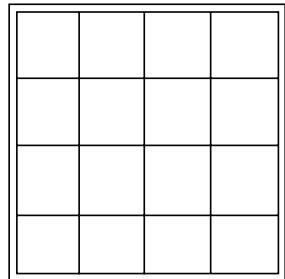


## On the Subject of 15 Mystic Lights

Grid is blue and yellow. Period.

This module consists of two stages, where Stage 1 has 16 lights variant and Stage 2 has 15 lights variant.

The module lights up in the dark (cool, right?).

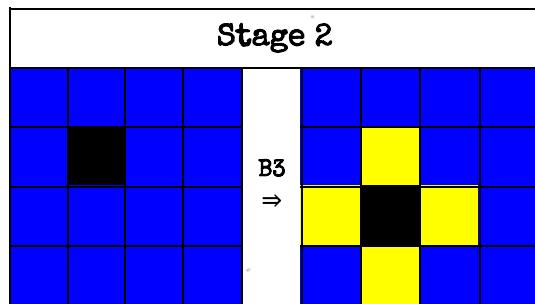
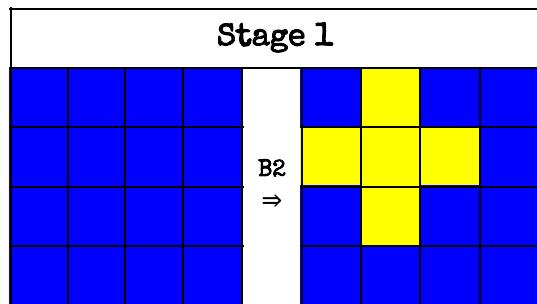


When a button is pressed, the button will toggle between yellow and blue itself and the adjacent buttons in the four major cardinal directions.

The 15 lights variant has a hole in the board which cannot be interacted with. Clicking on a light adjacent to the hole will toggle the adjacent lights and then move the interacted light to the hole.

To solve the module, turn the lights to one color on both stages.

If colorblind mode is enabled on this module, a 0 represents a blue light while a 1 represents a yellow light. Both texts are colored differently to distinguish between the two colors. The text goes away when the lights are in one color and reappears when the module generates the given variant.



Please contact Fang#1217 (manual side) and kavinkul#8635 (algorithm side) if you found any mistakes or errors.

## Stage 1: 16 Lights Variant

The method used to solve this stage is called [Row Chasing](#) (<https://www.youtube.com/watch?v=84uVjM4hypo>).

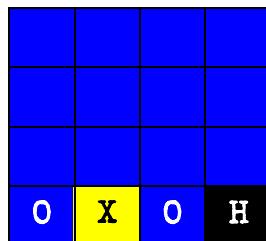
To sum it up, "chase" the lights in row (or column) until all lights on that row (or column) are the same. Repeat for subsequent rows.

This method will **always** solve the stage.

## Stage 2: 15 Lights Variant

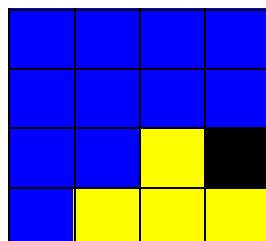
1. Chase the hole until it is off to one side of the board.
2. Then, chase the off lights from the opposite side of the hole to the side with hole until only one column contains some unlit lights.
3. This may require to toggle a square next to the hole which will move the hole.  
In such case, continue to chase all the lights first, then chase the hole.
4. Note: O and X mean square with same/different color from the square from the other 3 rows, while H means the hole on the module.
5. The board can be mirrored on either x-axis or y-axis, colors can be flipped, with the same technique.

### Case 1: XOH

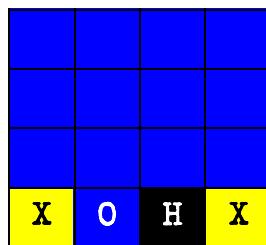


Chase Around in direction from H to X around the board.

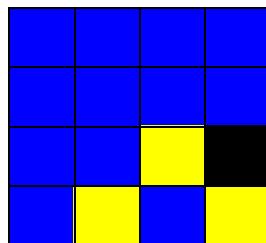
If the initial configuration is XOH O, the board will be in this configuration, tap the inner X (C4 in this case) to solve the module.



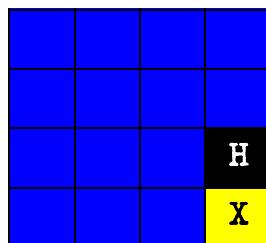
Otherwise, if the initial configuration is O XOH, the board will turn into Case 4.

**Case 2: XOHX/XHOX**

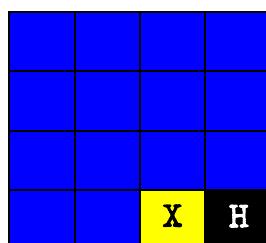
Chase Around indirection of H to O to X until it becomes (refer 2nd grid), then tap at (D4 C4 in this case) to turn it into Case 3.

**Case 3: HX Vertical**

Tap at X (D4 in this case) to turn it into Case 4.

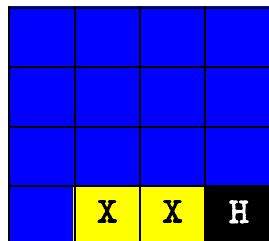
**Case 4: HX**

Press the 0 next to an X, then press the square that was an X, then press the first square again, then second square to solve the module.

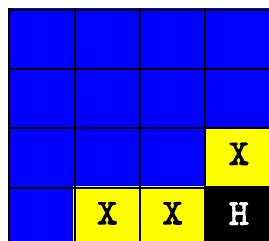


**Case 5: HXX**

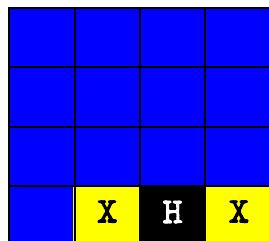
Chase the hole in the direction of HXX until it solves.

**Case 6: HXX + X Vertical**

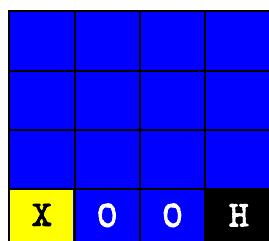
Chase the hole in direction of HXX first which will turn it into Case 1.

**Case 7: XHX**

Press the 0 next to an X, then press the square that was an X, then press the first square again, then second square to turn it into Case 1.

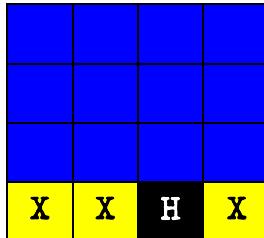
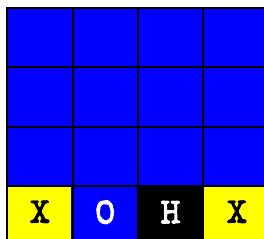
**Case 8: XOOH**

Press the 0 next to X, then the original 0 next to the hole, then repeat 1 more time to turn it into Case 10.

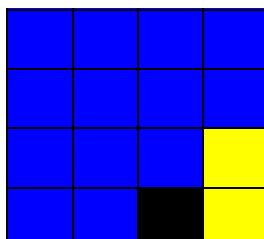


**Case 9: XXHX**

Press the furthest X from H, then the X between that X and H, then repeat 1 more time to turn it into Case 11.

**Case 10: XOHX**

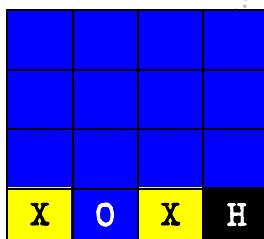
Chase the hole in the direction of HOX until it becomes:



Then, solve the module. (duh)

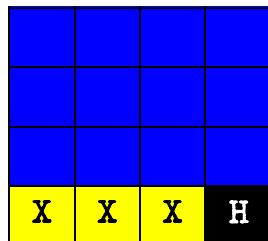
**Case 11: XOXH**

Press O, then square next to H (that used to be H). Repeat 1 more time to turn it into Case 1.

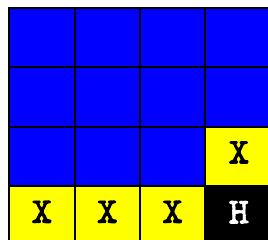


**Case 12: XXXH**

Chase H around in the direction of HXXX until it turn into Case 1.

**Case 13: XXXH + Vertical X**

Press X in the middle of two X's, then the original X that is in between X and H, then repeat once to turn it into Case 5.

**Case 14: XXOH**

Press X next to the O and then press square where the O originally was, then repeat once to turn it into Case 9.

