On the Subject of Bell of Tío

A. E. *ding* F. *ding* A. E. I. O. U. *ding ding ding* A. B. C. *ding* ... okay, enough!

Unfortunately, Nacho has gotten to your nitroglycerin pills to treat your angina, and has replaced them with ibuprofen, which has caused you to suffer a heart attack and a stroke. You have become almost completely paralyzed, and have lost movement everywhere except for a few places, including your right index finger. Your only means of communication are through ringing a



In order to disarm this module, you must spell out its secret word. However, simply telling the module the word won't work, as your stroke has left you mute. In order to communicate via letters and words, you require a vocal assistant.

bell that has been attached to the armrest of your wheelchair with this finger.

Ring the bell to get your assistant's attention. Then, your assistant will read letters from a five by five grid. The grid of letters contains all letters from A to Z, except for one missing letter, shuffled in a random order.

Your assistant will read from the grid, initially starting at the top left, and go down the column, reading each letter along the way. Ring the bell again to stop at that row, and your assistant will then read all the letters within that row from left to right. Ring the bell once again when you wish to add the letter at that position to your input.

If the letter you wish to add to your input is at the beginning of the row, instead ring your bell repeatedly while your assistant is reading down the column and once she has reached that row.

Unfortunately, your assistant's salary is paid by the creators of the bomb, and she has agreed to manipulate the grid every time you add a letter to your input. All possible transformations are listed on the next page. Multiple transformations may apply at once.

Adding a letter to your input will result in a unique set of transformations to the grid based on which row the letter was in.

It is up to you to determine which transformations from the next page have been put into a pool of five. The transformations to be put into the pool are always taken from top to bottom.

It is also up to you to determine which of the five pooled transformations have been applied when adding to your input within each row.

Each row's determined transformations can be treated as a five-digit binary number, where each digit is either a 1 or a 0 based on whether that index within the pool has had its transformation applied or not. All five binary numbers can be converted into their alphabetic position, resulting in a five-letter word.

To submit your input, do not ring the bell while your assistant is reading the letters along any of the rows, and instead go past the right of the row.

To reset your input, do not ring the bell while your assistant is reading the letters down the first column, and instead go past the bottom of the column.

The entire grid has been rotated either clockwise or counterclockwise.

One of the rows has been horizontally flipped.

Two of the columns have swapped.

One of the rows has been cycled rightwards a fixed number of spaces.

One of the columns has been cycled downwards a fixed number of spaces.

Two of the rows have swapped.

One of the columns has been vertically flipped.

The outer ring of letters has been cycled either clockwise or counterclockwise a fixed number of spaces.