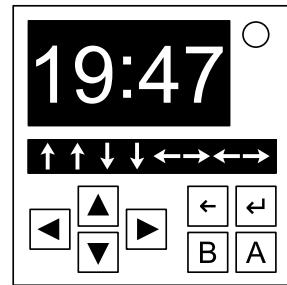


On the Subject of the Gamepad

Oh, the layout of the buttons on this thing takes me back to my childhood! Except I didn't expect to see that on a time bomb, even. Play time is over, I suppose.

See Appendix MathConcepts: Mathematical Concepts for more information.



- Two 2-digit numbers will appear on the top LCD display.
- The bottom has eight keys: the input keys ($\blacktriangle\blacktriangledown\blacktriangleright\blacktriangleright$ AB), Return, and Backspace.
- Determine the correct command, made of two subcommands, to input, depending on the properties of the two numbers. Use the first match.
- The two numbers are notated x and y . Individual digits are notated as $abcd$. A number followed by n means a multiple of that number.

Global Overrides	
Apply all matches <u>after</u> determining the two commands.	<ul style="list-style-type: none"> If $x = 11n$, switch the first keypress with the second, and the fifth with the seventh. If $a = 1 + d$, switch the third and fourth keypresses, as well as the sixth and eighth. If x or y is a highly composite number, switch the order of the subcommands. If x and y are perfect squares, flip the entire sequence.

First Subcommand	Second Subcommand
x is prime	$\blacktriangle\blacktriangledown\blacktriangleright\blacktriangleright$
$x = 12n$	$\blacktriangle A \blacktriangleleft\blacktriangleleft$
$a+b = 10$ AND last digit of serial number is odd	$AB \blacktriangle\blacktriangleright$
$x = 6n + 3$ OR $x = 10n + 5$	$\blacktriangledown\blacktriangleleft A \blacktriangleright$
$x = 7n$ AND $y \neq 7n$	$\blacktriangle\blacktriangleleft\blacktriangle A B$
$x = c \times d$	$A\blacktriangle\blacktriangleleft\blacktriangle$
x is a perfect square	$\blacktriangleright\blacktriangleright A \blacktriangledown$
$x = 3n - 1$ OR bomb has unlit ind. labeled SND	$\blacktriangleright A B A$
$60 \leq x < 90$ AND bomb has no batteries	$BB \blacktriangleright\blacktriangleleft$
$x = 6n$	$ABA \blacktriangleright$
$x = 4n$	$\blacktriangledown\blacktriangledown\blacktriangleleft\blacktriangle$
else	$A\blacktriangle\blacktriangleleft B \blacktriangleright$
	y is prime
	$\blacktriangle\blacktriangleright\blacktriangle\blacktriangleright$
	$y = 8n$
	$\blacktriangledown\blacktriangleright B A$
	$c-d = 4$ AND bomb has a Stereo RCA
	$\blacktriangleright A \blacktriangledown\blacktriangledown$
	$y = 4n + 2$ OR bomb has lit ind. labeled FRQ
	$B A \blacktriangleright A$
	$y = 7n$ AND $x \neq 7n$
	$\blacktriangle\blacktriangleleft\blacktriangle A,$
	y is a perfect square
	$\blacktriangle\blacktriangledown B \blacktriangleright$
	$y = a \times b$
	$A\blacktriangle\blacktriangleleft\blacktriangledown$
	$y = 4n - 1$ OR bomb has a PS/2 port
	$\blacktriangle B B B$
	$c > d$ AND bomb has 2 or more batteries
	$AA\blacktriangle\blacktriangledown$
	$y = 5n$
	$B A B \blacktriangleleft$
	$y = 3n$
	$\blacktriangleright\blacktriangle\blacktriangleleft\blacktriangle$
	else
	$B\blacktriangle A \blacktriangledown$

Appendix MathConcepts: Mathematical Concepts

This appendix contains a brief overview of some mathematical concepts used in the Gamepad module.

Prime Numbers

A prime number is a counting number (positive whole number) that can only be divided by 1 and itself. In other words, there is no way to share a prime number of donuts equally among any number of friends (unless you have as many friends as donuts!).

The prime numbers below 100 are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97.

Perfect Squares

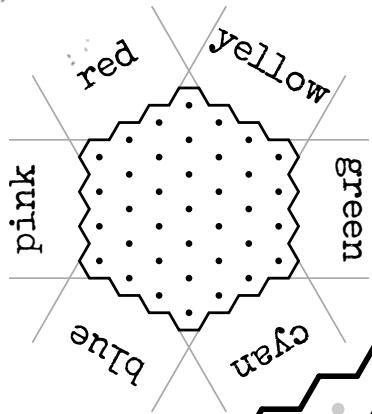
A perfect square is any whole number multiplied by itself.

The perfect squares below 100 are: 1, 4, 9, 16, 25, 36, 49, 64, 81.

Highly Composite Numbers

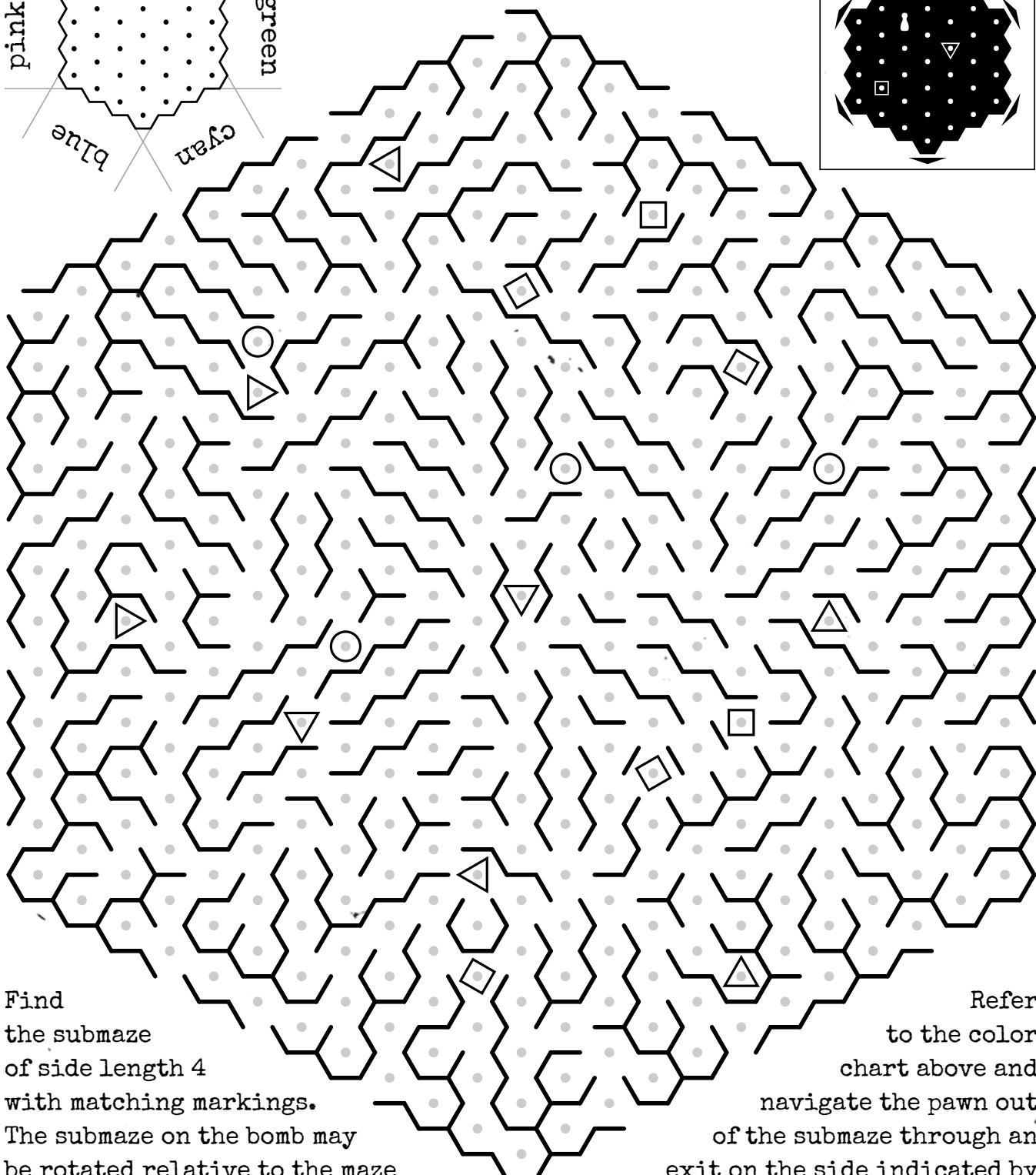
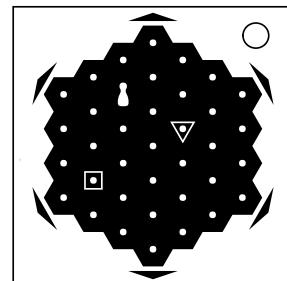
A highly composite number (HCN) has more divisors than any smaller positive integer. For example, 6 can be divided by 1, 2, 3, and 6, which is more than the last HCN, 4, which has 1, 2, and 4. 8 can be divided by 1, 2, 4, and 8, but a smaller number (6) has an equal number of divisors, so it is not a HCN.

The highly composite numbers below 100 are: 1, 2, 4, 6, 12, 24, 36, 48, 60.



On the Subject of Hexamazes

Dammit Jim, I'm a doctor, not a honeybee!



Find
the submaze
of side length 4
with matching markings.
The submaze on the bomb may
be rotated relative to the maze
shown here.

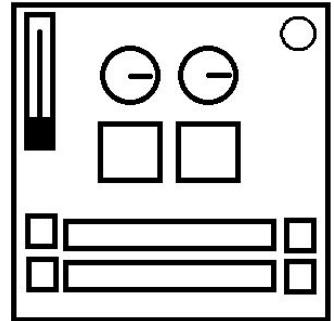
Refer
to the color
chart above and
navigate the pawn out
of the submaze through an
exit on the side indicated by
its color.

Warning: Do not cross the lines shown in the
maze. These lines are invisible on the bomb.

On the Subject of Laundry

Sorting and folding are the least of your worries.

All the messes from the previous explosions must be cleaned up. Using the Laundry Symbol Reference L4UHDR9 and the rules below, determine the correct setting on the machine panel. Once satisfied, insert a coin. On error, a sock will be lost, and a strike gained.



Determine the piece of clothing that has to be cleaned with the tables below. For all values higher than 5, subtract 6 from the total until the new number is less than 6. For all negative values, add 6 until you have a value between 0-5.

- **The Clothing Item** (table L41) is determined by the number of unsolved modules (excluding needy modules) + total amount of indicators.
- **The Item Material** (table L42) is determined by the total number of ports + the number of solved modules - battery holders.
- **The Item Color** (table L43) is determined by the last digit of serial number + batteries .

Use washing instructions based on the material, drying instructions based on the color, and use ironing and special instructions based on the item.

But, prioritize the following rules from top to bottom:

- If the color is Clouded Pearl ALWAYS use non-chlorine bleach.
- If the item is made out of leather, or in the color Jade Cluster, it can't go above 120°F. To be safe ALWAYS wash at 80°F.
- If the item is a corset or the material is corduroy then use special instructions based on material.
- If the material is wool or the color is Star Lemon Quartz ALWAYS dry with high heat.
- If a letter of the clothing material matches a letter in your serial code, then the color takes over the special instructions.
- BUT if there are exactly 4 batteries in 2 holders and a there is a lit BOB indicator, ignore all other rules. Bob did the work for you. Just throw in the coin. Thanks BOB.

Input the solution through putting The Washing Symbol Top-Left, The Drying Top-Right, Ironing on the top display and Special on the bottom display.

Table L41: Clothing Item Reference

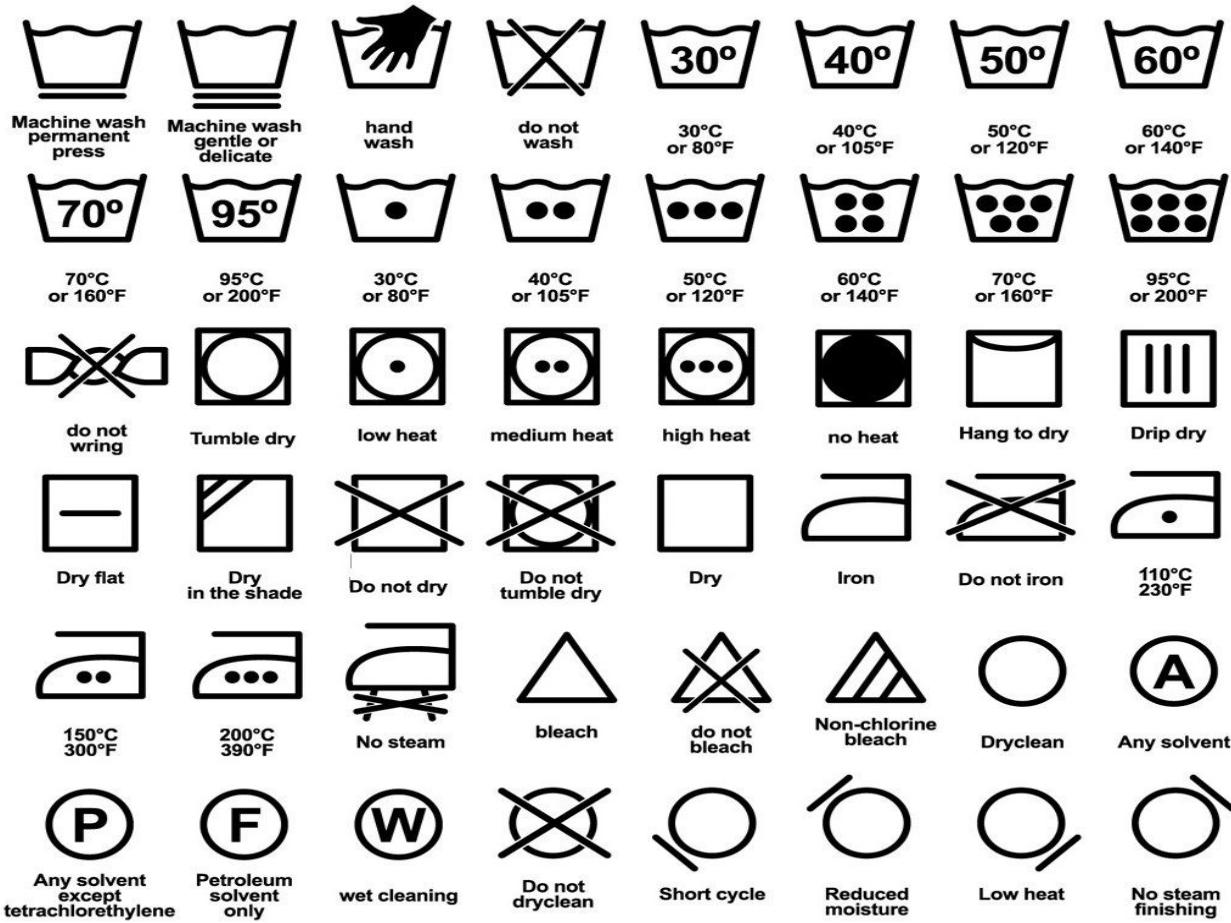
	CLOTHING ITEM	WASHING	DRYING	IRONING	SPECIAL
0	Corset	140°F	Dry Flat	2 dots	△
1	Shirt	105°F		No steam	No Tetrachlore-thylene
2	Skirt	30°C	Hang To Dry		Reduced Moisture
3	Skort		Tumble Dry	3 Dots	Circle Top Left
4	Shorts	Do Not Wring	Shade	150°C	
5	Scarf	95°C	Dry		Do not Dry Clean

Table L42: Clothing Material Reference

	CLOTHING MATERIAL	WASHING	DRYING	IRONING	SPECIAL
0	Polyester	50°C	No Heat	2 dots	
1	Cotton		Medium Heat	Iron	Do Not Dry Clean
2	Wool	Handwash		390°F	Reduced Moisture
3	Nylon	30°C	Drip Dry		Low Heat
4	Corduroy	105°F		110°C	W
5	Leather	Do Not Wash	Do Not Dry	Do Not Iron	

Table L43: Clothing Color Reference

	CLOTHING COLOR	WASHING	DRYING	IRONING	SPECIAL
0	Ruby Fountain	140°F		Do Not Iron	
1	Star Lemon Quartz		Dry Flat	Iron	
2	Sapphire Springs	80°F	Tumble Dry		
3	Jade Cluster	30°C		300°F	
4	Clouded Pearl		Low Heat	No steam	
5	Malinite	60°C	Medium Heat		

Laundry Symbol Reference

On the Subject of Lettered Keys

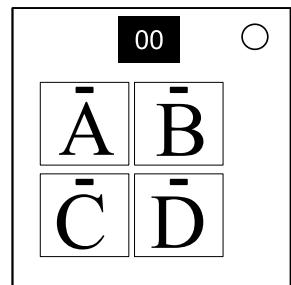
I haven't thought of anything yet...

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:

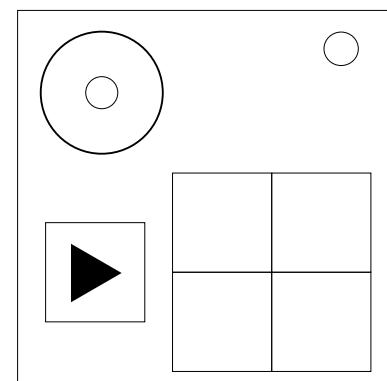
1. If the number indicated is equal to sixty-nine, Press the button with the label 'D'
2. If the number indicated is divisible by six, press the button with the label 'A'
3. If there are two or more batteries on the bomb and the number is divisible by three, press the button with the label 'B'
4. If the Serial number contains a 'C' 'E' or '3' and the number is greater than or equal to twenty-two, and less than or equal to seventy-nine, then press the button labelled 'B'
5. Otherwise, if the serial number contains a 'C' 'E' or '3', then press the button labelled 'C'
6. If the indicated number is less than forty-six, then press the button labelled 'D'
7. Otherwise, press the button labelled 'A'



On the Subject of Listening

"Why did we send a deaf person to defuse a bomb?" – Person who is no longer alive.

Press the play button to play a sound clip through the speaker. Each sound clip has a corresponding code that contains any of the four symbols \$ * & #. Match the sound clip to the table below and enter the code via the four button keypad.



Taxi Dispatch	&&&**	Dial-up Internet	*#&*&
Cow	&\$#\$\$&	Police Radio Scanner	**###
Extractor Fan	\$#\$\$*&	Censorship Bleep	&&\$&*
Train Station	#\$\$**	Medieval Weapons	&\$**&
Arcade	\$#\$\$#*	Door Closing	#\$#&\$
Casino	**\$*#	Chainsaw	&#&&#
Supermarket	#\$\$&*	Compressed Air	\$\$*\$*
Soccer Match	##\$*\$	Servo Motor	\$&\$\$\$
Tawny Owl	\$#*\$&	Waterfall	&**\$\$
Sewing Machine	#&&*#	Tearing Fabric	\$&&*&
Thrush Nightingale	**#**	Zipper	&\$&##
Car Engine	&#**&	Vacuum Cleaner	#&\$*&
Reloading Glock 19	\$&**#	Ballpoint Pen Writing	\$*\$\$**
Oboe	&\$\$##	Rattling Iron Chain	*#\$&&
Saxaphone	\$&&**	Book Page Turning	###&\$
Tuba	#&\$##	Table Tennis	*\$\$&\$
Marimba	&*\$*\$	Squeeky Toy	\$*&##
Phone Ringing	&\$\$&*	Helicopter	#&\$&&
Tibetan Nuns	#&&&&	Firework Exploding	\$&\$\$*
Throat Singing	**\$\$	Glass Shattering	*\$*\$\$
Beach	*&*&&		

Note: pressing play also clears whatever code you have entered.

On the Subject of Logic

Logic, Logic. That's an easy stuff but with the complexity of this bomb this maybe harder than you think.

- Each row will display 3 letters. Each letter will represent a statement.
- If ALL statement in the top row is true. That row is true.
- If ANY statement in the bottom row is true. That row is true.
- Use T/F button to the right to select True/False.
- Press "Submit" when done.

<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F
<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F
				SUBMIT

See Appendix A for indicator identification reference.

See Appendix B for battery identification reference.

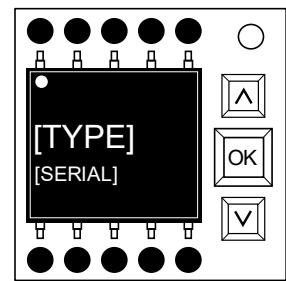
See Appendix C for port identification reference.

Letter	This letter is true if:	Letter	This letter is true if:
A	More than 2 batteries.	N	Exactly 1 battery.
B	Has Serial port.	O	No battery.
C	Has Parallel port.	P	Has RJ-45 port.
D	Serial number has vowel.	Q	Has DVI-D port.
E	Serial number doesn't have vowel.	R	More than 5 batteries.
F	Has Stereo RCA port.	S	Has SIG and CAR lit indicators.
G	Has CLR lit indicator.	T	Has at least 2 batteries and PS/2 port.
H	Has IND lit indicator.	U	Has serial and parallel port.
I	Less than 1 battery.	V	Has BOB lit indicator.
J	Has MSA lit indicator.	W	No letter in serial number.
K	Last digit of serial number is odd.	X	Has at least 4 port types.
L	Last digit of serial number is even.	Y	No lit indicator.
M	Has FRK lit indicator.	Z	Has RJ-45 port and Serial port.

On the Subject of Microcontrollers

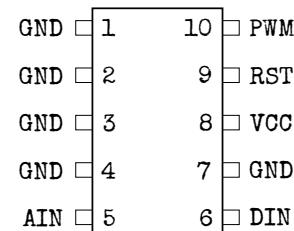
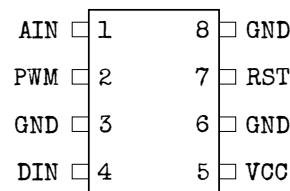
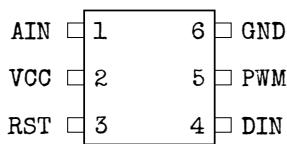
It's called "micro"-controller yet this thing in there is pretty big. Probably because it can cause a pretty big explosion...

1. Use the controller's imprinted type and its size to determine its pin configuration with the diagrams below.
2. The white mark on the controller indicates where the pin with the number 1 is located. The other pins are in ascending order on the side with the number 1 and then continued backwards on the other side.
3. Using the table below determine the correct color code for each connected element.
4. For each pin choose the correct element by pressing the UP and DOWN buttons and confirming your input with the OK button (the next pin will be selected automatically).

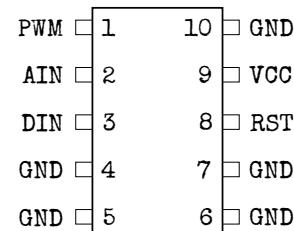
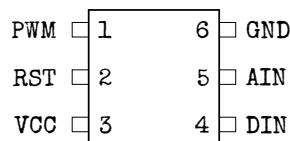
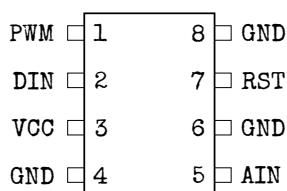


Pin Configurations

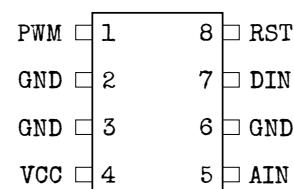
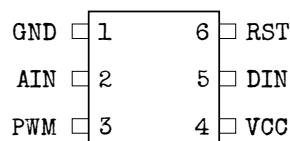
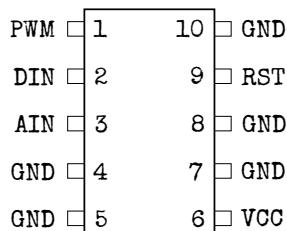
Strike (STRK) Controller:



Diode (LEDS) Controller:

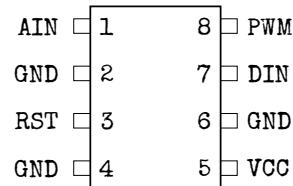
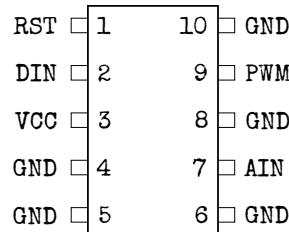
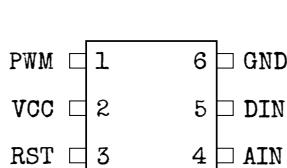


Countdown (CNTD) Controller:



continued on next page ...

Explosion (EXPL) Controller:



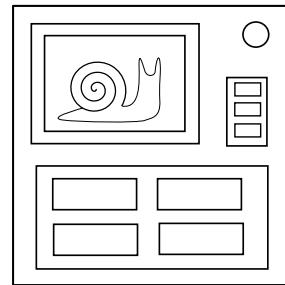
Component Color Codes

	Input Voltage (VCC)	Analog Input (AIN)	Digital Input (DIN)	Pulse Width Modulation (PWM)	Reset (RST)
If the last digit of the controller's serial number is 1 or 4	Yellow	Magenta	Green	Blue	Red
Otherwise, if there is a lit indicator "SIG" or a RJ-45 port	Yellow	Red	Magenta	Green	Blue
Otherwise, if the bomb's serial number contains C, L, R, X, 1 or 8	Red	Magenta	Green	Blue	Yellow
Otherwise, if the second numerical digit of the controller's serial number matches the number of batteries on the bomb	Red	Blue	Yellow	Green	Magenta
Otherwise	Green	Red	Yellow	Blue	Magenta

Note: Ground (GND) is always coded with white.

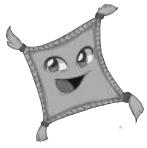
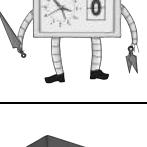
On the Subject of Monsplode, Fight!

Are you still a fan of some animated series from your childhood? It looks like you stumbled upon another fan.



- You encountered a wild Monsplode™.
- You can perform 4 different moves against it.
- Pick a move to deal the highest possible net damage to the opposing Monsplode™.
- A wrong move will incur a strike and the module will reset.
- Each move has a type, damage, and sometimes a special rule. (Special rules can override earlier information.)
- Each Monsplode™ also has a type, and sometimes a special rule.
- Net damage of a move is its base damage multiplied by the type advantage/disadvantage multiplier.

Monsplode™	Name	Type	Special Rules
	Buhar	WATER	Takes no damage from ROCK type moves.
	Lanaluff	NORMAL	If its name has a common letter with the serial, takes +3 net damage from POISON type moves.
	Bob	NORMAL	If there is a lit BOB indicator, only takes damage from NORMAL type moves.
	Mountoise	ROCK	Its type is NORMAL if the bomb has a strike.
	Nibs	NORMAL	Takes no damage from GRASS type moves.

Monsplode™	Name	Type	Special Rules
	Aluga	NORMAL	Takes +2 net damage from FIRE type moves. Takes -1 net damage from WATER type moves.
	Lugirit	GHOST	Takes +2 net damage from WATER type moves. Takes -1 net damage from FIRE type moves.
	Caadarim	NORMAL	If there is at least one port, takes no damage from NORMAL type moves.
	Vellarim	WATER	If there is a Parallel port, takes no damage from NORMAL type moves.
	Flaurim	FIRE	If there is a Serial port, takes no damage from NORMAL type moves.
	Gloorim	DARK	If there is a DVI-D port, takes no damage from NORMAL type moves.
	Melbor	DARK	If net damage of a move is exactly 6 or 8, it takes 0 damage instead.
	Clondar	ELECTR	Takes +3 net damage from WATER type moves.
	Docspplode	NORMAL	"Boom" will explode Docspplode instead of the bomb. It must be used if present.

Monsplode™	Name	Type	Special Rules
	Magmy	FIRE	If there are less than 3 batteries on the bomb, its type is ROCK.
	Pouse	ELECTR	If net damage of a move is 6 or more, it takes 0 damage instead.
	Ukkens	POISON	Takes no damage from WATER type moves.
	Asteran	GRASS	If there is a CAR indicator present, its type is WATER.
	Violan	GRASS	If there is a CLR indicator present, its type is WATER.
	Zenlad	GRASS	Takes +3 damage from ELECTR type moves.
	Zapra	ELECTR	If there is less than 3 batteries on the bomb, its type is NORMAL.
	Myrchat	POISON	If there is no lit indicator on the bomb, its type is DARK.

Move Name	Move Type	Base Damage	Special Rules
Appearify	NORMAL	4	Damage is 10 if the opponent is a DARK type.
Battery Power	ELECTR	0	Add 2 damage for each battery on the bomb.
Bedrock	ROCK	0	Damage is number of modules on the bomb.
Boo	GHOST	0	Add 3 damage for each '0' or 'O' in the serial number.
Boom	FIRE	0	Pressing this will detonate the bomb.
Bug Spray	POISON	2	Damage is 10 against Melbor and Zenlad.
Countdown	POISON	0	Damage is time left on the bomb in minutes, rounded down.
Dark Portal	DARK	0	Damage is the number of ports present.
Fiery Soul	FIRE	0	Damage is number of batteries multiplied by the number of battery holders.
Freak Out	GHOST	1	Damage is 5 if there is a "FRK" or "FRQ" indicator. 10 if any of them are lit.
Glyph	NORMAL	0	Damage is letter count of the opponent's name.
Last Word	GHOST	0	Damage is last digit of the serial number.
Sendify	NORMAL	2	Damage is 10 if the opponent is a ROCK or GRASS type.
Shock	ELECTR	3	Damage is 8 if there is an RJ-45 port on the bomb.
Shrink	NORMAL	0	Damage is the smallest digit of the serial number.
Stretch	NORMAL	0	Damage is the largest digit of the serial number.
Void	DARK	2	Damage is 10 if no other module is disarmed before this one.

Move Name	Move Type	Base Damage		Move Name	Move Type	Base Damage
Candle	FIRE	2		Spectre	GHOST	5
Cave In	ROCK	3		Splash	WATER	0
Double Zap	ELECTR	4		Tac	NORMAL	5
Earthquake	ROCK	5		Tangle	GRASS	2
Flame Spear	FIRE	6		Tic	NORMAL	3
Fountain	WATER	6		Toe	NORMAL	1
Grass Blade	GRASS	4		Torchlight	FIRE	4
Heavy Rain	WATER	4		Toxic Waste	POISON	5
High Voltage	ELECTR	6		Venom Fang	POISON	3
Hollow Gaze	DARK	4		Zap	ELECTR	2
Ivy Spikes	GRASS	6		-	-	-

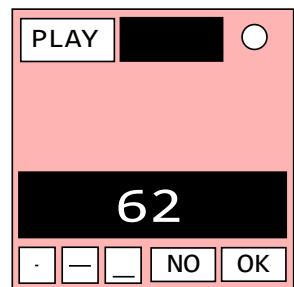
Opposing Type →	N O R M A L	P O I S O N	R O C K	G H O S T	F I R E	W A T E R	G R A S S	E L E C T R	D A R K
↓ Move Type									
NORMAL	x1	x1	x1/2	x0	x1	x1	x1	x1	x1
POISON	x1	x1/2	x1/2	x1/2	x1	x1	x2	x1	x1
ROCK	x1	x1	x1	x1	x2	x1	x1	x1	x1
GHOST	x0	x1	x1	x2	x1	x1	x1	x1	x1/2
FIRE	x1	x1	x1/2	x1	x1/2	x1/2	x2	x1	x1
WATER	x1	x1	x2	x1	x2	x1/2	x1/2	x1	x1
GRASS	x1	x1/2	x2	x1	x1/2	x2	x1/2	x1	x1
ELECTR	x1	x1	x1	x1	x1	x2	x1/2	x1/2	x1
DARK	x1	x1	x1	x2	x1	x1	x1	x1	x1/2

On the Subject of Morseomatics

Get it? Because it uses morse and maths! I'll see myself out...

See Appendix MorseOP for mathematical operation reference.

- Interpret the signal from the flashing light using the Morse Code chart.
- The signal will play once upon pressing "Play".
- The signal will be a maths question, encoded in the format <a> <op> .
- A response to the signal is entered using the dot, dash, and space buttons. The answer is submitted by pressing "OK".
- Your response is shown in the display. If you make a mistake, press "NO" to clear it.
- Warning: "NO" can only be pressed when the correct answer has a matching number in the time remaining, or when less than 30 seconds remain.



How to Interpret

1. A short flash represents a dot.
2. A long flash represents a dash.
3. There is a long gap between letters.
4. There is a very long gap before the word repeats.

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

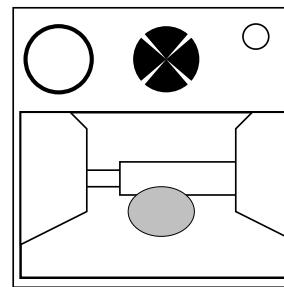
Appendix MorseOP: Mathematical Operations

MULT, TIMES	Multiply the two numbers together.
OVER, DIV	Divide the first number by the second.
MOD, REM	Divide the first number by the second, and take the remainder.
POW, EXP	Take the first number, and apply the second number as a power.
XOR	Apply a bitwise XOR operation to the two numbers.

On the Subject of the Mouse In The Maze

Inside some bombs is a mouse that is remote-controlled via a chip in its spinal cord.

- The mouse is located inside one of the following mazes.
- The mouse can move forward or backward or turn left or right.
- To disarm the module, navigate the mouse to the accepting position and press the circular button with the labyrinth.
- Pressing the button at any other location causes a strike.
- The accepting position is marked with one of four colored spheres. Which one depends on the color of the torus in the middle of the maze, according to the table below.



Maze	Torus color	Sphere color	Maze	Torus color	Sphere color
	green	blue		white	yellow
	blue	white		green	green
	white	green		blue	white
	yellow	yellow		yellow	blue
Maze	Torus color	Sphere color	Maze	Torus color	Sphere color
	green	blue		yellow	yellow
	blue	yellow		blue	green
	white	green		green	white
	yellow	white		white	blue
Maze	Torus color	Sphere color	Maze	Torus color	Sphere color
	white	yellow		green	yellow
	green	white		blue	green
	blue	green		white	blue
	yellow	blue		yellow	white

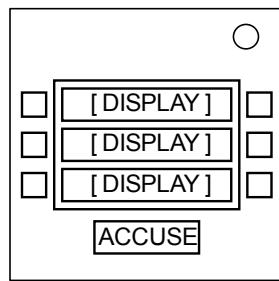
On the Subject of Murder

This module is powered by the restless soul of a murder victim. The only way to disarm it is to solve the case so the victim can pass peacefully to the afterlife.

See Appendix A for indicator identification reference.

See Appendix B for battery identification reference.

See Appendix C for port identification reference.



- Select the murderer, murder weapon, and location on the display panels and press "ACCUSE" to disarm the module.
- The module displays one location in red – this is the room in which the body was found. It is not necessarily the room in which the crime occurred.
- The table below shows the location of the suspects and potential weapons at the time of the murder. The murderer must have been in the same location as the murder weapon at this time.
- Some suspects and potential weapons have already been eliminated from the investigation – these are not listed on the module.

Suspects:

If there is a lit indicator with label TRN, use row 5 to locate the suspects.

Otherwise, if the body was found in the Dining Room, use row 7.

Otherwise, if the bomb has 2 or more Stereo RCA ports, use row 8.

Otherwise, if there are no D batteries on the bomb, use row 2.

Otherwise, if the body was found in the Study, use row 4.

Otherwise, if there are 5 or more batteries, use row 9.

Otherwise, if there is an unlit indicator with label FRQ, use row 1.

Otherwise, if the body was found in the Conservatory, use row 3.

Otherwise, the suspects can be located using row 6.

Weapons:

If the body was found in the Lounge, use row 3 to locate the weapons.

Otherwise, if there are 5 or more batteries, use row 1.

Otherwise, if the bomb has a serial port, use row 9.

Otherwise, if the body was found in the Billiard Room, use row 4.

Otherwise, if there are no batteries on the bomb, use row 6.

Otherwise, if there are no lit indicators on the bomb, use row 5.

Otherwise, if the body was found in the Hall, use row 7.

Otherwise, if the bomb has 2 or more Stereo RCA ports, use row 2.

Otherwise, the weapons can be located using row 8.

Locations:

	Miss Scarlett	Professor Plum	Mrs Peacock	Reverend Green	Colonel Mustard	Mrs White
	Candle-stick	Dagger	Lead Pipe	Revolver	Rope	Spanner
1	Dining Room	Library	Lounge	Kitchen	Study	Conservatory
2	Study	Hall	Billiard Room	Lounge	Kitchen	Library
3	Kitchen	Billiard Room	Ballroom	Library	Conservatory	Dining Room
4	Lounge	Ballroom	Dining Room	Conservatory	Hall	Kitchen
5	Billiard Room	Kitchen	Study	Ballroom	Dining Room	Hall
6	Conservatory	Lounge	Library	Study	Billiard Room	Ballroom
7	Ballroom	Conservatory	Kitchen	Hall	Library	Study
8	Hall	Study	Conservatory	Dining Room	Lounge	Billiard Room
9	Library	Dining Room	Hall	Billiard Room	Ballroom	Lounge

On the Subject of the Mystic Square

1. "row/column" on this page alway refers to the table below.
2. Discovering the Skull before the knight will cause a strike.
3. No other action will cause a strike.
4. How to find the skull:

1. If the middle position is empty, the skull is under the 7. Continue to step 4.
2. The middle number determines which row/column to use. If the last digit in the serial number is in one of the five cross positions as shown in the picture on the right, use rows. Otherwise, use columns.
3. Start from the empty position on the module. Using the table below, consider each number in the row/column and check if it's a direct neighbour to the current position. If it is, continue from that position. The final position is where the skull is located.
4. To disarm the module, move the sliders into a target constellation. See next page. Take care not to uncover the skull before the knight has been uncovered.

X		X
	X	
X		X

<

		last serial digit lies not on the cross-parts of the module							
	number in the middle of the module	1	2	3	4	5	6	7	8
on the cross-part	1	1	3	5	4	6	7	2	8
	2	2	5	7	3	8	1	4	6
	3	6	4	8	1	7	3	5	2
	4	8	1	2	5	3	4	6	7
	5	3	2	6	8	4	5	7	1
	6	7	6	1	2	5	8	3	4
	7	4	7	3	6	1	2	8	5
	8	5	8	4	7	2	6	1	3

"row/column" on this page always refers to the module.

Determining the desired constellation:

Before moving any sliders, use the sum of the rows as R1, R2 and R3 and the sum of the columns as C1, C2 and C3 to look up the target constellation in the table below. The following constellation is also always acceptable.



1	2	3
4	5	6
7	8	

	C1 > C2,C3	C2 > C1,C3	C3 > C1,C2	else																																				
R1 > R2,R3	<table border="1"> <tr><td>1</td><td>?</td><td>2</td></tr> <tr><td>?</td><td>?</td><td>?</td></tr> <tr><td>4</td><td>?</td><td>3</td></tr> </table> <table border="1"> <tr><td>1</td><td>?</td><td>2</td></tr> <tr><td>?</td><td>?</td><td>?</td></tr> <tr><td>3</td><td>?</td><td>4</td></tr> </table> <table border="1"> <tr><td>1</td><td>?</td><td>3</td></tr> <tr><td>?</td><td>?</td><td>?</td></tr> <tr><td>7</td><td>?</td><td>5</td></tr> </table> <table border="1"> <tr><td>1</td><td>?</td><td>3</td></tr> <tr><td>?</td><td>?</td><td>?</td></tr> <tr><td>5</td><td>?</td><td>7</td></tr> </table>	1	?	2	?	?	?	4	?	3	1	?	2	?	?	?	3	?	4	1	?	3	?	?	?	7	?	5	1	?	3	?	?	?	5	?	7			
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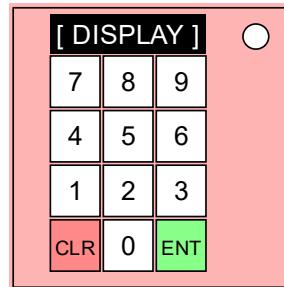
On the Subject of Number Pads

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 ignored.

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 the 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 less 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 reverse the current 3-digit code.

Level 4:

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

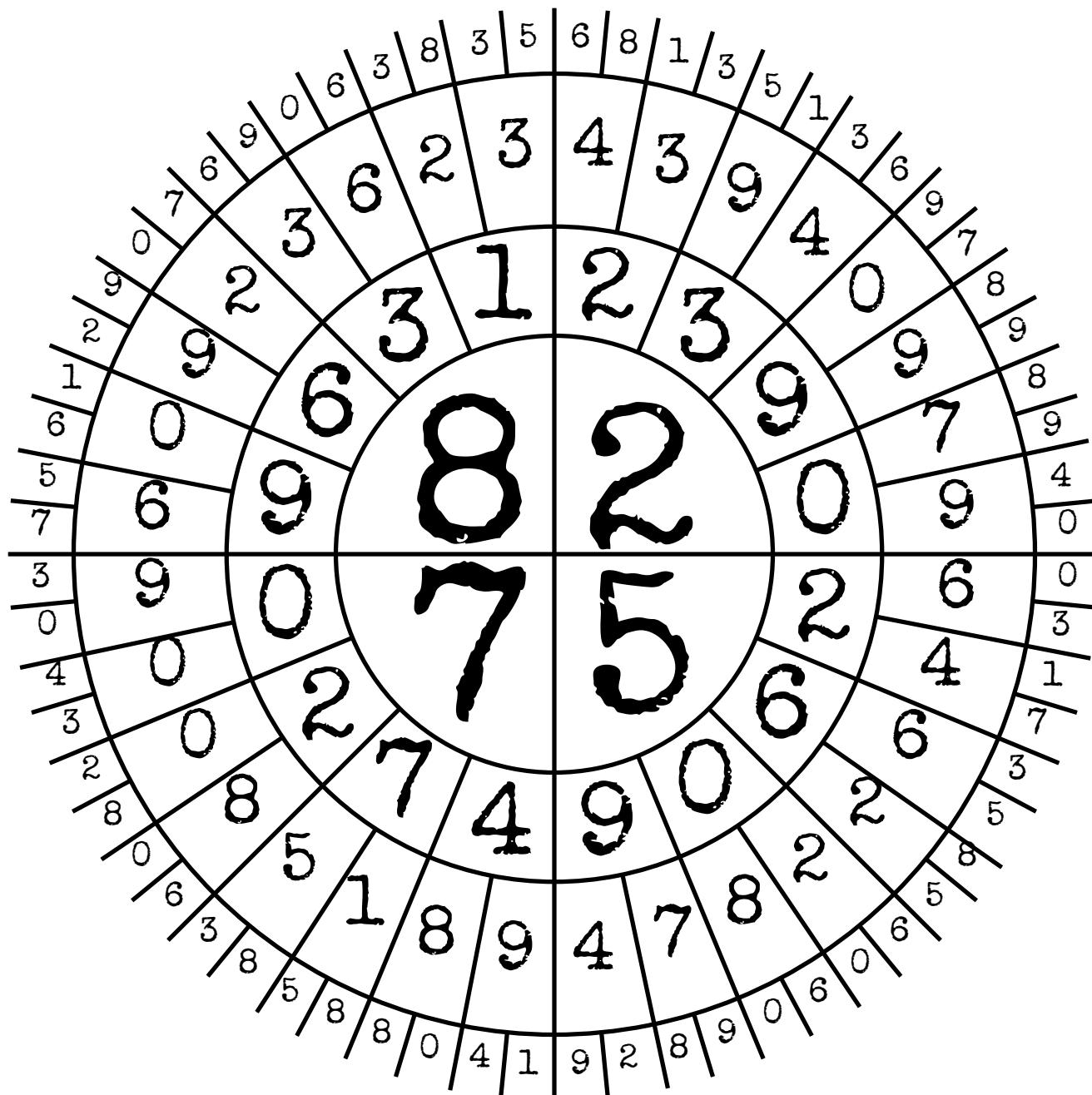
Otherwise, take the second path.

Final Instructions:*(follow all 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.

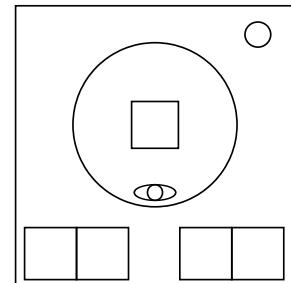
If both criteria above are not met, swap the first and fourth digits.

Finally, if the sum of all the digits in the code is even, reverse the code.**Wheel Chart**

On the Subject of Orientation Cube

If the bomb doesn't kill us a brain haemorrhage will.

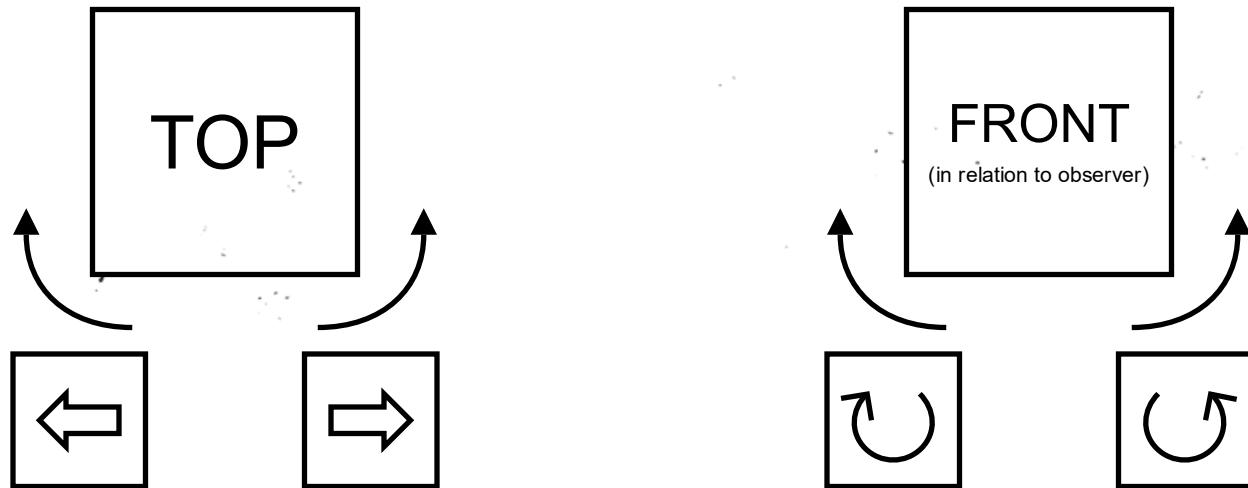
In order to diffuse this part of the bomb you will need good 3D orientation skills. A virtual cube needs to be rotated into a specific orientation using the four keys along the bottom. Unfortunately there is no display to indicate the current orientation of the virtual cube so you will have to imagine the state of the cube yourself.



The two keys in the bottom left will yaw the cube clockwise or anti-clockwise, respective to looking at the cube from the top.

The two keys in the bottom right will roll the cube clockwise or anti-clockwise, respective to the virtual observer. The virtual observer's position is indicated on the module as an eye. NOTE: The virtual observer's position may change.

For example, if the eye is at the bottom then it is facing the 'FRONT' face. Pressing 'Roll clockwise' will place the 'LEFT' face where the 'TOP' face is.



If the serial number on the bomb contains the letter R:

Rotate the cube so that the initial left face is in the same position as the initial top face, then press the SET button.

Otherwise, if the bomb has a lit indicator with the label TRN OR it has a lit/unlit indicator with the label CAR:

Rotate the cube so that the initial bottom face is in the same position as the initial right face, then press the SET button.

Otherwise, if the bomb has a PS2 port OR there have been one or more strikes:

Rotate the cube so that the initial bottom face is in the same position as the initial front face and the initial left face is in the same position as the initial bottom face, then press the SET button.

Otherwise, if the serial number on the bomb contains either the number 7 or 8:

Rotate the cube so that the initial right face is in the same position as the initial bottom face and the initial back face is in the same position as the initial front face, then press the SET button.

Otherwise, if there are more than two batteries on the bomb OR the virtual observer's initial position is facing the initial left face:

Rotate the cube so that the initial top face is in the same position as the initial bottom face, then press the SET button.

Otherwise:

Rotate the cube so that the initial top face is in the same position as the initial left face, then press the SET button.

On a strike:

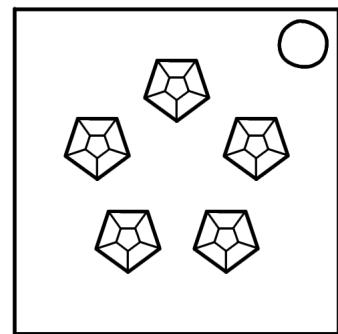
If you get strike then the virtual cube will be reset to the initial position. Be aware you may need to select a new rule if the observer is now in a different position.

On the Subject of Perspective Pegs

Everything is different from the perspective of another.

Step 1: Key Colour

- Calculate the alphabetic position difference of the first two letters in the serial number. ($A = 1$, $B = 2$, etc.)
- Regard the difference between alphabetic positions to be positive.
- If there are four or more letters in the serial number, add the position difference of the third and fourth letters.
- Look up this number on the **Key Colour** table to obtain a colour.



Step 2: Sequence Permutation

- Starting from the peg with three or more sides in this colour and proceeding clockwise, read the outermost facing colour of each peg to form a colour sequence of length five; this is the current sequence.
- Determine which column of the **Sequence Permutation** table to use.
- For each entry in the relevant column:
 - If the prime sequence is present in the current sequence, replace the first occurrence with the alternate sequence to form the new current sequence.
 - Otherwise, if the reverse of the prime sequence is present, replace the last occurrence with the reverse of the alternate sequence.
- Finally, take the first three colours in the current sequence to obtain the key sequence.

Step 3: Key Sequence

- Angle the bomb with one peg close to you and in the centre of your view, then observe the five colours facing you in a line; this is the candidate sequence for this view.
- The key sequence is present in one of the five candidate sequences exactly once, either forward or reverse.
- Locate the candidate sequence that contains the key sequence, and press the three pegs representing the key sequence in order.
- If the key sequence is the same backwards as it is forwards, you can press the three pegs in either forward or reverse order.

Table 1.1 Key Colour

Regard the difference between alphabetic positions to be positive.

Take the least significant digit of the number, and look up in the table:

0	3	Red	5	8	Blue
4	9	Yellow	2	6	Purple
1	7	Green			

Table 1.2 Sequence Permutation

R – Red, Y – Yellow, G – Green, B – Blue, P – Purple

Determine which column to use based on battery count.

Perform permutations from top to bottom:

1 - 2 Batteries		3 - 4 Batteries		0, 5+ Batteries	
Prime	Alternate	Prime	Alternate	Prime	Alternate
R YY	B PY	B PB	Y BG	P YB	R GB
Y PG	P BR	YY P	B RP	Y RP	R YR
R GP	B GR	G RB	Y PB	G YR	G BP
Y BG	B YY	R PY	G BG	B YG	P GR
PP R	R YP	Y GG	P BR	R PY	G YB
B GB	P YG	G PB	Y GY	P PG	P BR
Y GB	G PY	P RP	B BG	R YY	BB R
PG G	G YR	R YR	R PB	Y GP	P YY

On the Subject of Piano Keys

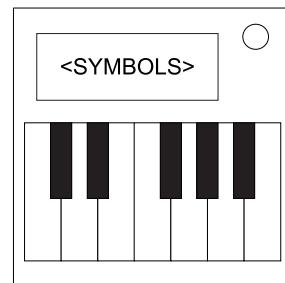
What do you get when you drop a piano down a mine shaft? A flat minor.

See Appendix A for indicator identification reference.

See Appendix B for battery identification reference.

See Appendix C for port identification reference.

See the next page for piano/keyboard reference.

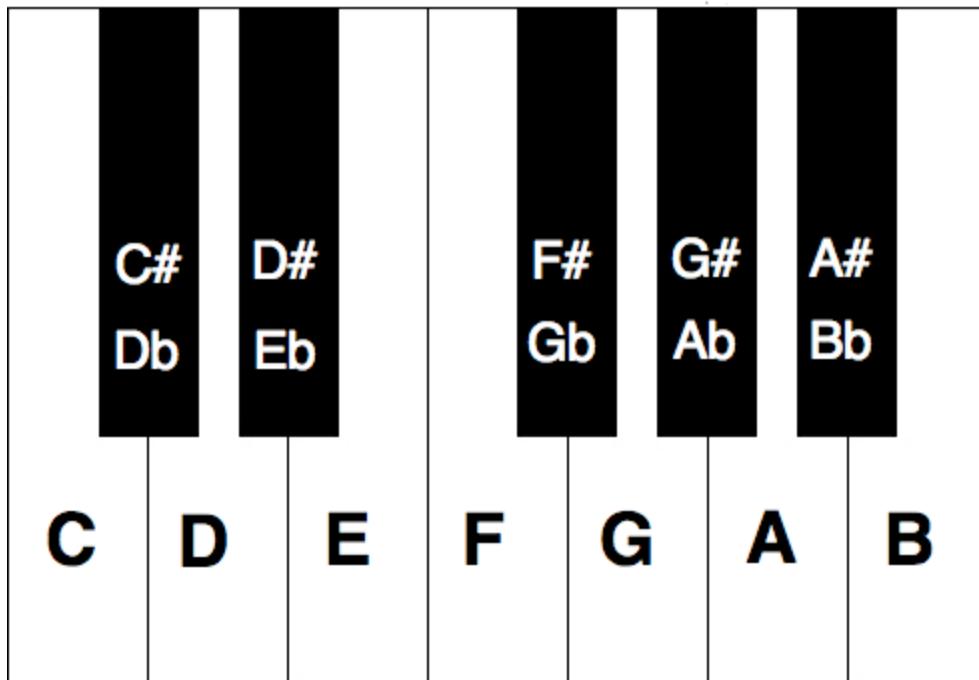


- A piano keys module will present with 3 musical symbols in the top indicator and a 12-note keyboard to input with.
- Each rule consists of one or more required symbol(s) and optional further requirements based on the bomb casing.
- Follow the list of rules down until one matches the criteria for the module; then execute the sequence of notes listed.
- A failed attempt will require re-entry of the entire note sequence.

<u>Required Symbol(s)</u>	<u>Further Requirements</u>	<u>Note Sequence</u>
♭	Last digit of serial number is even	B♭ B♭ B♭ B♭ G♭ A♭ B♭ A♭ B♭
C or #	2 or more battery holders	E♭ E♭ D D E♭ E♭ D E♭ E♭ D D E♭
♯ and ○	(No other requirements)	E F♯ F♯ F♯ F♯ E E E
∅ or ~	RCA port is present	B♭ A B♭ F E♭ B♭ A B♭ F E♭
	SND indicator is present and lit	E E E C E G G
~ or ○ or C	3 or more batteries	C♯ D E F C♯ D E F B♭ A
♭ and #	(No other requirements)	G G C G G C G C
∅ or ~	Serial number contains a 3, 7 or 8	A E F G F E D D F A
♯ or ~ or	(No other requirements)	G G G E♭ B♭ G E♭ B♭ G
(No requirement)	(No other requirements)	B D A G A B D A

Piano/Keyboard Reference

Use the following graphic as a reference to how tones are mapped onto a standard 12-note piano/keyboard.



On the Subject of Cruel Piano Keys

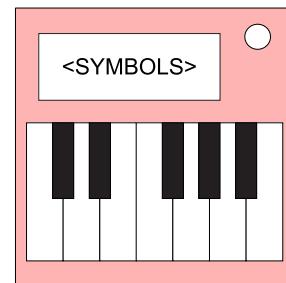
The devil's interval approaches...

See Appendix A for indicator identification reference.

See Appendix B for battery identification reference.

See Appendix C for port identification reference.

See the third page for serialism & music terminology reference.



- A cruel piano keys module will present with 4 musical symbols in the top indicator and a 12-note keyboard to input with.
- Each rule consists of one or more required symbol(s) and optional further requirements based on the bomb casing.
- Follow the list of rules down in **Table 2** until one matches the criteria for the module and bomb.
- Then use the lookup criteria to find the prime 12-tone row from **Table 1**.
- Then apply the according transformation from **Table 2** to the 12-tone row, and execute this final sequence.
- A failed attempt will require re-entry of the entire note sequence.

Table 1.

#	Prime 12-tone Sequence	#	Prime 12-tone Sequence
0	F D F# G# C B A# C# G E D# A	5	C D# F# D F C# B A G A# E G#
1	A# A C E C# D D# G B F# G# F	6	G# C A# C# E G B D# A D F F#
2	F# B A G# D C G C# F D# E A#	7	E A C# B G G# A# D# F# F C D
3	E D# D F# F A# G# C# C B G A	8	G# D# D E A# C# F# G F A C B
4	D E A A# C B C# G# F F# D# G	9	D# G# C B D C# F# A# F G A E

Table 2.

<u>Required Symbol(s)</u>	<u>Further Requirements</u>	<u>Lookup Index</u>	<u>Transformation</u>
or ~	2 or more indicators (lit or unlit)	Left-most digit in serial number	RI
# or x	An empty port plate	Number of battery holders	P, transpose down by 'x' semitones, where 'x' = number of minutes remaining
○ or □	2 or more of a certain type of port	Least significant digit of number of completed modules	I
or :	2 or more port plates	9 minus the number of unlit indicators	R
¢ or C	Serial contains 1 or more vowels	Least significant digit of number of strikes	R, transpose down by 3 semitones
¤ or ~^	Even number of batteries	DVI-D present: 7 Otherwise: 3	P, transpose up by 'x' semitones, where 'x' = number of ports*
♪ or {	An indicator with no vowels in the label	8	I
□ or :	Less than 2 ports	4	R
or x	(No other requirements)	5	P
If none of these rules apply, revert back to the <u>Normal</u> Piano Keys ruleset and play the given note sequence normally.			

Notes:

*: The Stereo RCA port does not count as 2 separate ports; the Red & White connectors are part of the same singular port.

Serialism & Music Terminology

To clarify, the note below a C would be a B, and similarly, the note after a B would be a C. The 12 tones on the piano essentially wrap around.

The Prime sequence (or 'P' for short), is the original or base form of the 12-tone row. No transformation takes place.

The Retrograde sequence (or 'R' for short), takes the Prime sequence, but executes it in reverse order. For example, the Retrograde of the Prime row A B C D E would be E D C B A.

The Inverse sequence (or 'I' for short), takes the Prime sequence, but the intervals between the notes are inverted. For example, take the interval from A to B; the interval is +2 semitones, as it takes you 2 semitones to get from A to B (A goes to A[#] then B). The inversion of this interval would be -2 semitones.

Therefore, the inverted sequence would be A then G, as G is -2 semitones away from A (A goes to G[#] then G).

As an extended example, the Inversion of the Prime row A B C D E would be A G F[#] E D; the first note always remains the same, and all the other notes get inverted relative to that note.

The Retrograde Inverse sequence (or 'RI' for short), takes the Inverse sequence in Retrograde. For example, the Retrograde Inverse of the Prime row A B C D E would take the Inverse first (which is A G F[#] E D), and then the Retrograde of this Inverse would be D E F[#] G A.

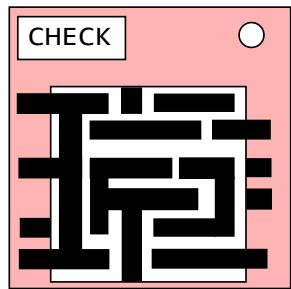
Transpositions apply a translation of the tone row up or down by a given number of semitones. For example, the Prime row A B C D E transposed up by 1 semitone would be A[#] C C[#] D[#] F.

An Interval is the tonal distance between two distinct notes and is usually measured in semitones. For example, the interval from G to B is up 4 semitones.

On the Subject of Plumbing

I'd wash your hands after this one...

- The module has 4 input pipes (left) and 4 output pipes (right). At least one input pipe and one output pipe will be active.
- The defuser must connect all active input pipes to all active output pipes, whilst taking care not to connect inactive pipes, using the 6 by 6 grid of pipes. Clicking on a pipe in the 6 by 6 grid will rotate it.
- All pipes connected to an active pipe must also correctly connect to other pipes. Any pipe with a connection not going into another pipe (or going into an inactive in/out pipe) will cause a strike upon checking the solution.
- Once the solution has been entered, press "CHECK" to verify the solution. An incorrect solution will cause a strike.
- Active input and output pipes are determined using the table below. If the pipe has more points for it than against, it is active.

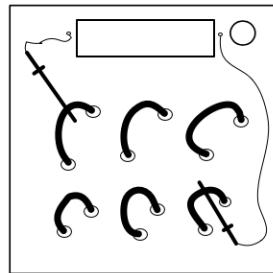


Red Input	Yellow Input
<ul style="list-style-type: none"> • For: Serial contains a '1' • For: Exactly 1 RJ45 port • Against: Any duplicate ports • Against: Any duplicate serial characters 	<ul style="list-style-type: none"> • For: Serial contains a '2' • For: One or more Stereo RCA ports • Against: No duplicate ports • Against: Serial contains a '1' or 'L'
Green Input	Blue Input
<ul style="list-style-type: none"> • For: Serial contains 3 or more numbers • For: One or more DVI-D ports • Against: Red Input is inactive • Against: Yellow Input is inactive 	<ul style="list-style-type: none"> • Note: Always active if all other inputs are inactive • For: At least 4 port types • For: At least 4 batteries • Against: No ports • Against: No batteries
Red Output	Yellow Output
<ul style="list-style-type: none"> • For: One or more Serial ports • For: Exactly one battery • Against: Serial contains more than 2 numbers • Against: More than 2 inputs are active 	<ul style="list-style-type: none"> • For: Any duplicate ports • For: Serial contains a '4' or '8' • Against: Serial doesn't contain a '2' • Against: Green Input is active
Green Output	Blue Output
<ul style="list-style-type: none"> • For: Exactly 3 inputs are active • For: Exactly 3 ports are present • Against: Less than 3 ports are present • Against: Serial contains more than 3 numbers 	<ul style="list-style-type: none"> • Note: Always active if all other outputs are inactive • For: All inputs are active • For: Any other output is inactive • Against: Less than 2 batteries • Against: No Parallel port

On the Subject of Probing

Not that kind of probing...

This module has six wires and two crocodile clips. Each wire carries three alternating currents (AKA 3-phase current), each phase a different frequency. The possible frequencies are 10Hz, 22Hz, 50Hz and 60Hz.



In order to probe the circuit you need to connect the red clip to a wire and the blue clip to a different wire. Common frequencies in both wires will cancel out and the display will show the remaining frequencies, in order from lowest to highest.

If the red and white wire contains a 50Hz current connect the red clip to the wire with the frequencies 10Hz, 22Hz and 60Hz, otherwise if the red and yellow wire does not contain a 10Hz current connect the red clip to the wire with the frequencies 22Hz, 50Hz and 60Hz, otherwise connect the red clip to the wire with the frequencies 10Hz, 22Hz and 50Hz.

If the yellow and red wire contains a 10Hz current connect the blue clip to the wire with the frequencies 10Hz, 50Hz and 60Hz otherwise connect the blue clip to the wire that contains the frequencies 10Hz, 22Hz and 50Hz.

Leave the clips connected for at least six seconds to defuse. Leaving the incorrect wires connected for more than six seconds will cause a strike.

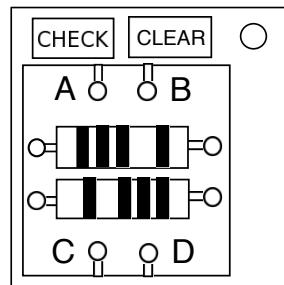
NOTE: Be aware that each time a strike is gained the frequencies in each wire may change.

On the Subject of Resistors

"It is easier to resist at the beginning than at the end."

- Leonardo da Vinci, on procrastination

The module contains 2 input pins (**A** and **B**), 2 resistors, and 2 output pins (**C** and **D**). Follow the rules to make the correct connections. To make a connection, click one pin and then another. Press **CLEAR** to remove all connections.



1. Take the first digit of the bomb's serial number (or 0 if there are no digits).
The *primary input* is **A** if even, **B** if odd.

2. Take the last digit of the bomb's serial number (or 0 if there are no digits).
The *primary output* is **C** if even, **D** if odd.

3. The *target resistance* in Ω is calculated as follows:

1. Take the first two digits of the bomb's serial number.

e.g. 2E7X19 \rightarrow 27, ZJ3MLN \rightarrow 3, ABCDEF \rightarrow 0

2. For each battery present on the bomb (up to a max of 6), multiply by 10.

4. Connect the primary input to the primary output, with the target resistance.

Note: all resistance values are checked to be within 5% accuracy.

5. If a lit **FRK** indicator is present, also connect the primary input to the other (secondary) output, with the target resistance.

Note: this means C and D will also be connected with some non-infinite resistance. This value is not checked as part of your solution, and so can be anything.

6. If step 5 did not apply and at least 1 D cell battery is present, connect the secondary input to the secondary output, with 0Ω resistance.

7. Press **CHECK** when finished to check the solution. All input/output pairs not mentioned should be disconnected.

Consult the following page to learn how to produce the target resistance.

Producing resistance

An input and output can be connected via one of five paths.

1. **No resistors**, 0Ω of resistance.

2. **Top resistor**.

3. **Bottom resistor**.

4. **Both resistors in serial**.

i.e. input → top resistor → bottom resistor → output

The combined resistance is the sum of the individual resistances.

5. **Both resistors in parallel**.

i.e. input → top resistor, input → bottom resistor,
top resistor → output, bottom resistor → output

The combined resistance is less than either of the individual resistances.

For the curious... it's: $1 / (1 / (\text{top resistance}) + 1 / (\text{bottom resistance}))$

Don't worry, this won't be on the test!

Reading resistors

Each resistor has a sequence of three colored bands, indicating a two-digit number and a multiplier. A fourth band indicates a tolerance value (not used). The fourth band is separated by a gap from the first three. Resistors can be rotated; take care to read the bands in the correct direction.

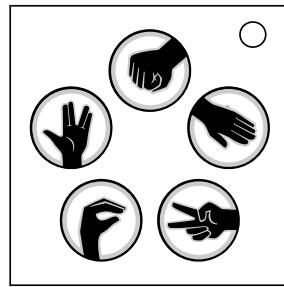
Color	First Band	Second Band	Multiplier
Black	0	0	1Ω
Brown	1	1	10Ω
Red	2	2	100Ω
Orange	3	3	$1,000\Omega$
Yellow	4	4	$10,000\Omega$
Green	5	5	$100,000\Omega$
Blue	6	6	$1,000,000\Omega$
Violet	7	7	$10,000,000\Omega$
Gray	8	8	—
White	9	9	—
Gold	—	—	0.1Ω
Silver	—	—	0.01Ω

For example, **Green Violet Yellow** indicates $57 \times 10,000\Omega = 570,000\Omega$.

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 which of the five icons to press.



First, determine the decoy. If the five icons are arranged in a 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 highest-scoring icon in each row. Stop at the first row in which there's no tie and the highest-scoring icon is not the decoy. Then press the icons on the module that beat this icon. If no row applies, press all icons except the decoy.

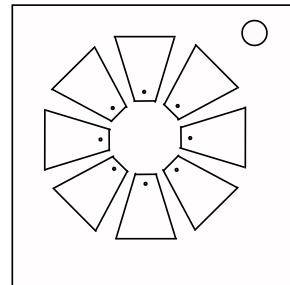
Which icon beats which? It's very simple. Scissors cuts paper. Paper covers rock. Rock crushes lizard. Lizard poisons Spock. Spock smashes scissors. Scissors decapitates lizard. Lizard eats paper. Paper disproves Spock. Spock vaporizes rock. And, as it always has, rock crushes scissors.

# of occurrences of:	Rock	Paper	Scissors	Lizard	Spock
serial number letter Skip this row if the serial number contains an X or Y.	R, O	P, A	S, I	L, Z	C, K
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 Round Keypads

I think someone tried to make this module look really cool, but failed.

- The circular keypad contains 8 symbols from the columns below.
- Find the column below that contains the most symbols from the keypad.
- If two or more columns have the most symbols, use the right-most column.
- Press all buttons that have a symbol not present on the correct column.

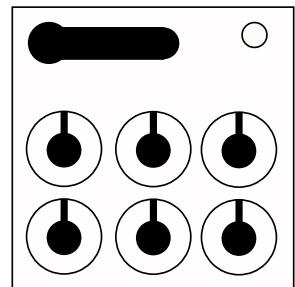


Q	Ё	©	б	Ψ	б
À	Ӯ	ӭ	Ҕ	Ҕ	Ӯ
Ӷ	҃	҅	Ҋ	Ҋ	Ӷ
ӵ	҇	҈	҉	҉	ӵ
Ҏ	★	Ҍ	ҋ	ҋ	Ҏ
ӷ	ӷ	Ӹ	ӹ	ӹ	ӷ
ҏ	᳚	᳚	᳚	᳚	ҏ
Ғ	᳚	᳚	᳚	᳚	Ғ

On the Subject of the Safety Safe

This safe either contains immense riches, or is empty.

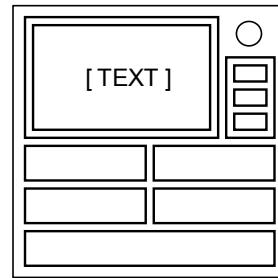
- All 6 dials must be oriented correctly to solve the module.
- Each dial has a tell, where it clicks louder. This is the starting location for each dial.
- Follow the rules below to determine how far to rotate each dial after the starting location.
- Turn the lever to check the solution. Any correct dials are indicated with a green light, and any incorrect dials are indicated with a red light.
- Starting at 0, add the number of port types on the bomb, multiplied by 7.
- Add the number of lit indicators with a matching letter in the serial, multiplied by 5.
- Add the number of unlit indicators with a matching letter in the serial.
- For the first five dials, add the number obtained from the table on the next page, using both the location of the dial and the serial number as reference.
- For the last dial, add the sum of the numbers in the last column using all characters in the serial number as a reference.
- Note: A full rotation takes 12 turns.



	Dial					
	Top			Bottom		
	Left	Middle	Right	Left	Middle	Right
	Serial					
	First	Second	Third	Fourth	Fifth	All
A	8	3	4	8	9	0
B	10	1	3	7	3	8
C	2	1	1	5	3	6
D	11	6	11	11	7	7
E	0	5	5	8	2	1
F	4	2	7	7	1	5
G	7	4	4	2	10	5
H	8	3	6	6	6	5
I	0	11	0	0	9	10
J	2	11	8	0	5	6
K	5	2	5	1	0	4
L	1	9	8	11	11	11
M	1	7	9	5	6	2
N	9	5	1	4	4	9
O	5	9	8	10	2	8
P	3	10	9	1	9	7
Q	4	10	6	1	4	8
R	8	0	4	0	6	11
S	9	4	0	6	3	10
T	7	6	7	11	5	3
U	11	9	6	3	11	1
V	11	11	2	8	1	0
W	6	0	11	6	11	2
X	4	2	7	2	8	10
Y	10	7	10	10	8	9
Z	3	7	1	10	0	4
0	7	0	3	5	8	6
1	9	10	10	9	1	2
2	2	5	11	7	7	3
3	10	8	10	4	10	4
4	6	8	0	3	5	0
5	6	3	3	3	0	11
6	1	1	5	2	7	3
7	0	6	2	4	2	1
8	5	4	9	9	10	7
9	3	8	2	9	4	9

On the Subject of Sea Shells

Clear communication is crucial when defusing bombs. One can only assume that this module doesn't want to be defused.



- The Sea Shells module consists of a display and five buttons.
- The display shows a phrase. The first two words of the phrase refer to a row of Table 1. The third and fourth words refer to a column of Table 1. The remainder of the phrase refers to Table 2.
- Table 1 will give a code, and Table 2 will provide a key to turn the code into a sequence of words.
- The buttons must be used to input the sequence of words. Pressing an incorrect button will result in a strike and reset the current stage of the module.
- Inputting a correct sequence three times will disarm the module.

Table 1:

	SEA SHELLS	SHE SHELLS	SEA SELLS	SHE SELLS
SHE SELLS	BDABDAB	ACEEAC	EACEACE	DAABDAB
SHE SHELLS	BEEBBE	CDCCDB	EAEEAE	BEEDA
SEA SHELLS	ABABA	EAAEEA	DBEAC	ABDBAA
SEA SELLS	ACACEAC	DBAEC	EBDADAB	CECEC

Table 2:

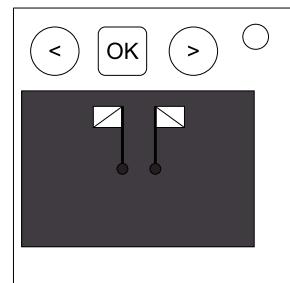
ON THE SEA SHORE	A = shoe D = sit	B = shih tzu E = sushi	C = she
ON THE SHE SORE	A = can D = 2	B = toucan E = cancan	C = tutu
ON THE SHE SURE	A = witch D = twitch	B = switch E = stitch	C = itch
ON THE SEESAW	A = burglar alarm D = burger	B = Bulgaria E = llama	C = armour

On the Subject of Semaphore

This module demands attention from the sea - unlucky for you the bomb's bone dry.

See the next page for semaphore reference.

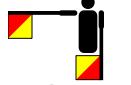
- A semaphore module will present with a previous button, a next button, an OK button and a semaphore indicator.
- Use the previous and next buttons to navigate through the semaphore sequence, starting from the left-most semaphore character to the right-most semaphore character.
- The semaphore sequence will contain some characters from the serial number on the bomb, but also includes one other character not present in the serial number.
- Navigate to the one and only character that is missing from the serial number, and then press the OK button.
- Control characters, such as 'Numerals', 'Letters', 'Error', 'Rest' and 'Cancel' are not considered as a valid answer.



Semaphore Reference

Numbers are signalled by first signalling 'Numerals', then the numbers.
Similarly, letters are signalled by first signalling 'Letters', then the letters.

Use the following graphics as a reference to how to interpret semaphore characters.

 Rest / Space	 Numerals	 Error / Attention	 A or 1	 B or 2
 C or 3	 D or 4	 E or 5	 F or 6	 G or 7
 H or 8	 I or 9	 J or Letters	 K or 0	 L
 M	 N	 O	 P	 Q
 R	 S	 T	 U	 V
 W	 X	 Y	 Z	 Cancel / Annul

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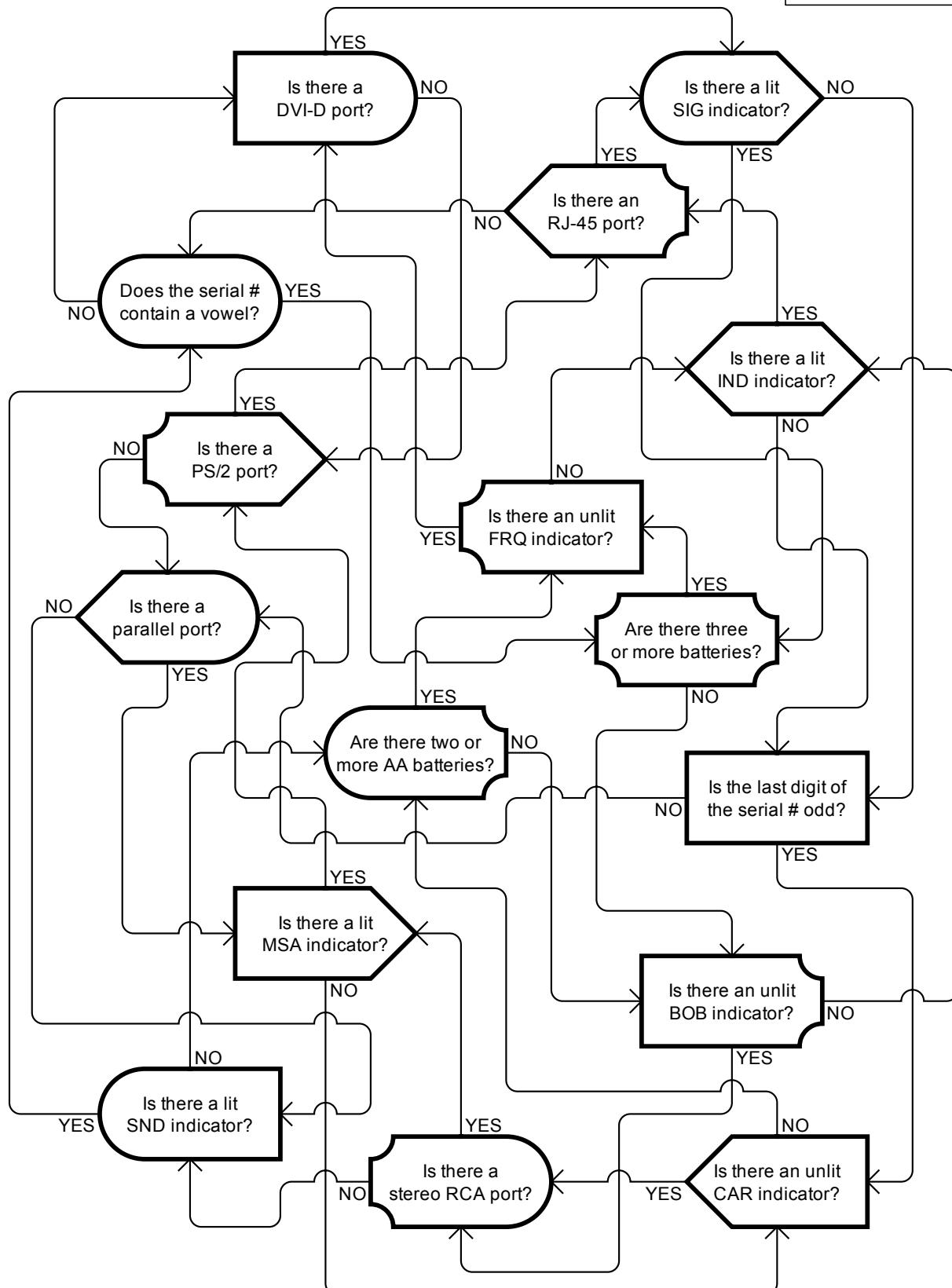
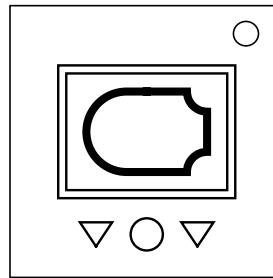
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On the Subject of Shape Shift

The concept is simple: change a shape into another shape according to certain rules. The rules, however, are not so simple.

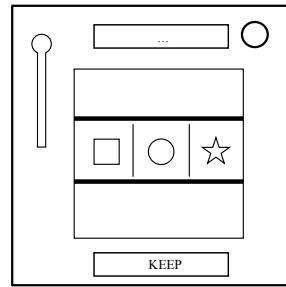
Starting at the shape displayed on the module, follow the flowchart and submit the first shape which is visited twice.



On the Subject of Silly Slots

Sassy sally said sorry since soggy Steven slurped soup.

Only press the KEEP button when the slots are in a LEGAL state. Only pull the lever when the slots are in an ILLEGAL state. The module will automatically defuse after 4 pulls of the lever.



The slots are in an ILLEGAL state if any of these statements are true:

- There is a single Silly Sasusage.
- There is a single Sassy Sally, unless the slot in the same position 2 stages ago was Soggy.
- There are 2 or more Soggy Stevens.
- There are 3 Simons, unless any of them are Sassy.
- There is a Sausage adjacent to a Sally, unless Sally is Soggy.
- There are exactly 2 Silly slots, unless they are both Steven.
- There is a single Soggy slot, unless the previous stage had any number of Sausage slots.
- All 3 slots are the same symbol and colour, unless there has been a Soggy Sausage in any previous stage.
- All 3 slots are the same colour, unless any of them are Sally or there was a Silly Steven in the last stage.
- There are any number of Silly Simons, unless there has been a Sassy Sausage in any previous stage.

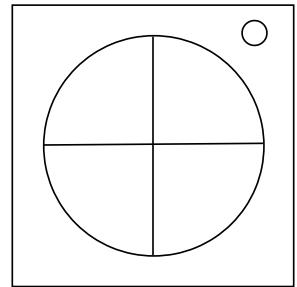
UNDERLINED words are placeholders, substitute them for the correct word using the matrix below and the keyword found on the module's display. This keyword changes when the lever is pulled.

		Placeholder						
		Sassy	Silly	Soggy	Sally	Simon	Sausage	Steven
Key Word	Sassy	Blue	Red	Green	Cherry	Grape	Bomb	Coin
	Silly	Blue	Green	Red	Coin	Bomb	Grape	Cherry
	Soggy	Green	Blue	Red	Coin	Cherry	Bomb	Grape
	Sally	Red	Blue	Green	Grape	Cherry	Bomb	Coin
	Simon	Red	Green	Blue	Bomb	Grape	Cherry	Coin
	Sausage	Red	Blue	Green	Grape	Bomb	Coin	Cherry
	Steven	Green	Red	Blue	Cherry	Bomb	Coin	Grape

On the Subject of Simon States

I'm not sure this even qualifies as Simon Says...

- One or more colours will flash per stage.
- Each stage will also show the colours of previous stages.
- The current sequence will repeat after a short delay.
- When the sequence repeats, your input is not reset.
- If you press an incorrect button, your input is reset.
- Using the table on the next page, press the correct colour for each stage to advance.
- When a rule asks for colour priorities, use the table below to determine the correct colour.



Priority	Top-Left Button Colour			
	Red	Yellow	Green	Blue
Highest	Red	Blue	Green	Yellow
High	Blue	Yellow	Red	Green
Low	Green	Red	Yellow	Blue
Lowest	Yellow	Green	Blue	Red

Stage 1

- If one colour flashed, press that colour.
- Otherwise, if two colours flashed and one was blue, press the highest priority colour that flashed.
- Otherwise, if two colours flashed, press blue.
- Otherwise, if three colours flashed including red, press the lowest priority colour that flashed.
- Otherwise, if three colours flashed, press red.
- Otherwise, press the second highest priority colour.

Stage 2

- If only red and blue flashed, press the highest priority colour that didn't flash.
- Otherwise, if two colours flashed, press the lowest priority colour that didn't flash.
- Otherwise, if one colour flashed and it was not blue, press blue.
- Otherwise, if one colour flashed, press yellow.
- Otherwise, if all colours flashed, press the same colour as stage 1.
- Otherwise, press the colour that didn't flash.

Stage 3

- If three colours flashed and at least one was pressed in a previous stage, press the highest priority colour that flashed and hasn't been pressed.
- Otherwise, if three colours flashed, press the highest priority colour that flashed.
- Otherwise, if two colours flashed and both have been pressed, press the lowest priority colour that didn't flash.
- Otherwise, if two colours flashed, press the same colour as stage 1.
- Otherwise, if one colour flashed, press that colour.
- Otherwise, press the second lowest priority colour.

Stage 4

- If three unique colours have been pressed, press the fourth colour.
- Otherwise, if three colours flashed and exactly one hasn't been pressed, press that colour.
- Otherwise, if at least three colours flashed, press the lowest priority colour.
- Otherwise, if one colour flashed, press that colour.
- Otherwise, press green.

On the Subject of Skewed Slots

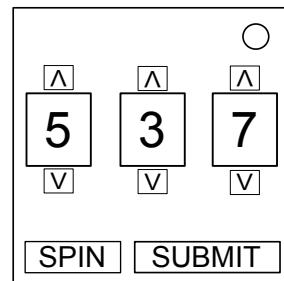
This has to be illegal somehow...

See Appendix A for indicator identification reference.

See Appendix B for battery identification reference.

See Appendix C for port identification reference.

See Appendix Math for a mathematical terms reference.



- A skewed slots module contains 3 numeric displays and a submit button on it.
- Based on the current display on the slots, submit the correct digits based on following sections of rules. Each section is labeled with which slot it applies to.
- After all the rules have been applied, if the number is below 0, add 10. Otherwise if the number is above 9, subtract 10. Repeat this until the number is between 0-9.
- If you submit the incorrect digits, the slots will automatically spin and a strike will be assigned.

NOTE: The original digit is the digit before it was modified at all.

All Slots

Replace any 2 with a 5 and any 7 with a 0.

For every lit indicator add 1 to the number and subtract 1 for every unlit indicator.

If the number is a multiple of 3, add 4 to it.

Otherwise, if the number is greater than 7, multiply it by 2.

Otherwise, if the number is less than 3 and it's an even number, divide it by 2.

Otherwise, if there is an RCA or a PS/2 port on the bomb, skip the rest of the rules in this section.

Otherwise, take the original digit and add the number of batteries on the bomb.

1st Slot

If the number is even and greater than 5, divide it by two.

Otherwise, if the number is prime, add the rightmost number in the serial number.

Otherwise, if there is a parallel port on the bomb, multiply it by -1.

Otherwise, if the original digit to the right is odd, leave this number unchanged.

Otherwise, subtract 2 from it.

2nd Slot

If there is a unlit BOB indicator, leave this number unchanged.
Otherwise, if the number is 0, add the original digit from the 1st display.
Otherwise, if the number is in the Fibonacci sequence, add the next number from the Fibonacci sequence based on the first occurrence of the number.
Otherwise, if the number is greater than or equal to 7, add 4.
Otherwise, multiply it by 3.

3rd Slot

If there is a serial port on the bomb, add the largest number from the serial number.
Otherwise, if the original digit is the same as any of the other original digits, leave this number unchanged.
Otherwise, if the number is greater than or equal to 5, add up all the individual digits in the binary form of the original digit for the new number.
Otherwise, add 1 to the number.

Appendix Math: Mathematical Terms Reference

Fibonacci Sequence

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

Prime Numbers

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29

Binary Conversions

Decimal	Binary Form
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
10	1010

On the Subject of Souvenir

Something to remember your explosion by.

- Answer all the questions correctly.
- When the module congratulates you, be polite and say thank you.

[Question]

[Answer 1] [Answer 3]
[Answer 2] [Answer 4]

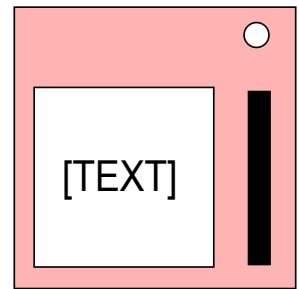
Questions that may come up:

- What were the markings in 3D Maze?
- What was the cardinal direction in 3D Maze?
- Which of these letters was wrong when you got a strike in Adjacent Letters?
- What was your strength/intelligence/dexterity before you took the potion in Adventure Game?
- Which item was the n th correct item you used in Adventure Game?
- Using which item gave you a strike in Adventure Game?
- How many pixels were black/white in the top/bottom left/right quadrant in Bitmaps?
- What was the n th coordinate in Chess?
- What was the initial setting on Connection Check in reading order?
- What was the setting on Connection Check when you got a strike?
- What is the n th-stage displayed/solution number in Forget Me Not?
- What was the color of the pawn in Hexamaze?
- What was the correct/wrong code you entered in Listening?
- Which creature was displayed in Monsplode, Fight!?
- Which move was selectable in Monsplode, Fight!?
- What color was the torus in Mouse in the Maze?
- Which color sphere was the goal in Mouse in the Maze?
- Which color(s) flashed in the n th stage in Simon States?
- What were your button presses in The Bulb?
- What was the n th query response from Two Bits?

On the Subject of The Square Button

This may look like the button you know and love, but don't be fooled! It's a brilliantly disguised imposter foiled only by a single mistake: It's the wrong shape.

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



1. If the button is blue and the number of AA batteries is larger than the number of D batteries, hold the button and refer to "Releasing a Held Button".
2. If the button is yellow or blue and has as at least as many letters on the label as the highest number in the serial, press and immediately release.
3. If the button is yellow or blue and the label states a colour, hold the button and refer to "Releasing a Held Button".
4. If the button has no label, press and immediately release when the two seconds digits on the timer match.
5. If the button is not dark grey and the number of letters on the label is larger than the number of lit indicators, press and immediately release.
6. If there are at least 2 unlit indicators and the serial contains a vowel, press and immediately release.
7. If no other rule applies, hold the button and refer to "Releasing a Held Button".

Releasing a Held Button

If you start holding the button down, a coloured strip will light up on the right side of the module. Based on its colour, follow the rules below:

- Cyan: Release when the two seconds digits add up to 7.
- Orange: Release when the two seconds digits add up to 3 or 13.
- Other: Release when the two seconds digits add up to 5.

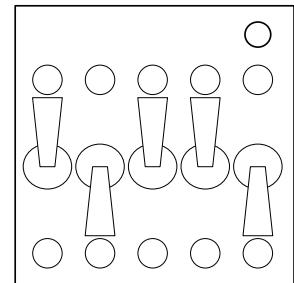
If the strip is flashing, follow these rules instead:

- Cyan: Release when the number of seconds remaining is a multiple of 7.
- Orange: Release when the number of seconds displayed is either prime or 0.
- Other: Release one second after the two seconds digits add up to a multiple of 4.

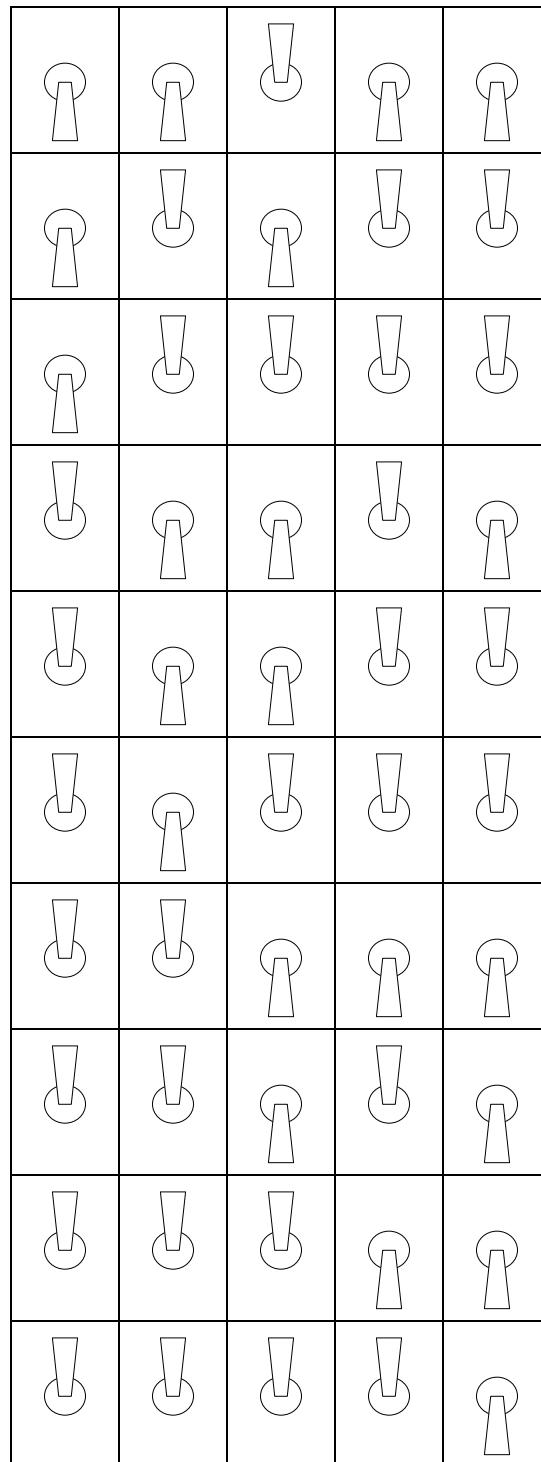
On the Subject of Switches

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.



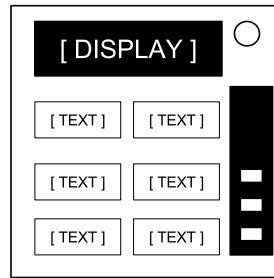
Avoid the following switch states:



On the Subject of Third Base

This module is identical to Who's On First, except with four characters on each button instead of confusing words and phrases. This should be easy, right?

1. Read the display and use step 1 to determine which button label to read.
2. Using this button label, use step 2 determine which button to push.
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:

NHXS
eye

IH6X
eye

XI8Z
eye

I809
eye

XOHZ
eye

H68S
eye

80XN
eye

Z8IX
eye

SXHN
eye

6NZH
eye

H6SI
eye

608I
eye

NX08
eye

66I8
eye

S89H
eye

SNZX
eye

9NZS
eye

8I99
eye

ZHOX
eye

SI9X
eye

SZN6
eye

ZSN8
eye

HZN9
eye

X9HI
eye

IS9H

XZNS

X6IS

8NSZ

Step 2:

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

"XI8Z":	NHXS, I809, XOHZ, 608I, 6NZH, 66I8, H6SI, Z8IX, XI8Z, SXHN, H68S, 80XN, IH6X, NX08
"H68S":	6NZH, I809, NHXS, 608I, SXHN, H6SI, IH6X, 80XN, NX08, XI8Z, Z8IX, XOHZ, 66I8, H68S
"SXHN":	Z8IX, 80XN, NX08, H68S, XOHZ, XI8Z, H6SI, NHXS, IH6X, 6NZH, 66I8, I809, SXHN, 608I
"Z8IX":	NX08, H6SI, I809, 608I, Z8IX, 66I8, XI8Z, IH6X, SXHN, XOHZ, 6NZH, 80XN, NHXS, H68S
"IH6X":	80XN, H6SI, I809, 608I, NHXS, Z8IX, SXHN, 66I8, 6NZH, XOHZ, NX08, H68S, IH6X, XI8Z
"NHXS":	I809, H6SI, 80XN, 608I, H68S, XOHZ, 66I8, XI8Z, IH6X, NHXS, 6NZH, Z8IX, SXHN, NX08
"XOHZ":	80XN, XOHZ, 6NZH, IH6X, XI8Z, Z8IX, 608I, SXHN, I809, H68S, NX08, NHXS, 66I8, H6SI
"80XN":	XI8Z, IH6X, 6NZH, XOHZ, I809, NHXS, H6SI, SXHN, 66I8, Z8IX, 80XN, 608I, NX08, H68S
"6NZH":	H6SI, 6NZH, H68S, SXHN, 608I, NHXS, Z8IX, XOHZ, 80XN, NX08, 66I8, XI8Z, I809, IH6X
"H6SI":	NHXS, IH6X, XI8Z, 66I8, SXHN, NX08, XOHZ, H6SI, 608I, 6NZH, 80XN, Z8IX, I809, H68S
"608I":	Z8IX, XI8Z, I809, XOHZ, IH6X, 66I8, SXHN, NX08, 6NZH, 608I, H6SI, H68S, 80XN, NHXS
"I809":	608I, SXHN, H68S, NHXS, 80XN, IH6X, NX08, I809, 6NZH, XI8Z, Z8IX, 66I8, XOHZ, H6SI
"NX08":	80XN, SXHN, Z8IX, I809, NHXS, 6NZH, H68S, 66I8, XOHZ, NX08, IH6X, XI8Z, H6SI, 608I
"66I8":	H6SI, 608I, NHXS, XI8Z, 66I8, I809, IH6X, 80XN, Z8IX, 6NZH, H68S, XOHZ, SXHN, NX08
"9NZS":	8NSZ, 8I99, ZHOX, HZN9, IS9H, SNZX, SZN6, XZNS, SI9X, 9NZS, ZSN8, X6IS, X9HI, S89H
"8I99":	ZHOX, IS9H, X6IS, SNZX, SI9X, X9HI, ZSN8, XZNS, 9NZS, S89H, HZN9, 8NSZ, SZN6, 8I99
"ZHOX":	ZSN8, 8I99, SNZX, ZHOX, IS9H, SZN6, 8NSZ, S89H, HZN9, 9NZS, SI9X, XZNS, X6IS, X9HI
"HZN9":	9NZS, HZN9, SZN6, IS9H, ZSN8, 8I99, S89H, ZHOX, SI9X, SNZX, 8NSZ, X9HI, X6IS, XZNS
"SZN6":	X9HI, S89H, SZN6, SNZX, SI9X, 8NSZ, ZHOX, XZNS, HZN9, X6IS, IS9H, ZSN8, 8I99, 9NZS
"S89H":	SNZX, 8NSZ, IS9H, SI9X, HZN9, SZN6, ZSN8, X9HI, S89H, 9NZS, X6IS, XZNS, 8I99, ZHOX
"SNZX":	SNZX, ZHOX, 8I99, 9NZS, X9HI, XZNS, ZSN8, IS9H, 8NSZ, X6IS, HZN9, SZN6, S89H, SI9X
"ZSN8":	SZN6, S89H, 8I99, HZN9, IS9H, ZSN8, X9HI, 9NZS, SNZX, X6IS, ZHOX, 8NSZ, XZNS, SI9X
"SI9X":	9NZS, XZNS, HZN9, ZHOX, S89H, X9HI, ZSN8, X6IS, 8I99, SNZX, SZN6, IS9H, SI9X, 8NSZ
"X9HI":	8NSZ, SNZX, IS9H, SI9X, ZHOX, SZN6, HZN9, XZNS, X6IS, 9NZS, S89H, 8I99, ZSN8, X9HI
"IS9H":	SI9X, SNZX, ZSN8, ZHOX, XZNS, 8NSZ, IS9H, X6IS, X9HI, 8I99, SZN6, HZN9, S89H, 9NZS
"XZNS":	8I99, S89H, X9HI, ZSN8, 9NZS, SZN6, 8NSZ, SI9X, HZN9, IS9H, XZNS, SNZX, ZHOX, X6IS
"8NSZ":	8I99, X9HI, X6IS, HZN9, 9NZS, XZNS, SNZX, SZN6, 8NSZ, S89H, SI9X, IS9H, ZHOX, ZSN8
"X6IS":	HZN9, IS9H, S89H, SZN6, XZNS, X9HI, ZSN8, SI9X, SNZX, 9NZS, X6IS, 8NSZ, 8I99, ZHOX

On the Subject of Tic-Tac-Toe

All those years of getting ties in Tic-Tac-Toe might finally pay off.

To defuse this module, all nine buttons must be filled with “X”s and “0”s.

The display labeled “Up Next:” shows either an “X” or an “0”.

The keypad displays some numbers between 1 and 9 and some already placed “X”s and “0”s. After placing a piece, the displays go blank.

The numbers in the chart on the following page indicate the location on the keypad where each piece should be placed.

Use the rules below to determine the starting row:

1. If the last digit of the serial number is even, the starting row is either 5, 6, 7, 8, or 9. Otherwise, the starting row is either 1, 2, 3, or 4.
2. If there is at least one parallel port, use the even values. Otherwise, use the odd values.
3. If there are more unlit indicators than lit indicators, the starting row is the lowest remaining value from rule 2.
4. If there are more lit indicators than unlit indicators, the starting row is the highest value remaining from rule 2.
5. If there are an equal number of lit and unlit indicators, the starting row is the average of the remaining values from rule 2.

In the chart, determine the appropriate placement column based on the relative number of “X”s and “0”s already on the board. Begin at the starting row and move down your selected column until you reach a number that corresponds to an unfilled spot on the keypad. If you pass row 9, continue at row 1.

If placing the piece in this location would result in a tic-tac-toe, you MUST press “PASS” and continue in the same row; otherwise, place the piece by pressing the location on the keypad and then move to the next row in the chart.

Two consecutive passes will result in a piece being placed (and displayed) in one of the available spaces. This may result in a tic-tac-toe but will not incur a strike.

Upon a strike, the row resets to the initial starting row and the keypad displays the placed pieces and remaining numbers. All previous placements remain until the module is defused.

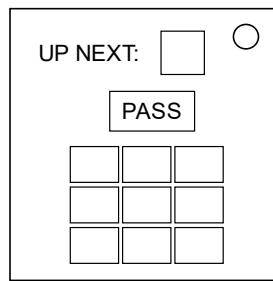


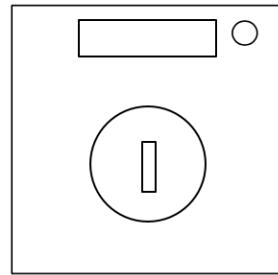
Table 1: Tic-tac-toe piece placement location chart

	“X”s > “O”s		“X”s = “O”s		“X”s < “O”s	
	Placing An:		Placing An:		Placing An:	
ROW	“X”	“O”	“X”	“O”	“X”	“O”
1	9	3	3	9	8	1
2	5	6	6	7	1	2
3	7	8	2	1	5	8
4	4	5	7	8	9	6
5	1	4	1	6	7	3
6	8	7	5	2	4	4
7	6	1	8	4	3	9
8	2	2	9	5	2	5
9	3	9	4	3	6	7

On the Subject of Turn The Key

How can something so simple be so infuriating?

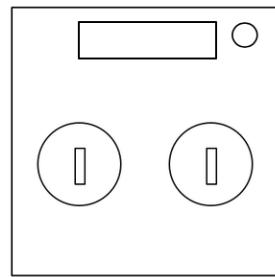
Turn the key when the bomb's timer matches the time on the display, no sooner, no later.



On the Subject of Turn The Keys

Order is everything.

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



LEFT KEY

Turn the left key after you have done all 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 all 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.

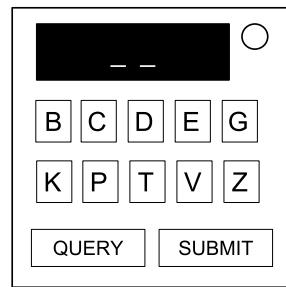
But before you have done any of the following:

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

On the Subject of Two Bits

This poorly programmed lookup device is as maddening with its slow responses as it is unforgiving with ill-timed inputs. Patience required.

Query a series of two-letter codes to track down the correct answer before submitting it. This primitive lookup machine is intolerant to incomplete and excessive inputs, as well as any input while it is busy.



Step 1: Determine Initial Code

If the serial number contains a letter, use the leftmost letter's numeric position in the alphabet as your base value (e.g. A=1, B=2). For no letters, use 0.

Add the last digit of the serial number multiplied by the number of batteries present.

If there is a Stereo RCA port present, double the current value.*

This value is now the current code.

* Note: Skip this step if there is also an RJ45 port present.

Step 2: Determine character pair and Perform Query

Using the current code, look up the character pair. Enter that pair into the device and press "Query".

	-0	-1	-2	-3	-4	-5	-6	-7	-8	-9
0-	kb	dk	gv	tk	pv	kp	bv	vt	pz	dt
1-	ee	zk	ke	ck	zp	pp	tp	tg	pd	pt
2-	tz	eb	ec	cc	cz	zv	cv	gc	bt	gt
3-	bz	pk	kz	kg	vd	ce	vb	kd	gg	dg
4-	pb	vv	ge	kv	dz	pe	db	cd	td	cb
5-	gb	tv	kk	bg	bp	vp	ep	tt	ed	zg
6-	de	dd	ev	te	zd	bb	pc	bd	kc	zb
7-	eg	bc	tc	ze	zc	gp	et	vc	tb	vz
8-	ez	ek	dv	cg	ve	dp	bk	pg	gk	gz
9-	kt	ct	zz	vg	gd	cp	be	zt	vk	dc

Step 3: Repeat and Submit

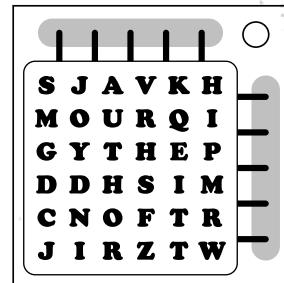
The response code from the device from the query in Step 2 is now your current code. Perform Step 2 an additional 2 times, using the new code each time.

After receiving the response code from the final query, look up the corresponding character pair, enter the pair into the device and press "Submit".

On the Subject of Word Search

LZIEAJDHARDERBNCOJWTHANPQIEYBZITLOOKSYWH

A field of 36 letters will appear on the screen within the module. Some of these letters will spell out words, which may be spelled backwards and appear in any direction.



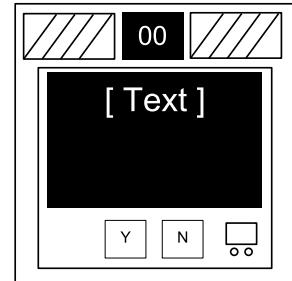
1. The chart below contains boxes with letters in the corners. For each of the four letters in the corners of the display, find a box on the chart that has that letter in the same corner.
2. Once all the relevant boxes have been located, use the last digit of the serial number (even or odd) to determine the correct words to reference.
3. Only one of those words will appear on the display. Select the first and last letter of the correct word to disarm the module. The bomb will record a strike if any other words are selected.

[even]	HOTEL	SEARCH	ADD	SIERRA	FINISH	
—	—	—	—	—	—	
[odd]	DONE	QUEBEC	CHECK	FIND	EAST	
—	V	U	S	Z		
POR	BOOM	LINE	KABOOM	PANIC	MANUAL	DECOY
—	—	—	—	—	—	—
COLOR	SUBMIT	BLUE	ECHO	FALSE	ALARM	CALL
P	Q	N	X	F	Y	
SEE	INDIA	NUMBER	ZULU	VICTOR	DELTA	HELP
—	—	—	—	—	—	—
TWENTY	NORTH	LOOK	GREEN	XRAY	YES	LOCATE
T	I	M	E	D	A	
ROMEO	TRUE	MIKE	FOUND	BOMBS	WORK	TEST
—	—	—	—	—	—	—
BEEP	EXPERT	EDGE	RED	WORD	UNIQUE	JINX
K	B	W	H	J	O	
GOLF	TALK	BRAVO	SEVEN	MODULE	LIST	YANKEE
—	—	—	—	—	—	—
LETTER	SIX	SERIAL	TIMER	SPELL	TANGO	SOLVE
R	L	C	G			
CHART	MATH	READ	LIMA	COUNT		
—	—	—	—	—		
OSCAR	NEXT	LISTEN	FOUR	OFFICE		

On the Subject of Answering Questions

I hope you studied, it's quiz night!

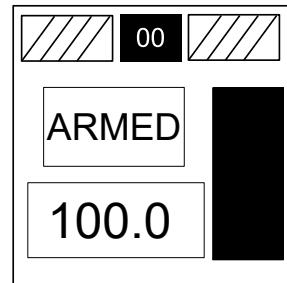
- Respond to the computer prompts by pressing "Y" for "Yes" or "N" for "No".



On the Subject of Filibuster

What's this game called? Ok, let's do that.

- A warning countdown signals the module is about to be armed.
- If you hear annoying beeping, talk.
- Keep talking.



Filibuster Settings

This mod requires a microphone. It will look for the default recording device and listen to it to determine the volume.

There is a *modSettings.json* file in the mod's folder (*SteamLibrary\steamapps\workshop\content\341800\739663396*) to customize the thresholds. You can open this file in a text editor to edit the settings. Restart the game if you are changing these values.

This is the default for the file:

```
{"MicThreshold": 25.0, "FailureThreshold": 3}
```

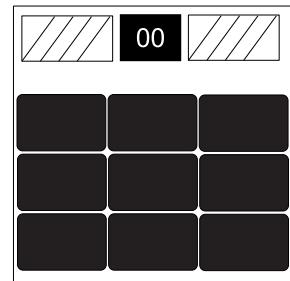
MicThreshold – a value from 0.0 – 100.0 to adjust for your microphone.

FailureThreshold – an integer value for the number of seconds of failing the mic check before a strike. I recommend this stay in the range of 1 – 10.

On the Subject of Lights Out

Who knew turning out all the lights was a hard task?

- Press the buttons to switch off all the lights.
- When pressed, a button will invert the lit state of the button itself and the lit state of the adjacent buttons in the four major cardinal directions.



On the Subject of Math

Math is still easy. But is it easy when you have to answer questions over and over to stop an explosion? Only one way to find out.

Answer the question. Enter the numbers with the keypad and press '=' to submit your answer. Use '-' to toggle the sign.

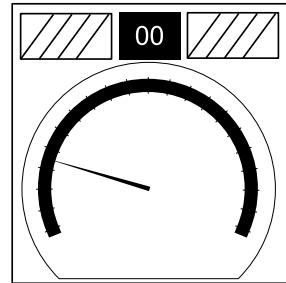
Don't blow up!

1	2	3	0
4	5	6	-
7	8	9	=

On the Subject of Motion Sense

Don't move. Its explosiveness is based on movement.

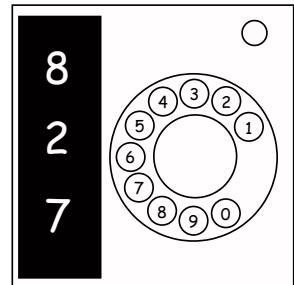
- When activated, this module will monitor all rotation activity of the bomb for the duration of the module activation.
- The more you rotate the bomb while active, the higher the needle will rise on the indicator.
- A strike is given if the needle on the gauge reaches the end of the scale.
- The back-light of the gauge will change color and an audible sound will be made when the gauge reaches 80% or more.
- Setting the bomb down, or conversely picking the bomb up, will cause rotation activity and will cause the needle to rise when the module is active.



On the Subject of Rotary Phones

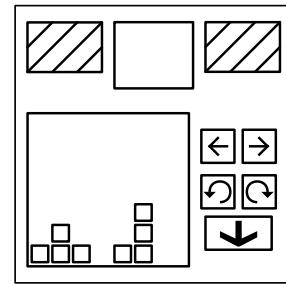
Hello, this is emergency services, please hold...

- The display will show 3 numbers, top to bottom, representing a single 3-digit number.
- Whenever the module activates, these numbers will change.
- Add the new number to the old one, take the 3 least significant digits, and enter the resulting number. This number is now your old number.
- If you gain a strike from this module, your old number is replaced with the currently displayed number.



On the Subject of Tetris

Chances are you've already played many iterations of this game. At this point, how can we be sure that Tetris isn't some kind of meta-virus that propagates itself through game developers and modders?

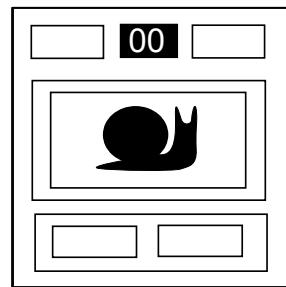


- To deactivate the module, the player will be required to place 3 Tetris pieces onto the game board.
- Pieces can be rotated, moved left and right, and placed using the arrow buttons.
- Pieces will not fall with time, but instead will be placed as far down as possible.
- Completely filling a row will cause that row to be removed, and other rows will fall down to fill the empty space.
- If the board fills up, the player will be unable to place new blocks, and will gain strikes.

On the Subject of Who's That Monsplode?

Are you still a fan of some animated series from your childhood? It looks like you stumbled upon another fan.

- The shadow of a Monsplode™ will appear on the screen.
- Picking the name of the Monsplode™ correctly will add 20 seconds to the counter.
- You can't have more than 80 seconds in the counter.
- If you make a mistake, the bomb will register a strike.



Monsplode™	Name	Monsplode™	Name	Monsplode™	Name
	Buhar		Lanaluff		Magmy
	Bob		Melbor		Docspplode
	Mountoise		Nibs		Clondar
	Aluga		Lugirit		Zapra
	Caadarim		Vellarim		Ukkens
	Flaurim		Gloorim		Zenlad
	Asteran		Violan		Pouse
	Myrchat				