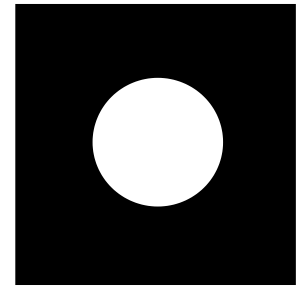


## On the Subject of The Sphere

*And you thought The Cube was bad...*



- The module will show a rotating sphere. The sphere will blend through 5 of 8 potential colours before repeating.
- The colour options are red, blue, green, orange, pink, purple, grey and white. The cycle will not necessarily be in that order. Colours may be repeated.
- Each transition will take 3 seconds before holding at black for 1 second.
- The sphere will emit a distinct sound and two smaller indicator spheres will illuminate before it blends into its 5th colour.
- To disarm the module, you must enter a series of 6 taps and 5 holds. Taps are determined by the serial number, holds by the sphere colours.
- To calculate the taps, take each character of the serial number, converting any letters to equivalent numbers, modulo 10 (e.g. A = 1). Tap and release the sphere when the final digit of the second timer is equal to that number.
- To calculate the holds, use the table below and hold the sphere for the given number of seconds (according to the bomb's second timer).
- Each time you click, the sphere will emit a sound (and hum upon holding).
- Tapping will trigger a green LED. Holding will trigger a blue LED.
- Enter all inputs in the correct order to disarm the module.
- Entering any incorrect inputs will cause a strike upon completion of the full sequence of 11. Correct inputs will be indicated by a pink LED, with incorrect inputs indicated with a red LED.
- Following a strike, you will only need to re-enter incorrect responses.
- For each colour, calculate the appropriate hold time using the formulae below. A '%' sign refers to the modulo operation:
  - Red =  $((\text{DVI-D ports} + \text{unlit indicators})^2 \% 10) + 1$ .
  - Blue:  $x = (\text{Batteries} + \text{parallel ports} + \text{lit indicators})^3$ . If  $x > 9$ , blue = 'tens' digit. Otherwise, or if the 'tens' digit is 0, blue = 5.
  - Green = Digital root of (the converted serial number digits). If the converted serial number digits are all 0, green = 4.
  - Orange:  $x = (\text{Battery holders} + \text{port plates} + 7) * (\text{RJ45} + \text{parallel ports} + \text{unlit indicators} + 3)$ .  $y = \text{the sum of } x\text{'s digits}$ . Orange =  $(y \% 10) + 1$ .
  - Pink =  $((\text{Difference between (lit indicators)}^2 \text{ and (batteries)}^2) \% 10) + 1$ .
  - Purple:  $x = (\text{Total ports} + \text{port plates} + \text{unlit indicators} + \text{battery holders})^3$ . If  $x > 99$ , purple = 'hundreds' digit. Otherwise, or if the 'hundreds' digit is 0, purple = 7.
  - Grey = Digital root of  $((\text{port plates})^2 + (\text{batteries})^3)$ . If 0, grey = 4.
  - White = Digital root of  $((\text{batteries} + \text{lit indicators} + 13) * (\text{ports} + \text{indicators} + \text{port plates} + 9))$ .

## Ordering

- If you have exactly 2 AA batteries, exactly 1 serial port, an unlit FRQ indicator and exactly 3 port plates, submit your answer in order 10.
- Otherwise, add together the number of lit indicators, battery holders, serial ports and RJ-45 ports.
- Add together the number of unlit indicators, port plates, D batteries and Stereo RCA ports.
- Multiply the numbers together and modulo 10.
- Submit your answers in the corresponding order.
- T# refers to the tap position of the given serial number digit (e.g. T1 is the converted digit in the first position of the serial number).
- H# refers to the hold position of the colour in the sphere cycle (e.g. H1 is the answer yielded from the first colour of the sphere cycle).

#	Order
0	T4, T1, H5, T2, H3, H1, T6, T3, H2, H4, T5
1	H3, T2, T6, T1, H2, H5, T3, T4, T5, H1, H4
2	H5, H1, T3, T4, H3, T6, T1, H2, H4, T5, T2
3	T1, H2, T3, H5, T6, H4, H1, T2, T4, T5, H3
4	H1, T5, T3, H4, H2, T6, T1, T2, T4, H3, H5
5	T2, T4, H5, H1, T3, T1, H2, H3, H4, T5, T6
6	T6, H3, T2, H1, T5, T4, H4, H2, T3, T1, H5
7	H4, H1, H3, T2, T6, H5, H2, T4, T3, T5, T1
8	T4, T6, H3, T1, T2, H5, H1, T3, H2, T5, H4
9	H2, T2, H3, T6, H1, T5, T4, H4, H5, T1, T3
10	T1, H1, T2, H2, T3, H3, T4, H4, T5, H5, T6