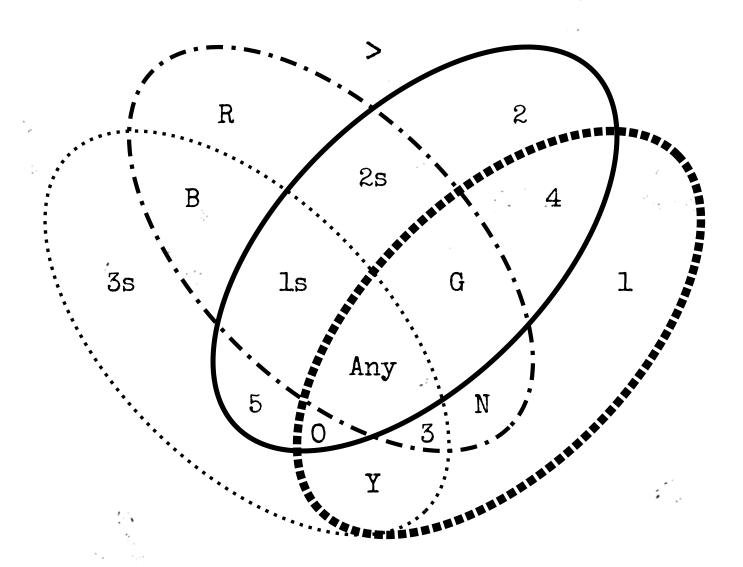
Use the serial number character that was ignored to get a direction:

B48F	TUMJY	6SHA
IQC3V	0scar →	0751G
OWRX	9LKZE	2NPD

The target sequence can be found somewhere within this torus, written in the direction obtained. Press the button that contains the first letter of the target sequence.

## Stage 4:

Read the Venn diagram using the only button that starts with an M and press the button given from the resulting instruction.



 Button has a primary color (red, blue, green)
 Button has been pressed in a previous stage
 Button has an even number of Ns
 Button is odd

Character	Button to press			
#	That button			
#s	The button pressed in that stage			
>	The button with the highest non- tied amount of Ns			
Any	Any button			
R	Any red button			
G	Any green button			
0	Any orange button			
В	Any blue button			
Y	Any yellow button			
N	Any brown button			

### Stage 5:

If every button pressed so far was different, press the only button that hasn't been pressed.

Otherwise, take the number of times each button has been pressed from left to right and use those numbers to form a number in base-5. Convert this to binary and take the 5 most significant bits, appending 0's to the left until it's 5 bits long if necessary. With M being 0 and N being 1, press the button whose label matches these bits.