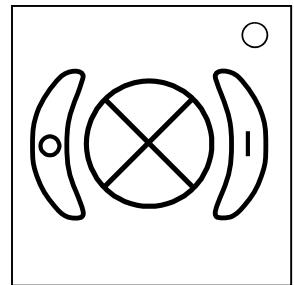


On the Subject of Not The Bulb

Zero. That's the bomb defuser's job. ;)



This module has two buttons labelled **I** and **O** and a see-through light bulb.

The glass is one of six colours: Red, Green, Blue, Yellow, Purple, or White and the screw cap is one of five materials: Copper, Silver, Gold, Blue plastic, or Carbon fibre.

If the screw cap is Ceramic, the module is [The Bulb \(The%20Bulb.html\)](#).

Selecting the bulb before either of the buttons will cause it to flash a sequence in [Tap Code \(Tap%20Code.html\)](#), with $K = (6, 1)$. **Do not interact with the module while it is transmitting.**

Decoding the sequence reveals one of the nine letter words in **Table A** that has been encrypted by the following process:

1. Shifting the word 0–8 letters to the left.
2. Caesar shifting each letter 0–25 letters forwards.

Find the word in **Table A** that starts with the first letter of the **encrypted** word and apply the same encryption process that was used to generate the transmitted sequence to it. This yields the module's keycode.

Use **Table B** with each letter of the keycode and the colour of the glass to obtain a sequence of four button presses to be submitted into the module.

Selecting the bulb will submit the last four button presses in order.

If the submission is **correct**, the bulb will flash and a sound may be heard. This sound only plays once, so be vigilant. The bulb may not produce a sound, in which case no modifications are applied.

Otherwise, use **Table C** with the sound that plays and material of the screw cap to obtain a modification.

Apply the modification to the remaining unsubmitted letters of the keycode before submitting the next sequence of button presses.

If the submission is **incorrect**, the bulb will not flash, a strike is incurred, and module will reset its submissions, starting over from the first letter of the keycode and allowing the bulb to be selected to restart the transmission.

The module is solved once all nine sequences of presses have been correctly submitted.

Table A

AMPLITUDE	BOULEVARD	CHEMISTRY	DUPLICATE	EIGHTFOLD	FILAMENTS	GOLDSMITH
HARLEQUIN	INJECTORS	JUXTAPOSE	KILOHERTZ	LABYRINTH	MOUSTACHE	
NEIGHBOUR	OBSCURITY	PENUMBRAL	QUICKSAND	RHAPSODIC	SQUAWKING	TRIGLYPHS
UNIVERSAL	VEXATIONS	WHIZBANGS	XENOGLYPH	YARDSTICK	ZIGAMORPH	

Table B

- L and R are the positions of the buttons.
- I and O are the states of the buttons.

	R	G	B	Y	P	W
A	RIRO	LLOI	OILR	IRLO	LRRI	IRLR
B	ORLL	LROO	IILR	IORO	ILIR	RRLI
C	LRII	LIOR	ROLO	OLRI	ROLR	RLOI
D	RLLI	OLII	RILO	IRLI	IORL	IIOR
E	ILRO	LRLI	IRIL	OLLR	IILO	RLIO
F	LROR	LORR	LLRO	RROL	RRIO	RIOL
G	RIIO	LLRI	ROIL	OLIO	RILI	RIIL
H	LILR	ROOI	RROI	ILLO	RIRL	LROL
I	IORR	ORIR	ORIO	IIRO	OILI	LOLR
J	OLRO	LOIR	OIOL	RLII	ORLR	LIIO
K	LOIL	IRLL	RRIL	IOLL	IROI	RLIL
L	LIRI	IROO	IROL	LIRR	ROIO	ORLI
M	LLIR	LRIR	ORRI	LLOR	OLRL	OLOR
N	ILOR	IOLR	LORO	LIOL	IRRO	RILR
O	ILRR	ROLL	ORRL	OIRO	OIRI	LOII
P	OIIL	LRRO	LORL	IROR	LRLO	RORI
Q	ILLR	ILOO	OORL	IOIL	ORIL	ILIO
R	LROI	RLLO	RRLO	ROII	ILOL	OIRR
S	ROOL	RORL	RIOO	IOOR	OIRL	RLOL
T	ILOI	IIOL	LOIO	RIOR	LIOO	LOOI
U	LOOR	IRRL	LIRO	LIIR	OLRR	ORLO
V	ILRI	IORI	OLOI	LIRL	LORI	LRIL
W	OIRR	OROI	OIOR	LLIO	OLLI	OILO
X	LILO	OROL	ROIR	IRIO	RLOO	RIOI
Y	RLRI	ORII	OOLI	IOOL	RILL	ROLI
Z	RLRO	IOLO	OOIL	OOIR	LIOI	OORI

Table C

Material	Sound	Select	Click	Tap	Ding	Key	Bumper	Fake Strike
	Ref.	The Bulb	Nonogram	Tap Code	Stars	Recorded Keys	Sonic the Hedgehog	Double Oh
Copper	R	S	Z	L	M	U	D	
Silver	L	U	R	D	Z	S	M	
Gold	U	D	M	Z	L	R	S	
Plastic	Z	M	S	R	U	D	L	
Carbon Fibre	S	Z	U	M	D	L	R	

Legend	
U	+1 Caesar shift
D	-1 Caesar shift
L	+1 left shift
R	-1 left shift
M	ROT 13
Z	Atbash
S	Reverse