Welcome to the dangerous and challenging world of bomb defusing.

Study this manual carefully; you are the expert. In these pages you will find everything you need to know to defuse even the most insidious of bombs. And remember — One small oversight and it could all be over!

Defusing Bombs

A bomb will explode when its countdown timer reaches 0:00 or when too many strikes have been recorded. The only way to defuse a bomb is to disarm all of its modules before its countdown timer expires.



Modules

Each bomb will include up to 11 modules that must be disarmed. Each module is discrete and can be disarmed in any order.

Instructions for disarming modules can be found in Section 1. "Needy" modules present a special case and are described in Section 2.

Strikes

When the Defuser makes a mistake the bomb will record a strike which will be displayed on the indicator above the countdown timer. Bombs with a strike indicator will explode upon the third strike. The timer will begin to count down faster after a strike has been recorded.

If no strike indicator is present above the countdown timer, the bomb will explode upon the first strike, leaving no room for error.

Gathering Information

Some disarming instructions will require specific information about the bomb, such as the serial number. This type of information can typically be found on the top, bottom, or sides of the bomb casing. See Appendix A, B, and C for identification instructions that will be useful in disarming certain modules.

Strike Indicator



Keep Talking and Nobody Explodes v. 1

\$

Section 1: Modules

Modules can be identified by an LED in the top right corner. When this LED is lit green the module has been disarmed.

All modules must be disarmed to defuse the bomb.



19. 19.

On the Subject of Wires

Wires are the lifeblood of electronics! Wait, no, electricity is the lifeblood. Wires are more like the arteries. The veins? No matter...

- A wire module can have 3-6 wires on it.
- Only the <u>one</u> correct wire needs to be cut to disarm the module.
- Wire ordering begins with the first on the top.

<u>3 wires:</u>

If there are no red wires, cut the second wire.

Otherwise, if the last wire is white, cut the last wire.

Otherwise, if there is more than one blue wire, cut the last blue wire.

Otherwise, cut the last wire.

4 wires:

If there is more than one red wire and the last digit of the serial number is odd, cut the last red wire.

Otherwise, if the last wire is yellow and there are no red wires, cut the first wire.

Otherwise, if there is exactly one blue wire, cut the first wire.

Otherwise, if there is more than one yellow wire, cut the last wire.

Otherwise, cut the second wire.

5 wires:

If the last wire is black and the last digit of the serial number is odd, cut the fourth wire.

Otherwise, if there is exactly one red wire and there is more than one yellow wire, cut the first wire.

Otherwise, if there are no black wires, cut the second wire.

Otherwise, cut the first wire.

<u>6 wires:</u>

If there are no yellow wires and the last digit of the serial number is odd, cut the third wire.

Otherwise, if there is exactly one yellow wire and there is more than one white wire, cut the fourth wire.

Otherwise, if there are no red wires, cut the last wire.

Otherwise, cut the fourth wire.



The Button

On the Subject of The Button

You might think that a button telling you to press it is pretty straightforward. That's the kind of thinking that gets people exploded.

See Appendix A for indicator identification reference. See Appendix B for battery identification reference.



Follow these rules in the order they are listed. Perform the first action that applies:

- 1. If the button is blue and the button says "Abort", hold the button and refer to "Releasing a Held Button".
- 2. If there is more than 1 battery on the bomb and the button says "Detonate", press and immediately release the button.
- 3. If the button is white and there is a lit indicator with label CAR, hold the
- button and refer to "Releasing a Held Button".
- 4. If there are more than 2 batteries on the bomb and there is a lit indicator with label FRK, press and immediately release the button.
- 5. If the button is yellow, hold the button and refer to "Releasing a Held Button".
- 6. If the button is red and the button says "Hold", press and immediately release the button.
- 7. If none of the above apply, hold the button and refer to "Releasing a Held Button".

Releasing a Held Button

If you start holding the button down, a colored strip will light up on the right side of the module. Based on its color you must release the button at a specific point in time:

- Blue strip: release when the countdown timer has a 4 in any position.
- White strip: release when the countdown timer has a 1 in any position.
- Yellow strip: release when the countdown timer has a 5 in any position.
- <u>Any other color strip</u>: release when the countdown timer has a 1 in any position.

On the Subject of Keypads

I'm not sure what these symbols are, but I suspect they have something to do with occult.

- Only one column below has all four of the symbols from the keypad.
- Press the four buttons in the order their symbols appear from top to bottom within that column.



			0	1
			0	
2	1	ō]	
	L	<u>u</u>		
-	5	ē		•
-		U		

1

, ÷.

Keypads

*

On the Subject of Simon Says

This is like one of those toys you played with as a kid where you have to match the pattern that appears, except this one is a knockoff that was probably purchased at a dollar store.

- 1. One of the four colored buttons will flash.
- 2. Using the correct table below, press the button with the corresponding color.
- 3. The original button will flash, followed by another. Repeat this sequence
- in order using the color mapping.
- 4. The sequence will lengthen by one each time you correctly enter a sequence until the module is disarmed.



If the serial number contains a vowel:

	ja:	Red Flash	Blue Flash	Green Flash	Yellow Flash
-	No Strikes	Blue	Red	Yellow	Green
Button to press:	l Strike	Yellow	Green	Blue	Red
	2 Strikes	Green	Red	Yellow	Blue

If the serial number does <u>not</u> contain a vowel:

			Red Flash	Blue Flash	Green Flash	Yellow Flash
Supervised in the second second		No Strikes	Blue	Yellow	Green	Red
-	Button to press:	l Strike	Red	Blue	Yellow	Green
		2 Strikes	Yellow	Green	Blue	Red



Who's on First

On the Subject of Who's on First

This contraption is like something out of a sketch comedy routine, which might be funny if it wasn't connected to a bomb. I'll keep this brief, as words only complicate matters.

- 1. Read the display and use step 1 to determine which button label to <u>read</u>.
- 2. Using this button label, use step 2 determine which button to <u>push</u>.
- 3. Repeat until the module has been disarmed.

Step 1:

Based on the display, read the label of a particular button and proceed to step 2:

YES	FIRST	DISPLAY	OKAY		
 	BLANK	NO			READ
RED ,O	REED		HOLD ON	YOU	YOU ARE
YOUR	YOU'RE	UR			THEIR
	THEY ARE	SEE	с О	CEE	÷.,

[DISF	PLAY]	0	
[TEXT]	[TEXT]		*
[TEXT]	[TEXT]		
[TEXT]	[TEXT]		

Keep Talking and Nobody Explodes v. 1

Step 2:

Using the label from step 1, <u>push the first button</u> that appears in its corresponding list:

"READY":	YES, OKAY, WHAT, MIDDLE, LEFT, PRESS, RIGHT, BLANK, READY, NO, FIRST, UHHH, NOTHING, WAIT
"FIRST":	LEFT, OKAY, YES, MIDDLE, NO, RIGHT, NOTHING, UHHH, WAIT, READY, BLANK, WHAT, PRESS, FIRST
"NO":	BLANK, UHHH, WAIT, FIRST, WHAT, READY, RIGHT, YES, NOTHING, LEFT, PRESS, OKAY, NO, MIDDLE
"BLANK":	WAIT, RIGHT, OKAY, MIDDLE, BLANK, PRESS, READY, NOTHING, NO, WHAT, LEFT, UHHH, YES, FIRST
"NOTHING":	UHHH, RIGHT, OKAY, MIDDLE, YES, BLANK, NO, PRESS, LEFT, WHAT, WAIT, FIRST, NOTHING, READY
"YES":	OKAY, RIGHT, UHHH, MIDDLE, FIRST, WHAT, PRESS, READY, NOTHING, YES, LEFT, BLANK, NO, WAIT
"WHAT":	UHHH, WHAT, LEFT, NOTHING, READY, BLANK, MIDDLE, NO, OKAY, FIRST, WAIT, YES, PRESS, RIGHT
"UHHH":	READY, NOTHING, LEFT, WHAT, OKAY, YES, RIGHT, NO, PRESS, BLANK, UHHH, MIDDLE, WAIT, FIRST
"LEFT":	RIGHT, LEFT, FIRST, NO, MIDDLE, YES, BLANK, WHAT, UHHH, WAIT, PRESS, READY, OKAY, NOTHING
"RIGHT":	YES, NOTHING, READY, PRESS, NO, WAIT, WHAT, RIGHT, MIDDLE, LEFT, UHHH, BLANK, OKAY, FIRST
"MIDDLE":	BLANK, READY, OKAY, WHAT, NOTHING, PRESS, NO, WAIT, LEFT, MIDDLE, RIGHT, FIRST, UHHH, YES
"OKAY":	MIDDLE, NO, FIRST, YES, UHHH, NOTHING, WAIT, OKAY, LEFT, READY, BLANK, PRESS, WHAT, RIGHT
"WAIT":	UHHH, NO, BLANK, OKAY, YES, LEFT, FIRST, PRESS, WHAT, WAIT, NOTHING, READY, RIGHT, MIDDLE
"PRESS":	RIGHT, MIDDLE, YES, READY, PRESS, OKAY, NOTHING, UHHH, BLANK, LEFT, FIRST, WHAT, NO, WAIT
"You":	SURE, YOU ARE, YOUR, YOU'RE, NEXT, UH HUH, UR, HOLD, WHAT?, YOU, UH UH, LIKE, DONE, U
"YOU ARE":	YOUR, NEXT, LIKE, UH HUH, WHAT?, DONE, UH UH, HOLD, YOU, U, YOU'RE, SURE, UR, YOU ARE
"YOUR":	UH UH, YOU ARE, UH HUH, YOUR, NEXT, UR, SURE, U, YOU'RE, YOU, WHAT?, HOLD, LIKE, DONE
"You're":	YOU, YOU'RE, UR, NEXT, UH UH, YOU ARE, U, YOUR, WHAT?, UH HUH, SURE, DONE, LIKE, HOLD
"UR":	DONE, U, UR, UH HUH, WHAT?, SURE, YOUR, HOLD, YOU'RE, LIKE, NEXT, UH UH, YOU ARE, YOU
"U" :	UH HUH, SURE, NEXT, WHAT?, YOU'RE, UR, UH UH, DONE, U, YOU, LIKE, HOLD, YOU ARE, YOUR
"UH HUH":	UH HUH, YOUR, YOU ARE, YOU, DONE, HOLD, UH UH, NEXT, SURE, LIKE, YOU'RE, UR, U, WHAT?
"UH UH":	UR, U, YOU ARE, YOU'RE, NEXT, UH UH, DONE, YOU, UH HUH, LIKE, YOUR, SURE, HOLD, WHAT?
"WHAT?":	YOU, HOLD, YOU'RE, YOUR, U, DONE, UH UH, LIKE, YOU ARE, UH HUH, UR, NEXT, WHAT?, SURE
"Done";	SURE, UH HUH, NEXT, WHAT?, YOUR, UR, YOU'RE, HOLD, LIKE, YOU, U, YOU ARE, UH UH, DONE
"NEXT":	WHAT?, UH HUH, UH UH, YOUR, HOLD, SURE, NEXT, LIKE, DONE, YOU ARE, UR, YOU'RE, U, YOU
"HOLD":	YOU ARE, U, DONE, UH UH, YOU, UR, SURE, WHAT?, YOU'RE, NEXT, HOLD, UH HUH, YOUR, LIKE
"SURE":	YOU ARE, DONE, LIKE, YOU'RE, YOU, HOLD, UH HUH, UR, SURE, U, WHAT?, NEXT, YOUR, UH UH
"LIKE":	YOU'RE, NEXT, U, UR, HOLD, DONE, UH UH, WHAT?, UH HUH, YOU, LIKE, SURE, YOU ARE, YOUR

On the Subject of Memory

Memory is a fragile thing but so is everything else when a bomb goes off, so pay attention!

- Press the correct button to progress the module to the next stage. Complete all stages to disarm the module.
- Pressing an incorrect button will reset the module back to stage 1.
- Button positions are ordered from left to right.

Stage 1:

If the display is 1, press the button in the second position. If the display is 2, press the button in the second position. If the display is 3, press the button in the third position. If the display is 4, press the button in the fourth position.

Stage 2:

If the display is 1, press the button labeled "4".

If the display is 2, press the button in the same position as you pressed in stage 1. If the display is 3, press the button in the first position.

If the display is 4, press the button in the same position as you pressed in stage 1.

Stage 3:

If the display is 1, press the button with the same label you pressed in stage 2. If the display is 2, press the button with the same label you pressed in stage 1. If the display is 3, press the button in the third position. If the display is 4, press the button labeled "4".

Stage 4:

If the display is 1, press the button in the same position as you pressed in stage 1. If the display is 2, press the button in the first position. If the display is 3, press the button in the same position as you pressed in stage 2.

If the display is 4, press the button in the same position as you pressed in stage 2.

Stage 5:

If the display is 1, press the button with the same label you pressed in stage 1. If the display is 2, press the button with the same label you pressed in stage 2. If the display is 3, press the button with the same label you pressed in stage 4. If the display is 4, press the button with the same label you pressed in stage 3.



Memory

On the Subject of Morse Code

An antiquated form of naval communication? What next? At least it's genuine Morse Code, so pay attention and you might just learn something.

- Interpret the signal from the flashing light using the Morse Code chart to spell one of the words in the table.
- The signal will loop, with a long gap between repetitions.
- Once the word is identified, set the corresponding frequency and press the transmit (TX) button.



If the	Respond at
MOLG TRE	rrequencys
shell	3.505 MHz
halls	3.515 MHz
slick	3.522 MHz
trick	3.532 MHz
boxes	3.535 MHz
leaks	3.542 MHz
strobe	3.545 MHz
bistro	3.552 MHz
flick	3.555 MHz
bombs	3.565 MHz
break	3.572 MHz
brick	3.575 MHz
steak	3.582 MHz
sting	3.592 MHz
vector	3.595 MHz
beats	3.600 MHz



Complicated Wires

On the Subject of Complicated Wires

These wires aren't like the others. Some have stripes! That makes them completely different. The good news is that we've found a concise set of instructions on what to do about it! Maybe too concise...

- Look at each wire: there is an LED above the wire and a space for a."*" symbol below the wire.
- For each wire/LED/symbol combination, use the Venn diagram below to decide whether or not to cut the wire.
- Each wire may be striped with multiple colors.





Letter	Instruction
C	Cut the wire
D	Do not cut the wire
S	Cut the wire if the last digit of the serial number is even
P	Cut the wire if the bomb has a parallel port
в	Cut the wire if the bomb has two or more batteries

See Appendix B for battery identification reference. See Appendix C for port identification reference.



On the Subject of Wire Sequences

It's hard to say how this mechanism works. The engineering is pretty impressive, but there must have been an easier way to manage nine wires.

- Within this module there are several panels with wires on them, but only one panel is visible at a time. Switch to the next panel by using the down button and the previous panel by using the up button.
- Do not switch to the next panel until you are sure that you have cut all necessary wires on the current panel.
- Cut the wires as directed by the following table. Wire occurrences are cumulative over all panels within the module.

Red Wire Occurrences		Blue Wire Occurrences		Black Wire Occurrences	
Wire Occurrence	Out if connected to:	Wire Occurrence	Out if connected to:	Wire Occurrence	Out if connected to:
First red occurrence	C	First blue occurrence	В	First black occurrence	A, B or C
Second red occurrence	В	Second blue occurrence	A or C	Second black occurrence	A or C
Third red occurrence	A	Third blue occurrence	B 🦻	Third black occurrence	В
Fourth red occurrence	A or C	Fourth blue occurrence	A	Fourth black occurrence	A or C
Fifth red occurrence	В	Fifth blue occurrence	В	Fifth black occurrence	В
Sixth red occurrence	A or C	Sixth blue occurrence	B or C	Sixth black occurrence	B or C
Seventh red occurrence	A, B or C	Seventh blue occurrence	C	Seventh black occurrence	A or B
Eighth red occurrence	A or B	Eighth blue occurrence	A or C	Eighth black occurrence	С
Ninth red occurrence	В	Ninth blue occurrence	A	Ninth black occurrence	C



Wire Sequences

On the Subject of Mazes

This seems to be some kind of maze, probably stolen off of a restaurant placemat.

- . Find the maze with matching circular markings.
- The defuser must navigate the white light to the red triangle using the arrow buttons.
- Warning: Do not cross the lines shown in the maze. These lines are invisible on the bomb.





Passwords

On the Subject of Passwords

Fortunately this password doesn't seem to meet standard government security requirements: 22 characters, mixed case, numbers in random order without any palindromes above length 3.

- The buttons above and below each letter will cycle through the possibilities for that position.
- Only one combination of the available letters will match a password below.

and the second	and the second se		A CONTRACTOR OF A CONTRACTOR O	
about	after	again	below	could
every	first	found	great	house
large	learn	never	other	place
plant	point	right	small	sound
spell	still	study	their	there
these	thing	think	three	water
where	which	world	would	write

• Press the submit button once the correct word has been set.



Caesar Cipher

On the Subject of Caesar Cipher

Communication was dangerous back in the days. Can you figure out what the original message was?

Decipher the characters on the display with the help of Caesar's tactics. There's no delete button, so press those buttons carefully!



For example: if the offset is -2, **D** becomes **B** and **L** becomes **J**. The table below can be used to calculate the required offset. If the offset column contains an = sign, that value should be used, regardless of other rules that apply.

Condition	Offset
Serial number contains a vowel	-1
Number of batteries	+1 per battery
The last digit of the serial number is even	+1
Indicator with label CAR is present	+1
Parallel port and lit indicator with label NSA is present	=0

On the Subject of The Bulb

How many bomb defusal experts does it take to screw in a light bulb?

This module has two buttons labeled I and O and a light bulb, which is either see-through (translucent) or opaque, and is one of six colors: blue, green, purple, red, white or yellow.



If you incur a strike because you pushed a wrong button, ignore it and continue. If you incur a strike because you unscrewed or screwed in the bulb at an incorrect time, you <u>must</u> undo that before continuing.

Begin at Step 1 below.

While the bulb is screwed in, a long press on either button will reset the module back to Step 1. Attempting this while the bulb is out will incur a strike.

- Step 1 . If the light is on and the bulb is see-through, press I and go to Step 2.
 - If the light is on and the bulb is opaque, press 0 and go to Step 3.
 - Otherwise, unscrew the bulb and go to Step 4.
- Step 2 If the bulb is red, press I, then unscrew it and go to Step 5.
 - If the bulb is white, press 0, then unscrew it and go to Step 6.
 - Otherwise, unscrew the bulb and go to Step 7.
- Step 3 . If the bulb is green, press I, then unscrew it and go to Step 6.
 - If the bulb is purple, press 0, then unscrew it and go to Step 5.
 - Otherwise, unscrew the bulb and go to Step 8.
- Step 4 If the bomb has any of the following indicators: CAR, IND, MSA or SND, press I and go to Step 9.
 - Otherwise, press 0 and go to Step 10.
- Step 5 If the light went off at Step 1, press the same button again, then screw the bulb back in.
 - Otherwise, press the button you haven't yet pressed, then screw the bulb back in.
- **Step 6** If the bulb went off when you pressed I, press the button that you pressed in Step 1, then screw the bulb back in.
 - Otherwise, press the button that you pressed in Step 2 or 3, then screw the bulb back in.

Keep Talking and Nobody Explodes Mod

Step 7'	 If the bulb is green, press I, remember <u>SIG</u> and go to Step 11. If the bulb is purple, press I, then screw it back in and go to Step 12. If the bulb is blue, press O, remember <u>CLR</u> and go to Step 11. Otherwise, press O, then screw the bulb back in and go to Step 13.
Step 8	 If the bulb is white, press I, remember <u>FRQ</u> and go to Step 11. If the bulb is red, press I, then screw it back in and go to Step 13. If the bulb is yellow, press O, remember <u>FRK</u> and go to Step 11. Otherwise, press O, then screw the bulb back in and go to Step 12.
Step 9	 If the bulb is blue, press I and go to Step 14. If the bulb is green, press I, then screw it back in and go to Step 12. If the bulb is yellow, press O and go to Step 15. If the bulb is white, press O, then screw it back in and go to Step 13. If the bulb is purple, screw it back in, then press I and go to Step 12. Otherwise, screw the bulb back in, then press O and go to Step 13.
Step 10	 If the bulb is purple, press I and go to Step 14. If the bulb is red, press I, then screw it back in and go to Step 13. If the bulb is blue, press O and go to Step 15. If the bulb is yellow, press O, then screw it back in and go to Step 12. If the bulb is green, screw it back in, then press I and go to Step 13. Otherwise, screw the bulb back in, then press O and go to Step 12.
Step 11	 If the bomb has the remembered indicator, press I, then screw the bulb back in. Otherwise, press O, then screw the bulb back in.
Step 12	 If the light is now on, press I. Otherwise, press O.
Step 13	 If the light is now on, press 0. Otherwise, press I.
Step 14	 If the bulb is opaque, press I, then screw the bulb back in. Otherwise, press O, then screw the bulb back in.
Step 15	 If the bulb is see-through, press I, then screw the bulb back in. Otherwise, press O, then screw the bulb back in.

On the Subject of Light Bulbs

These things don't even glow!

There are three light bulbs available on the module. Each light bulb will contain a color. The center light bulb has 2 possible colors while the other light bulbs have 8 possible colors. Using the non-center light bulbs, locate the color



combination on the table below and locate the sequence of the light bulb statuses on the intersection of the table. The center bulb will indicate how you will submit your answer. If the center bulb is gray, invert every output on the gathered sequence. If not, submit the answer normally.

	Red	Orange	Yellow	Green	Blue	Purple	Cyan	Magenta
Red	000	00-	0	00-	000	-0-	000	00-
Orange	-00	-0-	0-0	-0-	-00	000	000	0-0
Yellow	-0-	0		0	-00	0	00-	-00
Green	0	-00		-00	0	-00	0	0-0
Blue	0-0	00-	000	0		0-0	0-0	0
Purple		0		-00	0	-0-	000	0
Cyan		-0-	00-	00-	0-0	0)0 0-0	
Magenta		0	000	-0-	0	5000 tang tang	-0-	00-

- The light bulb must be off

0 The light bulb must be on

The left bulb indicates the row of the table, and the right bulb indicates the column of the table.

Conditional Buttons

On the Subject of Conditional Buttons

Colored buttons, how hard can this be?

On the module, there are six buttons, each buttons has a different color. To defuse the module, apply the following procedure:

The procedure:

- 1. Determine which buttons to press.
- 2. Determine the order of buttons to press.

Important Notes:

- 1. After the first button is pressed, all buttons will turn blank.
- 2. In the rare case where no condition is satisfied, proceed to <u>step 2</u> and press the first 3 available buttons.

Step 1:

There are 10 known colors: Black, Blue, Dark green, Light green, Orange, Pink, Purple, Red, White and Yellow.

Each color has a specific condition that must be satisfied. If the condition is satisfied, press the button. And if it isn't, don't press it.

The Conditions:

- Black If there are more batteries than battery holders.
- Blue If there are 2 or more batteries.
- Dark green If there is an odd number of modules or at least one needy module.
- Light green If there is a DVI port, and the serial number contains one of more of the following digits: 3, 4, 5, 6, 7, 8.
- Orange If there is at least 1 PS/2 port.
- Pink If there is an indicator with the label "BOB" and there is an odd number of batteries.
- Purple If the module "The Button" is present or the serial number contains one or more of the following letters: X, Y, Z.
- Red If there is a lit indicator with label "NSA".
- White Always.
- Yellow If the serial number contains one or more of the following letters: H, K, L.



<u>Step 2:</u>

Table below describes the order in which the buttons should be pressed. Select the correct row with the last digit of the serial number, and follow from left to right:

Last digit of serial number	Order to follow
0	Black, Blue, Dark green, Light green, Orange, Pink, Purple, Red, White, Yellow
l	White, Red, Light green, Purple, Black, Dark green, Orange, Blue, Pink, Yellow
2	Orange, Yellow, Red, Blue, Purple, Light green, Dark green, White, Black, Pink
3	Orange, Purple, Light green, Dark green, White, Blue, Red, Pink, Yellow, Black
4	Blue, Light green, Purple, Orange, Red, White, Yellow, Pink, Black, Dark green
5	Pink, Yellow, Dark green, Blue, Light green, Black, Orange, Purple, White, Red
6	Red, Blue, Yellow, Dark green, Pink, Black, Purple, Orange, Light green, White
7	White, Dark green, Purple, Red, Pink, Light green, Black, Orange, Blue, Yellow
8	White, Blue, Dark green, Black, Yellow, Pink, Red, Light green, Purple, Orange
9	Pink, Black, Light green, Blue, Purple, Dark green, White, Yellow, Red, Orange

On the Subject of Green Arrows

What's the point?

On the module are 4 directional buttons, and a display screen in the middle.

If the buttons are not Green, you're looking at a different module.

On the screen is a random number somewhere between 00 and 99. Look at the table below to find the correct button to press. Use the 10s digit as the column, and the 1s digit as the row. After each correct presses, the number will change. Keep repeating the process, and the module will be disarmed after 7 consecutive correct presses. Pressing the wrong button will register a strike and reset your streak.

	1-	2-	3-	4-	5-	6-	7-	8-	9-	0-
-0	Up	Right	Left	Right	Up	Right	Left	Right	Up	Down
-9	Left	Right	Up	Down	Left	Down	Up	Down	Left	Right
-8	Down	Up	Right	Left	Right	Down	Right	Left	Down	Up
-7	Up	Down	Up	Down	Up	Right	Left	Right	Up	Down
-6	Left	Right	Left	Right	Left	Down	Down	Up	Left	Right
-5	Down	Up	Down	Up	Down	Up	Left	Down	Down	Up
-4	Up	Down	Right	Up	Right	Down	Up	Left	Up	Down
-3	Left	Right	Up	Right	Up	Right	Right	Up	Left	Right
-2	Down	Up	Down	Up	Down	Up	Up	Right	Down	Up
-1	Up	Down	Right	Left	Down	Left	Right	Up	Down	Left



LEDs

On the Subject of LEDs

For those who feel that buttons and levers and incandescent bulbs are just too complicated.

- There will be 4 LEDs in a diamond formation. The LED pattern is taken from the table below. The pattern may be rotated.
- Exactly one LED will be a different color from the diagram. This LED will never be the circled LED.
- Press the different LED until its color is the correct color in the diagram. Then, press the circled LED.
- Pressing any other LED will cause a strike.



Colored Switches

On the Subject of Colored Switches

It's only five switches. How hard can it be?

See Appendix for identifying modules in Colored Switches family.

- The module has five switches on it. Each switch may be orange, green, purple, turquoise, blue, or red.
- The diagram below indicates which switch transitions are safe. A switch can be toggled only if it has the same color as the relevant arrow in the diagram. A black, thicker line indicates this switch can be toggled regardless of its color. The numbers indicate the switch being toggled (numbered from left to right).
- To defuse the module, first make any three permissible toggles. Then the LEDs below the switches come on. The switches must be brought into the position indicated by those LEDs.





Yellow Arrows

On the Subject of Yellow Arrows

Points!

On the module are 4 directional buttons, and a display screen in the middle.

If the buttons are not Yellow, you're looking at a different module.

On the display is a random English letter. That is your **Starting Row**. Then, take the last digit of the Serial Number plus one, and move down that many rows. Perform that instruction, and move down again by the same number (If Z is reached but you still have more down moves, loop back to A and continue). Keep doing that, and the module will be disarmed after 5 consecutive correct presses.

Pressing an incorrect button will register a Strike, and the module will reset itself with a new Starting Row, and you must start over.

Letter	Press/If/Otherwise
A	Up/The Up button is present/Eat a Screwdriver
В	Down/Previous input is Left/Right
С	Left/The Serial Number ends with a 3/Up
D	Up/This is the Starting Row/Down
E	Right/Lit SIG present/Left
F	Down/No (PS/2) port present on the bomb/Any
G	Up/Down hasn't been pressed yet/Down
Н	Any/Serial Port present/Right
I	Down/No Needy present/Any
J	Left/Previous input was Down/Up
K	Down/9 is an odd number/Go back to kindergarten
L	Up/No batteries on bomb/Down
M	Right/Number of battery holders is less than 3/Left
N	Any/This is the Starting Row/Right
0	Left/The Serial Number contains the letter O/Down



Letter	Press/If/Otherwise
Р	Down/Serial Number has 4 letters/Up
Q	Down/Previous input was Right/Left
R	Up/Unlit CLR present/Down
S	Left/You're not on the 42nd of June/Quit Game
Т	Left/Number of batteries is even/Down
υ	Any/No modules on bomb starts with a Y/Any
v	Up/Previous input was Up/Down
W	Right/No port plates present/Any
X	Up/This is the Starting Row/Left.
Y	Any/Up hasn't been pressed yet/Up
Z	Right/Right is Right OR is on the Right/Right

On the Subject of Rock-Paper-Scissors-Lizard-Spock

Anecdotal evidence suggests that in the game of Rock-Paper-Scissors, players familiar with each other will tie 75 to 80% of the time due to the limited number of outcomes. Rock-Paper-Scissors-Lizard-Spock was created by Internet pioneer Sam Kass as an improvement on the classic game. All hail Sam Kass. Hail.



To disarm this module, determine the correct signs to press.

First, determine the decoy. If the five signs are arranged in a regular pentagon, there is no decoy. Otherwise, the decoy is the one that is in the middle of the arrangement or in the middle in a line of three (horizontal, diagonal or vertical).

Next, go through the rows of the following table and determine the highestscoring sign in each row. Stop at the first row in which there's no tie and the highest-scoring sign is not the decoy. Then press the signs on the module that beat this sign. If no row applies, press all signs except the decoy.

Which sign beats which? It's very simple. Scissors cuts paper. Paper covers rock. Rock crushes lizard. Lizard poisons Spock. Spock smashes scissors. Scissors decapitates lizard. Lizard eats paper. Paper disproves Spock. Spock vaporizes rock. And, as it always has, rock crushes scissors.

# of occurrences of:	Rock	Paper	Scissors	Lizard	Spock
serial number letter Skip this row if the serial number contains X or Y.	R, 0	P, A	S, I	L, Z	С, К
port Skip this row if a PS/2 port is present.	RJ-45	Parallel	Serial	DVI-D	Stereo RCA
lit indicator Skip this row if a lit TRN indicator is present.	FRK, FRQ	BOB, IND	CAR, SIG	CLR, NSA	SND, MSA
unlit indicator Skip this row if an unlit TRN indicator is present.	FRK, FRQ	BOB, IND	CAR, SIG	CLR, NSA	SND, MSA
serial number digit	0,5	3,6	1,9	2, 8	4,7

On the Subject of Light Cycles

The name "blinkenlights" was taken.

There are six colored LEDs in a row which continuously flash in sequence from left to right. To disarm this module, determine a sequence of colors, then input that sequence by pressing the button when each color is lit. (For example, to enter the color red, press the button when the red LED is lit.)

Determine the correct sequence of colors as follows:

- Start with the order of the LEDs on the module. This is a sequence of six colors.
- Take the first and last character of the serial number, then the second and second-last, etc. up to the last and first character, resulting in a list of 6 pairs.
- For each such pair of characters, look up the information in the following table. Use the first in the pair for the row, the second for the column. A letter in the table refers to a color (R = red, Y = yellow, G = green, B = blue, M = magenta, W = white), while a number refers to a position in your sequence (1 through 6). Swap those two colors in your sequence.
- After performing the six swaps, enter the resulting sequence.



Light Cycl

	A, B, C	D, E, F	G, H, I	J, K, L	M, N, O	P, Q, R	S, T, U	V, W, X	¥, Z, O	1, 2, 3	4, 5, 6	7, 8, 9
A	5/B	B/R	M/G	Y /5	4/1	R/W	6/4	1/6	2/3	3/M	G/Y	₩/2
B	2/R	6/M	4/3	5/B	R/5	¥/2	1/G	M/Y	₩/6	3/4	B/W	G/1
Q	M/Y	2/4	Y/R	3/5	₩/2	G/B	l/W	R/3	5/G	4/6	B/M	6/1
D	5/6	6/3	1/4	M/2	R/Y	2/M	W/R	B/G	Y/W	3/B	G/1	4/5
E	B/R	₩/2	2/3	1/4	M/B	5/6	Y/W	R/M	G/Y	6/G	3/5	4/1
F	R/Y	2/G	1/M	¥/5	5/R	W/B	6/3	B/1	M/4	G/6	3/2	4/W
G	¥/1	5/4	2/₩	R/Y	1/R	B/3	6/G	G/6	M/B	W/5	4/2	3/M
H	3/5	W/Y	G/2	2/B	5/G	M/R	B/3	1/4	4/6	Y/M	6/₩*	R/1
I	R/M	4/5	5/W	B/1	M/6	3/2	W/B	G/Y	¥/R	1/4	6/G	2/3
J	W/B	R/6	5/Y	4/1	2/5	¥/3	M/W	3/2	B/G	G/M	1/R	6/4
K	6/4	B/2	W/G	R/5	G/1	2/Y	Y/R	M/B	1/6	3/W	5/3	4/M
L	6/4	B/5	₩/6	1/G	R/2	4/R	G/W	3/M	2/B	¥/3	5/Y	M/l
M	₩/3	3/G	2/4	Y/M	M/2	R/5	6/R	B/6	G/Y	5/B	1/W	4/1
N	1/Y	6/M	2/1	G/R	3/G	5/B	R/4	4/3	₩/2	Y/W	B/5	M/6
0	R/5	3/G	2/3	₩/4	B/2	l/M	5/6	M/1	4/Y	G/B	6/R	,Y/W
P	1/4	4/B	6/2	3/W	M/R	¥/6	B/Y	2/G	5/M	G/5	R/3	W/1
Q	5/G	M/B	4/W	¥/2	R/M	W/4	6/1	3/6	B/Y	1/5	G/R	2/3
R	M/G	5/6	G/M	₩/5	I /2	R/4	B/1	1/B	2/R	4/3	6/W	3/Y
S	R/Y	6/5	5/G	G/B	W/M	4/3	1/W	B/1	3/6	2/4	¥/2	M/R
T	G/3	B/2	6/W	M/B	1/5	¥/4	5/M	W/R	4/6	3/Y	2/G	R/1
U	5/1	W/3	4/5	3/4	Y/W	1/Y	B/G	6/2	M/6	G/R	2/M	R/B
V	M/6	6/B	1/G	3/5	W/R	B/4	G/M	R/1	2/W	5/2	4/Y	Y/3
W	Y/M	B/1	5/3	2/0	3/2	R/5	1/4	₩/6	4/W	G/R	M/Y	6/B
X	4/2	_R/B	W/5	Y/M	2/Y	5/1	B/R	G/3	M/G	3/6	6/W	1/4
Y	G/Y	l/R	5/4	4/G	3/B	M/6	2/5	¥/2	R/1	₩/3	B/W	6/M
Z	G/B	B/G	1/5	M/1	3/M	R/3	Y/W	6/Y	5/2	4/6	W/R	2/4
0	2/R	R/B	5/G	₩/2	Y/1	4/Y	3/5	l/M	B/W	G/6	6/4	M/3
1	R/4	₩/6	3/2	2/₩	4/Y	6/5	B/R	5/G	Y/B	G/M	M/1	1/3
2	4/B	B/3	6/4	W/1	M/Y	R/6	G/5	Y/W	5/2	2/R	3/G	l/M
3	B/6	M/3	4/B	1/4,	2/5	¥/1	G/Y	R/W	W/G	5/2	6/M	3/R
4	M/R	2/B	₩/5	6/Y	B/3	4/2	G/1	Y/6	5/G	3/M	R/W	1/4
5	Y/1	5/6	1/W	₩/4	B/G	G/5	4/M	2/B	3/R	6/3	M/2	R/Y
6	3/4	W/B	I/G	5/M	R/1	G/W	1/2	6/Y	B/R	M/6	4/3	2/5
- 7	4/G	6/5	¥/4	G/B	3/1	M/Y	5/3	1/M	2/R	R/2	B/W	₩/6
8	Y/B	R/2	W/R	5/3	1/W	3/5	B/M	G/4	6/Y	4/G	2/1	M/6
9	G/Y	3/1	5/M	R/2	6/W	M/B	Y/6	2/4	4/G	B/5	1/R	W/3.
1	A, B, C	D, E, F	G, H, I	J, K, L	M, N, O	P, Q, R	S, T, U	V, W, X	Y, Z, O	1, 2, 3	4, 5, 6	7, 8, 9

On the Subject of Number Pads

Try putting in 0000. No? Try 0001. Still not working? We might be here for a while ...

See Appendix A for indicator identification reference. See Appendix B for battery identification reference. See Appendix C for port identification reference.

- Enter a 4-digit code using the numbered buttons.
- Press the green button labelled ENT to submit the entered code.
- Press the red button labelled CLR to discard the entered code.
- Perform the first action that applies on each level.
- The CLR and ENT buttons' colors are to be <u>ignored</u>.

Using the wheel chart, starting from the center, pick a path by following the instructions below for each level you are on. (center level is 1, next one out is 2, etc.) Each path you take is the code digit corresponding to its level number unless contradicted by higher levels' instructions. Follow the final instructions after you complete all four levels.

On the first level, the paths are in order from the upper-right corner going clockwise. On the rest of the levels, they are also in clockwise order.

Level 1:

If three or more of the numbered buttons are colored yellow, take the first path. If all three of the numbered buttons 4, 5, and 6 are colored white, blue, or red, take the second path.

If the serial number contains a vowel, take the third path.

Otherwise, take the fourth path.

Level 2:

If there are at least two blue numbered buttons and at least three green buttons, take the first path.

If the numbered button 5 isn't blue nor white, take the second path.

If there are fewer than two ports on the bomb, take the third path.

Otherwise, take the fourth path, and if the top row of buttons contains a green button, subtract 1 from the first digit (if it's 0, it becomes 9).

Level 3:

If there are more than two white numbered buttons and more than two yellow numbered buttons, take the first path.

Otherwise, take the second path and <u>reverse the current 3-digit code</u>.

Level 4:

If there are 2 or fewer yellow numbered buttons, take the first path and add 1 to each digit (if a digit is 9, it becomes 0).

Otherwise, take the second path.

[DI	SPL	AY]	0	
7	8	9		
4	5	6		
1	2	3		
CLR	0	ENT		
	[DI 7 4 1 CLR	[DISPL. 7 8 4 5 1 2 CLR 0	[DISPLAY] 7 8 9 4 5 6 1 2 3 CLR 0 ENT	[DISPLAY] 7 8 9 4 5 6 1 2 CLR 0

Final Instructions:

(follow <u>all</u> instructions in this order)

If the last digit of the serial number is even, swap the first and third digits. If there are an odd number of batteries, swap the second and third digits. If neither of the above criteria is met, swap the first and fourth digits. Finally, if the sum of all the digits in the code is <u>even</u>, reverse the code.

..

Wheel Chart



Colorblind helper: Hold the CLR button.

On the Subject of Corners

The solution is just around the corner.

- Observe the colors of the four corners of the module. They can be red, green, blue, or yellow.
- Find the locations in the following diagram corresponding to the relevant colored corners.
- Start in the location that contains the last digit of the serial number. Touch that corner on the module to begin.
- Find the shortest path through the diagram that visits all remaining corners and touch them in the order in which they occur in that path.



0 0 0 0

Pattern Lock

On the Subject of Pattern Locks

You know those weird locks people have on their phones sometimes? It's like one of those, but more annoying.

- There will be nine circles, of which one is red, one is green, and one is blue.
- Red is always square one, but the module is sometimes rotated. The rest of the circles' corresponding numbers
- . follow the pattern below if red is in the top left. Otherwise, rotate the pattern such that square one is in the location of the red circle.

l	2	3
4	5	6
7	8	9

- The green and blue circles determine what pattern needs to be input. In the chart on the following page, the position of the green determines the row, and the position of the blue determines the column.
- The images in the chart treat square one as if in the top left. This may not be the case on your bomb.
- Clicking two adjacent circles will connect them. After that, continue drawing the pattern by clicking circles adjacent to the previously-clicked ones. Do not retrace your steps or connect non-adjacent circles.
- If you make a mistake, you may clear the board with the button labeled "CLR."
- Once the pattern is complete, click the button labeled "SUB" to complete the module.



Keep Talking and Nobody Explodes Mod

ţ

*

Pattern Lock

÷.

	2	3	4	5	6	7	8	9
2								
3					8 8 8 8 8 1 8			
4		K		\square	\sum	M	\triangleright .	
5	. 1	$\overset{\circ}{\bigtriangleup}$	\sum		\bigtriangledown	\sim	\leq	
6				8:		<i>IV</i> .	Ŕ	$\overline{\mathcal{M}}$
7	• 4	Å	A	\mathbf{N}	4		\mathbf{P}	Z
8	\mathcal{A}	М • • •	. М • • • •	Ň	X .	Χ.		
9	· X	X .	X	\square				

.

On the Subject of Rainbow Arrows

Pointedly pointless pointing.

See Appendix A for indicator identification reference. See Appendix B for battery identification reference. See Appendix C for port identification reference.



1

- This module has eight arrow buttons in a rainbow color
- arrangement, and a display screen in the center showing a two-digit number.
- Use the location of the white arrow button to determine your starting rule in the table below.
- Follow the directions for each rule to determine what arrow to press.
- If the rainbow pattern proceeds clockwise, move down one rule after each press; otherwise, move up one rule instead. The table wraps around.
- All arrow presses must be unique. If a rule says to press an arrow that has already been pressed, then instead press the closest arrow that hasn't been pressed yet, in either direction. In case of a tie for distance, use the arrow reached by following the same direction as the rainbow pattern.
- Pressing an incorrect arrow button will result in a strike, and a reset of all inputs up to that point. The number on the display and the colors of the arrows will not change, however.
- The module will be disarmed after each arrow button has been correctly pressed once.

Keep Talking and Nobody Explodes Mod

1

**

Rainbow Arrows

\$

 $e_{a_1^{(1)}} \geq e_{a_2}$

*

Start	Rule
North	Use the right digit of the display as the starting square in the maze to the right, and navigate to the square that contains the last digit of the serial number in the fewest number of moves required. If those two digits are the same, press the diagonal arrow that corresponds to the relative location of the starting square, and ignore the rest of this section. Otherwise:
	 If the first two moves were along the same axis, start from the arrow in the direction of the first move. If the first two moves were along different axes, start from the diagonal arrow formed by combining the first two moves. From the starting arrow, move clockwise a number of steps equal to half the number of moves required, rounded down, and press the arrow in that position.
Northeast	Multiply the displayed number by four, then modulo 360. Starting from the exact center of the white arrow, rotate clockwise by that number of degrees, then press the arrow that's closest to that position. However , if this is the fourth or eighth rule used, press the arrow directly opposite that position instead.
East	 Assemble a four-bit binary (base 2) number as follows, from least to most significant. Bit 1 is 1 if any diagonal direction has been pressed before this point. Bit 2 is 1 if either a parallel port or serial port is present. Bit 3 is 1 if the displayed number is a multiple of (number of batteries + 1). Bit 4 is 1 if there are as least as many battery holders as there are port plates. Rotate the resulting binary number right by the number of indicators, then convert it into a decimal number. Move clockwise that many steps starting from North, and press the arrow in that position.
Southeast	If this is the starting rule, press the white arrow. Otherwise, starting from the last arrow that was pressed, move counter-clockwise until an arrow that has not been pressed yet is reached. Then, move clockwise a number of steps equal to the number of arrows pressed thus far, and press the arrow in that position.

continued on next page...

Start	Rule										
	Assign every arrow a letter from A-H, starting from the white arrow and moving clockwise. Then, start with a string of "ABCDEFGH" and modify it in the following ways:										
South	 Move any letters present in the serial number to the front of the string, in the order they first appear in the serial number. If the last digit of the serial number is even, cycle the string to the right by the first digit of the serial number. If the number of batteries is odd, move all letters in odd positions to the front of the string, keeping the order they appeared. If North or South has been assigned a vowel, reverse the string. 										
	For each word in the table to the right, determine a val	ue _									
	equal to the count of letters in the word that are present	ntin	Word	#	Word	#					
st	the serial number, plus the number of modules on the bol named " <word> Arrows". Take the word with the highest va</word>	no alue	RED		BLUE	5					
hwe	and look up the number next to that word in the table; i	f	VELLOW	2		0					
out	there's a tie, use the word with the lowest number.	H	GREEN	4	DOUBLE	8					
	Starting from the white arrow, move that number of steps in the same direction as the rainbow pattern; then, press the arrow in that position.										
	Using the table to the right, find the word that		T			-					
	shares the most unique letters in common with the	yoked	white	poets	xysti						
	reading order. Then, take the <i>n</i> th letter of the	Lower	tango	magic	joust	-					
	English alphabet, where n is the displayed number	Iarce	along	quirk	notel	-					
Vest	modulo 26, plus one.	zeros	royal	brave	vault						
P.	If one of the words adjacent to the given word (orthogon with that letter, press the arrow in the direction that Otherwise, use the next letter of the English alphabet, necessary, and repeat until such a word is found. The ta	ally or would t wrappi ble doe	diagon ake you ng arou as <i>not</i> w	ally) s to thand fro rap are	tarts it word. m Z to A ound.	if					
	Take the two digits on the screen individually, and com	pare th	nem to th	ne bomi	's seria	u l					
ادر	number.	•									
Northwest	If both digits on the module are present, press North. If only the left digit is present, press West. If only the right digit is present, press East. If neither are present, press South.										

1.1

On the Subject of Multicolored Switches

"AAAAA AAAAA! MY EYES! SOO MANY COLORS!"

See Appendix of <u>Colored Switches</u> for identifying modules in the Colored Switches family.

- This module has five colored switches with colored sockets, 10 colored LEDs, and a tiny LED in the middle.
- To disarm this module, flip the switches into a <u>key</u> configuration while avoiding several <u>invalid</u> configurations.

1. Instructions

- Obtain the following 6 sequences of 5 colors each (left to right):
 - the top row of LEDs when the tiny LED is lit (set A);
 - the top row of LEDs when the tiny LED is unlit (set B);
 - the bottom row of LEDs when the tiny LED is lit (set C); and
 - the bottom row of LEDs when the tiny LED is unlit (set D).
- You will also need the colors of the switches and the sockets.
- Decompose all colors into their Red, Green and Blue component as illustrated in Appendix COLOR5.
- The 12 results obtained from sets A, B, C and D represent possible switch configurations. The presence of a color represents a switch flipped up and absence represents down. Refer to these as <u>candidates</u>. Out of those, 10 are <u>invalid</u> (result in a strike) and one is the <u>key</u> (which disarms the module). The remaining configuration is <u>safe</u>, as are all configurations not listed.

2. Finding the key set

- Determine which of the three color components (Red, Green and Blue) occur on the **switches** the <u>maximum</u> and <u>minimum</u> number of times.
- In case of ties, favor Red over the other two, and Green over Blue.
- Out of the <u>candidates</u> obtained from the same color component as the <u>maximum</u>, find the one with the most "up" switches. Favor earlier sets in case of a tie.
- Out of the <u>candidates</u> obtained from the same color component as the <u>minimum</u>, find the one with the fewest "up" switches. Favor earlier sets in case of a tie.
- If the amount of "up" switches in the two candidates are both even or both odd, the set containing the minimum candidate is the key set. Otherwise, it
- is the set containing the <u>maximum</u> candidate.



Keep Talking and Nobody Explodes Mod

Multicolored Switches

3. Finding the key configuration within the key set

- Determine which of the three color components (Red, Green and Blue) occur on the sockets the <u>maximum</u> and <u>minimum</u> number of times.
- . If all components occur the same number of times, refer to the next section.
- . In a two-way tie, favor Red over the other two, and Green over Blue.
- The configuration corresponding to the minimum component is the key.
- The configuration corresponding to the maximum component is safe.

4. In case of a three-way tie

- Note: in this situation it is possible for the key configuration to not be in the key set.
- In the table on the right, find the row corresponding to the <u>key set</u>.
- Find the column corresponding to the color component that was used in Section 2 to obtain the <u>key set</u>.

	Red	Green	Blue
Set A	(2, 3)	(1,3)	(1, 2)
Set B	(3, 4)	(2, 4)	(2, 3)
Set C	(4, 5)	(3, 5)	(3, 4)
Set D	(5, 6)	(4, 6)	(4, 5)

- For each of the two numbers shown, count that many unshaded cells in reading order within the table. Observe the row and column labels for those cells.
- The first number reveals the set and color component of the \underline{key} configuration and the second the <u>safe</u> configuration.

Appendix COLOR5: Additive color mixing

Fun fact: this section is the only colored section in the entire manual other than the flavour text.



On the Subject of Recolored Switches

Oh no, it's one of these module chains again. Oh no, it's one of these module chains again. Oh no, it's one of these module chains again.

See Appendix of <u>Colored Switches</u> for identifying modules in Colored Switches family.

- . There will be 5 colored switches on the module and 10 LEDs beneath them. If
- the switches are not colored, or there are other LEDs lit besides the topleft, you are looking at a different module.
- To solve the module, flip 10 switches. To obtain the switch to flip, use the below tables to obtain a number. Flip the switch in that number's position from left to right. For the first stage, use the color of the center switch as the row. After a switch is flipped, the next LED will light.

Use this table if 2 or fewer switches are in the up position.

	Last lit LED in reading order							
		Orange	Purple	Green	Red	Blue	Cyan	White
	Orange	1	1	5	3 -	3	3	4
	Purple	3	3	2	3	1	4	2
Last flipped switch	Green	4	3	3	1	5	3	5
,	Red	3	1	1	4	3	3	2
	Blue	1	3	2	4	3	1	5
	Cyan	3	1	2	1	3	5	4

Use this table if 3 or more switches are in the up position.

	Last lit LED in reading order							
<i>c</i>		Orange	Purple	Green	Red	'Blue	Cyan	White
19 °	Orange	3	2	2	4	2	5	5
Tool Oliveral	Purple	5	3	1	1	4	5	1
Last Illpped switch	Green	2	4	3	5	5	2	2
	Red	4	4	3	1	4	4	2
A.	Blue	4	3	3	1	4.	4	2
x	Cyan	3	5	2	1	1	4	5

Uncolored Switches

On the Subject of Uncolored Switches

Oh no, it's one of these module chains again.

See Appendix of Colored Switches for identifying modules in Colored Switches family.

- The module has five black switches and 10 LEDs beneath them. If the switches are not black or the LEDs do not
- have color, you are looking at a different module.
- Each LED can be orange, green, purple, turquoise, blue, red, white, or unlit.
- To disarm the module, set the switches to their preferred positions.
- For each switch, use the colors of the two LEDs directly below it with Table A to obtain two true/false inputs.
- Observe the positions of the switches at the beginning and locate their assigned logic operator in Table B.
- Apply the operator to each of the five sets of inputs. If the result of the operation for a switch is true, that switch's preferred position is up. If the result is false, the preferred position is down.
- In order to submit a pattern, press the switches to flip their positions. 2 seconds after a switch is flipped, the solution will submit unless another switch is flipped.
- If an invalid solution is submitted, a strike will be incurred and the switches will reset to their initial positions.

Orange	Green	Purple	Turquoise
There are more batteries than there are ports + indicators.	The switches form an illegal position from the Switches manual (rule seed 1).	There is a Souvenir, Turn the Key, Needy module, or any module with "Forget" in its name.	The number of red [,] and blue LEDs is greater than the number of orange and purple LEDs.
Red	Blue	White	Unlit
There is at least one strike, or there is a Two Factor.	There is a lit NSA or FRK indicator, or there is an unlit MSA or FRQ	There are at least 3 switches that point upwards.	There is at most l white LED.

Table A: LED Color Reference:



75

,

Table	B:	Posi	tion	toC)perat	tor:

٤

1

Logic Operator	Representative switch states	Operator explanation
AND		The result is true if both of the inputs are true.
OR ,		The result is true if at least one of the inputs is true.
XOR		The result is true if only one of the inputs is true.
NAND		The result is true if at least one of the inputs is false.
NOR		The result is true if both inputs are false.
XNOR		The result is true if both inputs share the same state.
Implication Left / Implies		The result is false if top input is true and bottom input is false. Else returns true.
Implication Right / Is implied by	UUUUUUUUUUUUUUUUUUUUUUUUUU	The result is false if top input is false and bottom input is true. Else returns true.

*

1

On the Subject of Color Decoding

The colors, Simon; what do they mean !?

This module is comprised of three stages, where each stage contains a 4×4 indicator grid above a 6×6 display grid. Each grid is comprised of five colors: Red, Green, Blue, Yellow, and Purple. In each stage you must select a number of rows and/or columns from the 6×6 grid. You can select a row or

column by pressing the arrow button at the end of that row or column. The selections you must make can be determined as follows:

- From the pattern of the indicator and the state of the bomb, determine the row in the next table to use for the stage.
- For the Venn line patterns section, consider the colors present in the indicator. For every color that is present in both the indicator and the table row for the stage, obtain the line pattern above that color in the column. Use that pattern or patterns in the Venn diagram on the following page to determine the correct constraint set number.
- Go to that constraint set. For each constraint in that set from top to bottom, select the row or column which satisfies that constraint from the 6×6 grid. Skip the constraint labels described in the skip section, based on the current stage.

Indicator	Bomb/Module		Venn Patt	Line erns	•	SI	cip Sectio	m
1 20001 11	Duave	•				Stage 1	Stage 2	Stage 3
Checkered	≤2 Batteries	R	G	B	Y	A, C	В	В, Е
VIIECKEI EU	>2 Batteries	Ρ	В	Y	R	B, D	D	C, E
Vertical	≤2 Ports	G	R	Р	Y	C	A, D	A, B
Vervicar	>2 Ports	В	Y	G	P	A, E '	B, D	A, D
Horigontal	≤2 Lit Indicators	Y	P	R	В	D	A, C	В, Е
noi izoneai	>2 Lit Indicators	G	В	Р	R	С, Е	A	C, D
Solid	Stage 1 or 3	P	G	В	R	A, E	B, D	С
DOTTO	Otherwise	Y	R	G	P	E	A, D	В, С

• When you have completed all three stages, the module will be disarmed.





1



Note: Sequence constraints are reversible; e.g. BRR and RRB are equivalent on the display.

	Constraint Sets 1-4								
Label	Set 1	Set 2	Set 3	Set 4					
A	BGB in sequence.	PYP in sequence.	BPY in sequence.	GGB in sequence.					
В	BBY in sequence.	G is not present.	PPB in sequence.	YRG in sequence.					
C	R is not present.	YYR in sequence.	PRP in sequence.	P is not present.					
D	YPG in sequence.	RPY in sequence	G is not present.	BYB in sequence.					
E	YGB in sequence.	BPR in sequence.	RBR in sequence.	RGB in sequence.					
		Constrain	Constraint Sets 5-8						
Label	Set 5	Set 6	Set 7	Set 8					
Label A	Set 5 GGY in sequence.	Set 6 PGG in sequence.	Set 7 BBG in sequence.	Set 8 PGB in sequence.					
Label A B	Set 5 GGY in sequence. RGG in sequence.	Set 6 PGG in sequence. YRR in sequence.	Set 7 BBG in sequence. BYG in sequence.	Set 8 PGB in sequence. Y is not present.					
LabelABC	Set 5 GGY in sequence. RGG in sequence. YRP in sequence.	Set 6 PGG in sequence. YRR in sequence. B is not present.	Set 7 BBG in sequence. BYG in sequence. PYY in sequence.	Set 8 PGB in sequence. Y is not present. PPG in sequence.					
LabelABCD	Set 5 GGY in sequence. RGG in sequence. YRP in sequence. PRR in sequence.	Set 6 PGG in sequence. YRR in sequence. B is not present. YYG in sequence.	Set 7 BBG in sequence. BYG in sequence. PYY in sequence. R is not present.	Set 8 PGB in sequence. Y is not present. PPG in sequence. BRG in sequence.					

Wire Placement

On the Subject of Wire Placement

Sometimes, the wire may look like a face, calming you down... and then you explode.

- This module contains a grid of wires.
- . There are always 8 wires on it.
- . Wires can be red, blue, yellow, black or white.
- In the following table, use only the column corresponding to the color of the wire connected to C3.
- Cut a wire if it is a specific color and is connected to a specific spot on the grid as indicated in the table.

	Wire connected to C3 is						
1	Black	Blue	Red	White	Yellow		
Cut if color		is c	onnect	ted to:"			
Yellow	D2	Dl	D2	A2 🔹	Dl		
Blue	A2	C4	Al	C4	D4		
White	D3	D2	D4	B3	B2		
White	B2	Cl	B4	Al	Cl		
Red	Al	B3	C4	B2	B3		
Blue	03	C2	Cl	D3	Bl		
Black	Bl	D4	A4	D2	B4		
Red	C4	D3	Bl	Cl	C2		
Yellow	A3	03	A2	A4	A3		
Yellow	Dl	Al	B2	B4	A4		



1 %

On the Subject of Logic Gates

There are only 10 types of bomb experts: those who understand logic gates, and those who don't.

The module contains a circuit of 7 logic gates, lettered A through G. Logic gates are explained on the second page. The circuit has 8 inputs and 1 output. Determine all gate types and find an input configuration that will set the final output to on.



- The first row of 8 LEDs tell you the input states. The second row of 4 LEDs
- tell you the output states of gates A through D. Use the arrow buttons to cycle through different input configurations, and determine the gate types of the first four gates.
- One gate type will occur twice on the circuit, all others once. In the following rules, if the found gate type already occurs, and you already found the duplicate, continue taking single steps until you find an available gate type.
- To find the gate type of gate E:
 - Start at the gate type of gate A in the diagram above.
 - Take the +n number of the gate type of gate B. Take that many steps following the arrows.
- To find the gate type of gate F:
 - Start at the gate type of gate E in the diagram above.
 - Take the +n number of the gate type of gate C. Take that many steps.
- To find the gate type of gate G:
 - Start at the gate type of gate F in the diagram above.
 - Take the +n number of the gate type of gate D. Take that many steps.
- Once you've established all gate types, cycle to an input configuration that will set the final output to on. Press 'CHECK'. If the output is off, you've earned a strike.



A logic gate is an elementary building block of a digital circuit. Most logic gates have two inputs and one output. At any given moment, every input and every output is either off (0, false) or on (1, true).

There are seven basic logic gates: NOT, AND, OR, XOR, NAND, NOR and XNOR. The NOT gate has one input and one output. The others have two inputs and one output. Inputs are normally drawn on the left, outputs on the right.

NOT	Has only one input. True becomes false, false becomes true. This gate will not be used on the module directly.
AND	When both inputs are true, the output is true. Otherwise, the output is false.
OR	When either or both inputs are true, the output is true. When both inputs are false, the output is false.
XOR	(Exclusive-OR) If either, but not both, inputs are true, the output is true. If neither or both inputs are true, the output is false.
NAND	It operates as an AND gate followed by a NOT gate. When both inputs are true, the output is false. Otherwise, the output is true.
NOR	It operates as an OR gate followed by a NOT gate. When either or both inputs are true, the output is false. When both inputs are false, the output is true.
XNOR	(Exclusive-NOR) It operates as an XOR gate followed by a NOT gate. If either, but not both, inputs are true, the output is false. If neither or both inputs are true, the output is true.

TNI	יזיזכ	OUTPUT						
77/1	UL	AND	OR	XOR	NAND	NOR	XNOR	
0	0	0	0	0	1	1	1	
0	1	0	1	1	1	0	0	
1	0	0	1	1	1	0	0	
1	1	1	1	0	0	0	1	

On the Subject of Turn The Key

How can something so simple be so infuriating?

Turn the key when the bomb's timer matches the time on the display, no sooner, no later.



Turn The Keys

On the Subject of Turn The Keys

Order is everything.

This modules has two keys and a display. The display indicates this module's priority.

LEFT KEY

Turn the left key after you have done <u>all</u> of the following:

- Turned the right key on all 'Turn the Keys' modules.
- Turned all lower priority left keys.
- · Solved all Password modules.
- Solved all Who's On First modules.
- Solved all Crazy Talk modules.
- · Solved all Keypad modules.
- Solved all Listening modules.
- Solved all Orientation modules.

But before you have done any of the following:

- Turned any higher priority left keys.
- Solved any Maze modules.
- Solved any Memory modules.
- Solved any Complex Wires modules.
- Solved any Wire Sequence modules.
- Solved any Cryptography modules.

RIGHT KEY

Turn the right key after you have done <u>all</u> of the following:

- Turned all higher priority right keys.
- Solved all Morse Code modules.
- Solved all Wire modules.
- Solved all Two Bits modules.
- Solved all The Button modules.
- Solved all Colour Flash modules.
- Solved all Round Keypad modules.

But before you have done any of the following:

- Turned any left keys.
- Turned any lower priority right keys.
- Solved any Semaphore modules.
- Solved any Combination Lock medules.
- Solved any Simon Says modules.
- Solved any Astrology modules.
- Solved any Switches modules.
- Solved any Plumbing modules.



On the Subject of Switches

A yes or no choice isn't too bad. Unfortunately you have to make five of them and any of them could be your last.

Switches need to be flipped to match the lit indicators either above or below them.

Avoid the following switch states:





Appendix A: Indicator Identification Reference

Labelled indicator lights can be found on the sides of the bomb casing.



Common Indicators

- SND
- CLR
- CAR
- IND
- FRQ
- SIG
- NSA
- MSA
- TRN
- BOB
- FRK

Appendix B: Battery Identification Reference

Common battery types can be found within enclosures on the sides of the bomb casing.

Battery	Туре
	AA
	D

Appendix C: Port Identification Reference

Digital and analog ports can be found on sides of the bomb casing.

Appendix C

÷.,

Port	Name
	DVI-D
000000000000000000000000000000000000000	Parallel
	PS/2
	RJ-45
	Serial
	Stereo RCA

Appendix: Identifying lookalikes of Colored Switches

If there are no lit LEDs: Colored Switches



If the sockets are colored and there is a middle LED between the top and bottom row of LEDs:

<u>Multicolored Switches</u>

If the first LED is lit: Recolored Switches

If all of the switches are black: Uncolored Switches





On the Subject of Horrible Memory

I thought Memory only went up to 4? Geez, I can't remember anything these days...

- Press the correct button to progress the module to the next stage. Complete all stages to disarm the module.
- Pressing an incorrect button will reset the module back to stage 1 and cause a strike.
- Button positions are ordered from left to right.

Stage 1:

If the display is 1, press the button labelled 6. If the display is 2, press the button in the 1st position. If the display is 3, press the green button. If the display is 4, press the button in the 3rd position. If the display is 5, press the button labelled 2.

If the display is 6, press the orange button.

Stage 2:

If the display is 1, press the button in the position that was pressed at stage 1. If the display is 2, press the purple button.

If the display is 3, press the button labelled 1.

If the display is 4, press the button with the label that was pressed at stage 1. If the display is 5, press the button in the 6th position.

If the display is 6, press the button with the colour that was pressed at stage 1.

Stage 3:

If the display is 1, press the button with the label that was in the 4th position at stage 1.

If the display is 2, press the button in the position that was green at stage 2. If the display is 3, press the button with the colour that was labelled 5 at stage 2.

If the display is 4, press the button with the label that was in the 1st position at stage 1.

If the display is 5, press the button in the position that was pressed at stage 2. If the display is 6, press the button with the colour that was in the 3rd position at stage 1.



Stage 4:

If the display is 1, press the button in the position that was labelled 2 at stage 1.

If the display is 2, press the button with the label that was in the 2nd position at stage 3.

If the display is 3, press the button with the colour that was pressed at stage 2.

If the display is 4, press the button in the position that was pressed at stage 3.

If the display is 5, press the button with the colour that was labelled 4 at stage 1.

If the display is 6, press the button with the label that was in the 6th position at stage 3.

Stage 5:

If the display is 1, press the button with the colour that was in the 3rd position at stage 4.

If the display is 2, press the button in the position that was labelled 6 at stage 3.

If the display is 3, press the button with the label that was pressed at stage 4.

If the display is 4, press the button with the label that was red at stage 1.

If the display is 5, press the button with the colour that was pressed at stage 3.

If the display is 6, press the button in the position that was blue at stage 2.