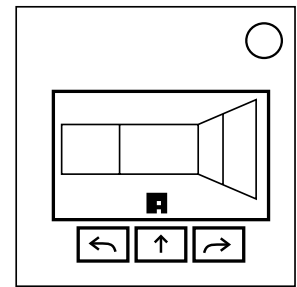# KEEP TALKING and NOBODY EXPLODES

# BOMB DEFUSAL MANUAL

## Version 1

by Rexkix

# On the Subject of 3D Maze

*You are in a maze of twisty passages, all alike. Exits are to the north, south, east, and west.*

- The defuser starts in a random position and orientation in one of the ten mazes below.
- Locate the defuser using a 3D view of the maze walls, which also shows the symbol on the floor of the current space, and if there is a symbol in the space ahead.
- The maze map is cyclic; moving off one of the edges will take the defuser to the space on the opposite side, provided there is no wall in between the space.
- One of the walls is the goal, the rest will cause strikes if moved into.
- To defuse the module, locate the goal wall, and move through it from either side.
- Using the methods below, calculate a row (0-7), a column (0-7), and a direction; the goal wall will be the first wall from these coordinates in the given direction.

## Row:

- Start with the first numeric digit in the serial number.
- Add 1 for every unlit indicator with a letter in **"MAZE GAMER"**.
- If the row number is greater than 7, subtract 8.

## Column:

- Start with the last numeric digit in the serial number.
- Add 1 for every lit indicator with a letter in **"HELP IM LOST"**.
- If the column number is greater than 7, subtract 8.

## Direction:

- Each maze contains three star icons marked on the map.
- On the floor in each of these locations is a letter, which maps to the direction to the goal wall: "N" becomes North, "S" becomes South, "E" becomes East, and "W" becomes West.
- Beware of letters not in these marked locations, they carry incorrect decoy instructions!
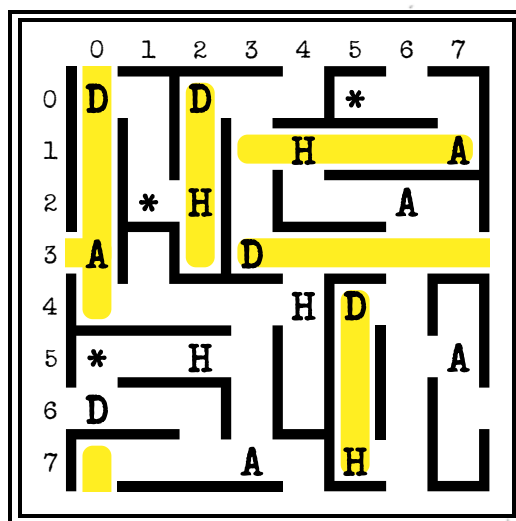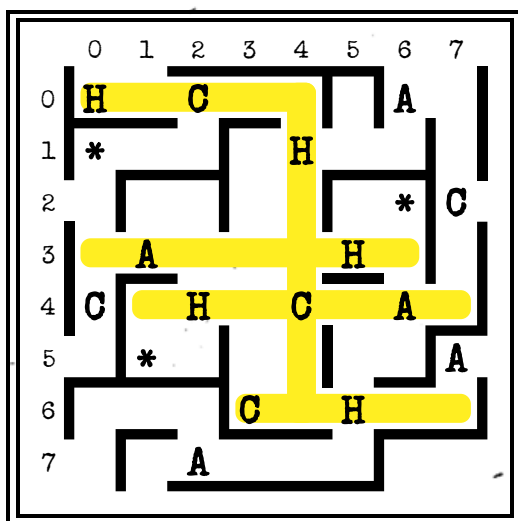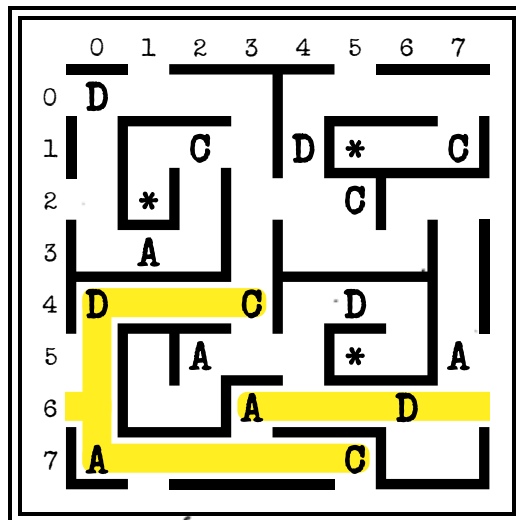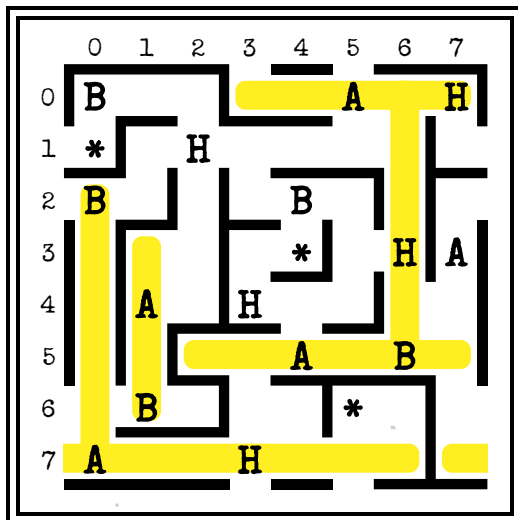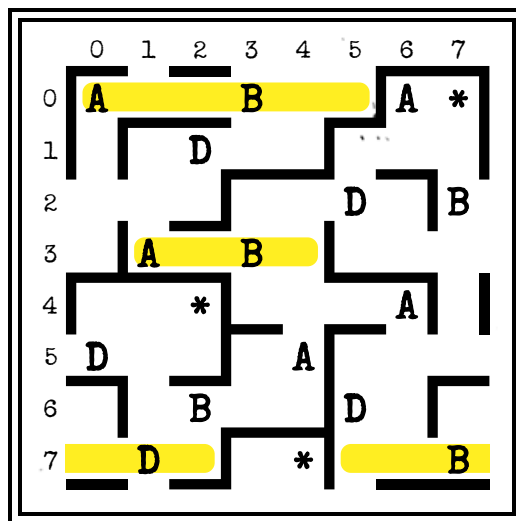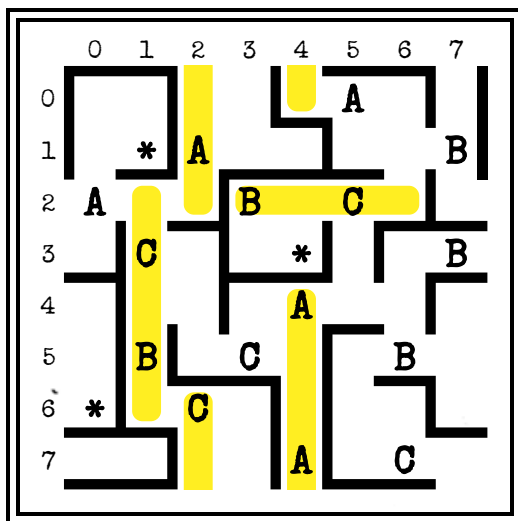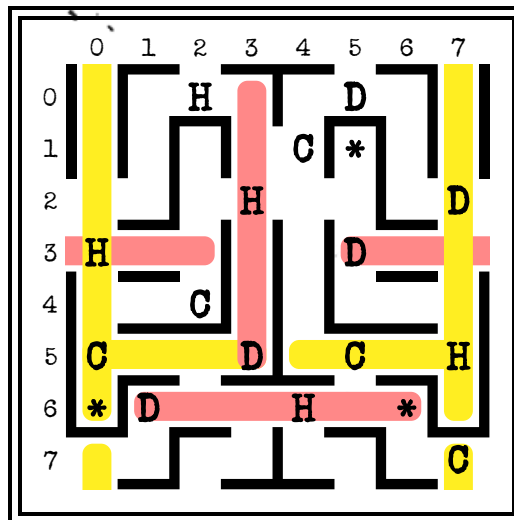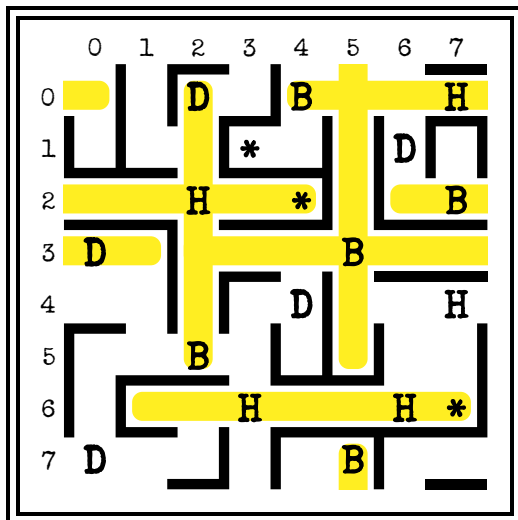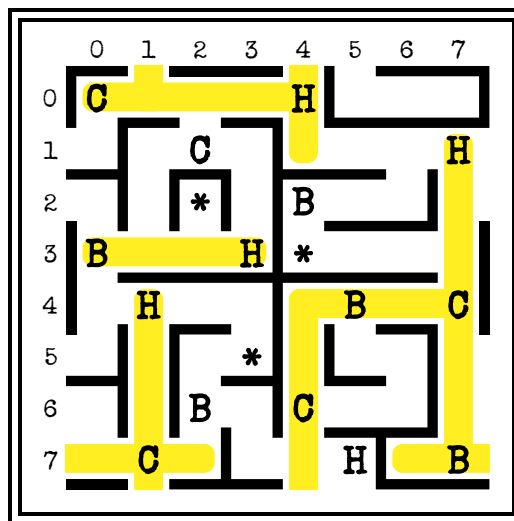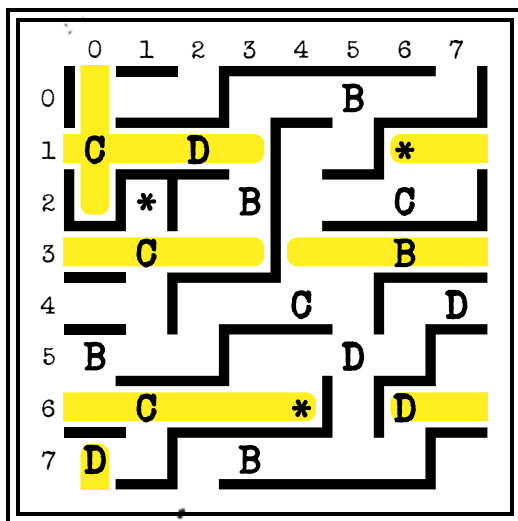
Highlighted lines contain two or more letters and are the easiest way I know to find out where somebody is in the maze.

In maze CDH, the red highlighted lines have the same spacing. They can be identified by describing the wall that D faces. In one case, it's a left corner, in another case, it's a right corner, and in the third case, it's a flat wall.

Row is the FIRST digit of the serial number and add 1 per UNLIT indicator among:

CAR
CLR
FRK
FRQ
MSA
NSA
SIG
TRN

Column is the LAST digit of the serial number and add 1 per LIT indicator among:

BOB
CLR
IND
MSA
NSA
SIG
SND
TRN

# On the Subject of Adjacent Letters

*UP, down, left, right, UP, down, left, right...!*

- Every button will have a different letter on it.
- Check the table to determine which buttons to press.
- Each letter in the "letter" column that has one of the letters in the "left/right" column directly left or right of it on the keypad must be pressed.
- Each letter in the "letter" column that has one of the letters in the "above/below" column directly above or below it on the keypad must be pressed.
- Press Submit to submit your answer. **Note:** Multiple buttons can be pressed and they can be in **any** order.

| Letter | Left/right | Above/below | Letter | Left/right | Above/below |
|:------:|:----------:|:-----------:|:------:|:----------:|:-----------:|
| A | GJMOY | HKPRW | N | PQRSV | AFGHL |
| B | IKLRT | CDFYZ | O | HJLUZ | IQSTX |
| C | BHIJW | DEMTU | P | DMNOX | CFHKR |
| D | IKOPQ | CJTUW | Q | CEOPV | BDIKN |
| E | ACGIJ | KSUWZ | R | AEGSU | BNOXY |
| F | CERVY | AGJPQ | S | ABEKQ | GMVYZ |
| G | ACFNS | HOQYZ | T | GVXYZ | CJLSU |
| H | LRTUX | DKMPS | U | FMVXZ | BILNY |
| I | DLOWZ | EFNUV | V | DHMNW | AEJQX |
| J | BQTUW | EHIOS | W | DFHMN | GLQRT |
| K | AFPXY | DIORZ | X | BDFKW | AJNOV |
| L | GKPTZ | ABRVX | Y | BCHSU | EGMTW |
| M | EILQT | BFPWX | Z | JNRSY | CLMPV |

# On the Subject of Adventure Games

*This appears to be a strange interface for an old text adventure game. All of the inventory management puzzles you have come to know and love, but none of the story.*
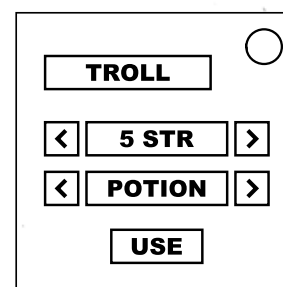
- The three screens show the enemy you are facing, a list of statistics about your character and the world, and a list of the objects in your inventory.

- In your inventory is three weapons, plus five miscellaneous items.

- You must decide which of the items to use to prepare for the battle, then which weapon to use.

- Use the left and right arrows to scroll through statistics and inventory.

- To use an item or weapon, press "USE" when is is displayed in the inventory.

- Use the item table below to determine whether or not to use each item.

- Items can be used in any order, but all applicable items must be used before a weapon is used to fight the enemy.

- Use the weapon table and the enemy statistic table to determine which weapon to use to fight the enemy.

- For each weapon, compare the player's relevant stat (STR, DEX, or INT), plus any bonus, to the enemy's same stat.

- To defeat the enemy most efficiently, use the weapon which has the highest stat advantage (or lowest disadvantage).

- If two weapons have the same stat advantage, either can be used.

| Statistic | Description |
|---|---|
| 5 STR | Strength (STR) of player, used in combat |
| 5 DEX | Dexterity (DEX) of player, used in combat |
| 5 INT | Intelligence (INT) of player, used in combat |
| 5' 5" | Height of player, in feet and inches |
| 15°C | Temperature, in degrees Celsius |
| 9.8 m/s$^2$ | Force of gravity, in meters per second squared |
| 101 kPa | Atmospheric pressure, in kilopascals |

| Item | Use if... |
|------|-----------|
| Balloon | Gravity is less than 9.3 m/s² or pressure is greater than 110 kPa, and not fighting an Eagle. |
| Battery | There is at most 1 battery on the bomb, and fighting an enemy other than a Golem or a Wizard. |
| Bellows | If fighting a Dragon or an Eagle, use if pressure is greater than 105 kPa. If fighting a different enemy, use if pressure is less than 95 kPa. |
| Cheat code | Cheaters never prosper! Don't use these. |
| Crystal ball | INT is greater than the last digit of the serial number, and not fighting a Wizard. |
| Feather | DEX is greater than either STR or INT. |
| Hard drive | There are two or more of the same port on the bomb. |
| Lamp | Temperature is less than 12°C, and not fighting a Lizard. |
| Moonstone | There are at least two unlit indicators on the bomb. |
| Potion | Always use, but note that STR, DEX, and INT may change. |
| Small dog | Fighting an enemy other than a Demon, a Dragon, or a Troll. |
| Stepladder | The player is shorter than 4', and fighting an enemy other than a Goblin or a Lizard. |
| Sunstone | There are at least two lit indicators on the bomb. |
| Symbol | Fighting a Demon or a Golem, or if the temperature is greater than 31°C. |
| Ticket | The player is 4' 6" or taller, and gravity is at least 9.2 m/s², and at most 10.4 m/s². |
| Trophy | STR is greater than the first numeric digit of the serial number, or if fighting a Troll. |

| Enemy | STR | DEX | INT |
|-------|-----|-----|-----|
| Demon | 50 | 50 | 50 |
| Dragon | 10 | 11 | 13 |
| Eagle | 4 | 7 | 3 |
| Goblin | 3 | 6 | 5 |
| Golem | 9 | 4 | 7 |
| Troll | 8 | 5 | 4 |
| Lizard | 4 | 6 | 3 |
| Wizard | 4 | 3 | 8 |

| Weapon | Uses... | Bonus |
|--------|---------|-------|
| Broadsword | STR | +0 |
| Caber | STR | +2 |
| Nasty Knife | DEX | +0 |
| Longbow | DEX | +2 |
| Magic orb | INT | +0 |
| Grimoire | INT | +2 |

# On the Subject of Alphabet

*Can you speak English? Do you know the alphabet? Then you should be okay.*

1. Use the four lettered buttons to spell a word from the word bank below.
2. Spell the longest word with the letters given by pressing the lettered buttons.
3. A letter can only be used once to spell a word.
4. If multiple words can be spelled, spell the word that comes first in alphabetical order, then the next one if there are enough remaining letters.
5. If no more words can be spelled, press the remaining buttons in alphabetical order.
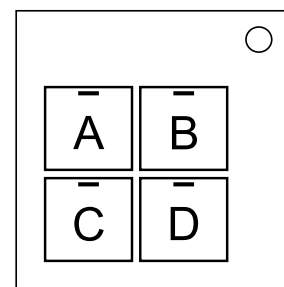
## Word Bank:

| | | | | |
|------|------|------|------|------|
| JQXZ | QEW  | AC   | ZNY  | TJL  |
| OKBV | DFW  | YKQ  | LXE  | GS   |
| VSI  | PQJS | VCN  | JR   | IRNM |
| OP   | QYDX | HDU  | PKD  | ARGF |

## Cheat Sheet:

| 4 Letters | 3 Letters | 2 Letters |
|:---------:|:---------:|:---------:|
| ARGF | DFW | AC |
| IRNM | HDU | GS |
| JQXZ | LXE | JR |
| OKBV | PKD | OP |
| PQJS | QEW | |
| QYDX | TJL | |
|      | VCN | |
|      | VSI | |
|      | YKQ | |
|      | ZNY | |

## On the Subject of Anagrams

*Randomly punching in the letters will eventually give me another word. One of the arrangements must work, right?*

The display shows a word. Rearrange the letters to form another word. It's got to work. It just has to.

Note that the status light is on the top left of the module.
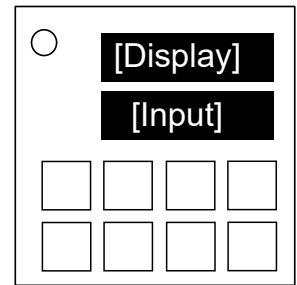
## On the Subject of Sword

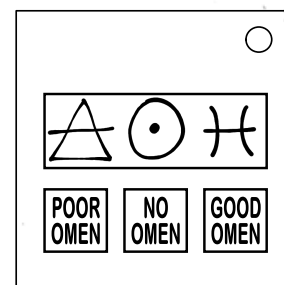*These letters are confusing. I think they're in the wrong order.*

The display shows a scrambled word. Decipher the word and
punch it in to solve this module.

# On the Subject of Astrology

*Sometimes, the stars have it out for you. Is this bomb a good or a poor omen?*

- Your fortune reading consists of the alchemical symbols of a classical element, a celestial body, and a zodiac sign.

- Calculate the Omen score of this reading:

- For each pair of symbols, look up their relationship value in the tables below, and add to the Omen score.

- For each symbol, if the english name of the symbol has a letter in common with the serial number of the bomb, add 1 to the Omen score.

- Subtract 1 from the Omen score for each symbol without a letter in common with the serial number.

- If the Omen score is positive, press GOOD OMEN anytime the number of the Omen score is a digit in the timer.

- If the Omen score is negative, press POOR OMEN anytime the number of the Omen score is a digit in the timer.

- If the Omen score is 0, press NO OMEN at any time.
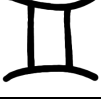
| | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ |
|---|---|---|---|---|---|---|---|---|---|---|
| △ | 0 | 0 | 1 | -1 | 0 | 1 | -2 | 2 | 0 | -1 |
| ▽ | -2 | 0 | -1 | 0 | 2 | 0 | -2 | 2 | 0 | 1 |
| ▽̵ | -1 | -1 | 0 | -1 | 1 | 2 | 0 | 2 | 1 | -2 |
| △̵ | -1 | 2 | -1 | 0 | -2 | -1 | 0 | 2 | -2 | 2 |

| | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| △ | 1 | 0 | -1 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 0 |
| ▽ | 2 | 2 | -1 | 2 | -1 | -1 | -2 | 1 | 2 | 0 | 0 | 2 |
| ▽̶ | -2 | -1 | 0 | 0 | 1 | 0 | 1 | 2 | -1 | -2 | 1 | 1 |
| △̶ | 1 | 1 | -2 | -2 | 2 | 0 | -1 | 1 | 0 | 0 | -1 | -1 |

| | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ☉ | -1 | -1 | 2 | 0 | -1 | 0 | -1 | 1 | 0 | 0 | -2 | -2 |
| ☽ | -2 | 0 | 1 | 0 | 2 | 0 | -1 | 1 | 2 | 0 | 1 | 0 |
| ☿ | -2 | -2 | -1 | -1 | 1 | -1 | 0 | -2 | 0 | 0 | -1 | 1 |
| ♀ | -2 | 2 | -2 | 0 | 0 | 1 | -1 | 0 | 2 | -2 | -1 | 1 |
| ♂ | -2 | 0 | -1 | -2 | -2 | -2 | -1 | 1 | 1 | 1 | 0 | -1 |
| ♃ | -1 | -2 | 1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | 2 | 0 |
| ♄ | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| ♅ | -1 | 2 | 0 | 0 | 1 | -2 | 1 | 0 | 2 | -1 | 1 | 0 |
| ♆ | 1 | 0 | 2 | 1 | -1 | 1 | 1 | 1 | 0 | -2 | 2 | 0 |
| ♇ | -1 | 0 | 0 | -1 | -2 | 1 | 2 | 1 | 1 | 0 | 0 | -1 |

| Symbol | Element | Symbol | Planet | Symbol | Planet |
|--------|---------|--------|--------|--------|--------|
| △ | Fire | ☉ | Sun | ♃ | Jupiter |
| ▽ | Water | ☾ | Moon | ♄ | Saturn |
| ▽ (with line) | Earth | ☿ | Mercury | ⛢ | Uranus |
| △ (with line) | Air | ♀ | Venus | ♆ | Neptune |
| | | ♂ | Mars | ♇ | Pluto |

| Symbol | Zodiac | Symbol | Zodiac | Symbol | Zodiac |
|--------|--------|--------|--------|--------|--------|
| ♈ | Aries | ♌ | Leo | ♐ | Sagittarius |
| ♉ | Taurus | ♍ | Virgo | ♑ | Capricorn |
| ♊ | Gemini | ♎ | Libra | ♒ | Aquarius |
| ♋ | Cancer | ♏ | Scorpio | ♓ | Pisces |

# On the Subject of Bitmaps

*Over 18 quintillion combinations, only some of them actually matter.*

- A combination of 64 pixels will appear on the grid.
- Each pixel can be black or white.
- There are 4 buttons underneath the grid labeled 1, 2, 3, and 4.
- Figure out which button to press by follow the steps below.
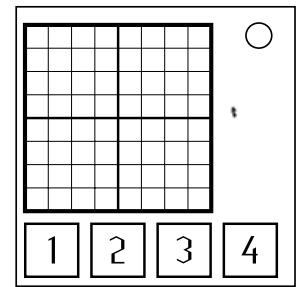
1. If the majority of the pixels on the top half of the grid are black, press '2'.
2. Otherwise, if the majority of the pixels on the **entire** grid are white, press '4'.
3. Otherwise, if the majority of the pixels on the bottom half of the grid are white, press '1'.
4. Otherwise, if there are 16 or fewer white pixels on the right side of the grid, press '2'.
5. Otherwise, if the majority of the pixels on the top left of the grid are white, press '3'.
6. Otherwise, if there are 17 or more black pixels on the left side of the grid, press '1'.
7. Otherwise, if the serial number contains a vowel, press '3'.
8. Otherwise, if there are 3 or more batteries on the bomb, press '4'.
9. Otherwise, press '2'.

# On the Subject of the Blind Alley

*What? Where?*

The module appears blank, but has eight touch-sensitive regions laid out as in the following diagram. Touch the regions that have the most conditions met in any order.

|  |  |  |
|---|---|---|
| • There is an unlit BOB indicator.<br>• There is a lit CAR indicator.<br>• There is a lit IND indicator.<br>• There is an even number of battery holders. | • There is an unlit CAR indicator.<br>• There is an unlit NSA indicator.<br>• There is a lit FRK indicator.<br>• There is an RJ-45 port. |  |
| • There is an unlit FRQ indicator.<br>• There is an unlit IND indicator.<br>• There is an unlit TRN indicator.<br>• There is a DVI-D port. | • There is an unlit SIG indicator.<br>• There is an unlit SND indicator.<br>• There is a lit NSA indicator.<br>• There is an even number of batteries. | • There is a lit BOB indicator.<br>• There is a lit CLR indicator.<br>• There is a PS/2 port.<br>• There is a serial port. |
| • There is a lit FRQ indicator.<br>• There is a lit SIG indicator.<br>• There is a lit TRN indicator.<br>• There is an even digit in the serial number. | • There is an unlit FRK indicator.<br>• There is a lit MSA indicator.<br>• There is a parallel port.<br>• There is a vowel in the serial number. | • There is an unlit CLR indicator.<br>• There is an unlit MSA indicator.<br>• There is a lit SND indicator.<br>• There is a stereo RCA port. |

# On the Subject of Beating Blind Alley

*The real Forget Me Not.*

Note: For use by those familiar with the original manual. Contact Nanthelas on Discord with any corrections.

## Widget Numbers

|       | Unlit | Lit |
|-------|-------|-----|
| BOB   | 1     | 6   |
| CAR   | 2     | 1   |
| CLR   | 9     | 6   |
| FRK   | 8     | 2   |
| FRQ   | 4     | 7   |
| IND   | 4     | 1   |
| MSA   | 9     | 8   |
| NSA   | 2     | 5   |
| SIG   | 5     | 7   |
| SND   | 5     | 9   |
| TRN   | 4     | 7   |

| DVI-D      | 4 |
|------------|---|
| Parallel   | 8 |
| PS-2       | 6 |
| Stereo RCA | 9 |
| RJ-45      | 2 |
| Serial     | 6 |

| Even Batteries  | 5 |
|-----------------|---|
| Even Holders    | 1 |
| Even in Serial  | 7 |
| Vowel in Serial | 8 |

## Number to Table Map

| 1 | 2 |   |
|---|---|---|
| 4 | 5 | 6 |
| 7 | 8 | 9 |

# On the Subject of Broken Buttons

*How did they get invisible ink to even work like that?*

| SUBMIT | SUBMIT | ○ |
|---|---|---|

| THIS | ONE | BOMB |
|---|---|---|
| DVI-D |  | SUBMIT |
| BOOM | SWITCH | SEA |
| WIRE | THING | BOB |

- A broken buttons module will have 2 submit buttons at the top of it and 12 buttons below them.
- Depending on the 12 buttons, follow the first rule that applies.
- Repeat the rules until it tells you to press the correct submit button, which will defuse the module.
- Every time a button is successfully pressed, the button's text will change.
- If the defuser presses an incorrect button, it will give a strike.
- By default the correct submit button is the left one.
- After successfully pressing 5 buttons, press the correct submit button.
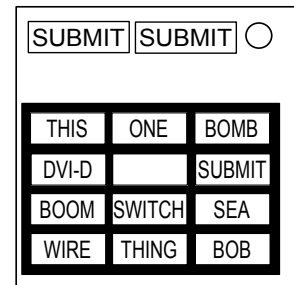
## Rules:

If the defuser sees the word *sea*, press a button labeled *sea*.

Otherwise, if any button on the third or first row starts with the letter T, press it.

Otherwise, if the word *one* and *submit* appear on buttons, the correct submit button will be the first one and press the button labeled one.

Otherwise, if a button is literally blank, press that button.

Otherwise, if the word *other* is on a button, the correct submit button changes to the other submit button and press the button labeled *other*.

Otherwise, if there are any duplicate words, click one of the buttons labeled with the duplicate word.

Otherwise, if a port name and the word *port* or *module* appear on the buttons, press a button labeled a port name.

Otherwise, if a button has less than 3 characters on it, press that button.

Otherwise, if the words *bomb* and *boom* are present, press the button labeled boom.

Otherwise, if the word *submit* and *button* appear on buttons, press the correct submit button at the top.

Otherwise, if the word *column* and either *seven* or *two* appear on buttons, press any button in the same row as a button labeled *column*.

Otherwise, if a button hasn't been correctly pressed yet, press the 3rd button in the 2nd row.

Otherwise, if the first button you pressed had the letter E in the word, the right submit is actually correct.

Lastly, press the correct submit button.

# On the Subject of The Bulb

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

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

If you incur a strike because you pushed a wrong button, ignore it and continue.

If you incur a strike because you unscrewed or screwed in the bulb at an incorrect time, you <u>must</u> undo that and then continue.

Begin at <u>step 1</u>.
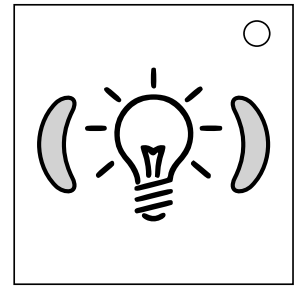
**Step 1**
- If the light is on and the bulb is see-through, press **I** and go to **Step 2.**
- If the light is on and the bulb is opaque, press **O** and go to **Step 3.**
- Otherwise, unscrew the bulb and go to **Step 4.**

**Step 2**
- If the bulb is red, press **I**, then unscrew it and go to **Step 5.**
- If the bulb is white, press **O**, then unscrew it and go to **Step 6.**
- Otherwise, unscrew the bulb and go to **Step 7.**

**Step 3**
- If the bulb is green, press **I**, then unscrew it and go to **Step 6.**
- If the bulb is purple, press **O**, then unscrew it and go to **Step 5.**
- Otherwise, unscrew the bulb and go to **Step 8.**

**Step 4**
- If the bomb has any of the following indicators: CAR, IND, MSA or SND, press **I** and go to **Step 9.**
- Otherwise, press **O** and go to **Step 10.**

**Step 5**
- If the light went off at Step 1, press the same button again, then screw the bulb back in.
- Otherwise, press the button you haven't yet pressed, then screw the bulb back in.

**Step 6**
- If the bulb went off when you pressed **I**, press the button that you pressed in Step 1, then screw the bulb back in.
- Otherwise, press the button that you pressed in Step 2 or 3, then screw the bulb back in.

**Step 7**
- If the bulb is green, press **I**, remember <u>SIG</u> and go to **Step 11**.
- If the bulb is purple, press **I**, then screw it back in and go to **Step 12**.
- If the bulb is blue, press **O**, remember <u>CLR</u> and go to **Step 11**.
- Otherwise, press **O**, then screw the bulb back in and go to **Step 13**.

**Step 8**
- If the bulb is white, press **I**, remember <u>FRQ</u> and go to **Step 11**.
- If the bulb is red, press **I**, then screw it back in and go to **Step 13**.
- If the bulb is yellow, press **O**, remember <u>FRK</u> and go to **Step 11**.
- Otherwise, press **O**, then screw the bulb back in and go to **Step 12**.

**Step 9**
- If the bulb is blue, press **I** and go to **Step 14**.
- If the bulb is green, press **I**, then screw it back in and go to **Step 12**.
- If the bulb is yellow, press **O** and go to **Step 15**.
- If the bulb is white, press **O**, then screw it back in and go to **Step 13**.
- If the bulb is purple, screw it back in, then press **I** and go to **Step 12**.
- Otherwise, screw the bulb back in, then press **O** and go to **Step 13**.

**Step 10**
- If the bulb is purple, press **I** and go to **Step 14**.
- If the bulb is red, press **I**, then screw it back in and go to **Step 13**.
- If the bulb is blue, press **O** and go to **Step 15**.
- If the bulb is yellow, press **O**, then screw it back in and go to **Step 12**.
- If the bulb is green, screw it back in, then press **I** and go to **Step 13**.
- Otherwise, screw the bulb back in, then press **O** and go to **Step 12**.

**Step 11**
- If the bomb has the remembered indicator, press **I**, then screw the bulb back in.
- Otherwise, press **O**, then screw the bulb back in.

**Step 12**
- If the light is now on, press **I**.
- Otherwise, press **O**.

**Step 13**
- If the light is now on, press **O**.
- Otherwise, press **I**.

**Step 14**
- If the bulb is opaque, press **I**, then screw the bulb back in.
- Otherwise, press **O**, then screw the bulb back in.

**Step 15**
- If the bulb is see-through, press **I**, then screw the bulb back in.
- Otherwise, press **O**, then screw the bulb back in.

# On the Subject of Caesar Cipher

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

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

[DISPLAY] ○

| A | B | C | D |
| E | F | G | H |
| I | J | K | L |

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

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

| | |
|---|---|
| A – 1 | N – 14 |
| B – 2 | O – 15 |
| C – 3 | P – 16 |
| D – 4 | Q – 17 |
| E – 5 | R – 18 |
| F – 6 | S – 19 |
| G – 7 | T – 20 |
| H – 8 | U – 21 |
| I – 9 | V – 22 |
| J – 10 | W – 23 |
| K – 11 | X – 24 |
| L – 12 | Y – 25 |
| M – 13 | Z – 26 |

# On the Subject of Chess

*Under pressure, chess can feel more like a game of battleships.*

This module is based on a **6x6 chessboard** *(referenced on the following page)* and all figures follow the standard FIDE movement rules.
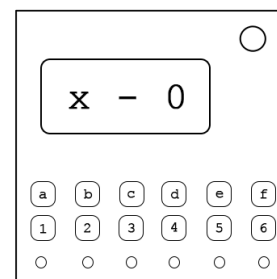
The chess module will present with a display and two rows of six buttons each.

- There are six unique coordinates that represent six positions on the chessboard.
- Use the numbered keys in the bottom row to browse through the different coordinates. A green LED below the button will indicate the position of the currently selected coordinate.
- Using the reference table below, each position can be assigned a certain chess figure.
- The chess figures will cover 35 of the 36 possible fields with their combined movesets.
- All chess figures are colorless but can block each other's movement.
- Find the one field that isn't covered by any of the chess figures and enter the coordinate to defuse the module.
- To enter the coordinate, press the letter first, then the number. The LEDs will turn red to confirm the input of a solution.

Use this table as reference to determine the correct figure for each position:

| |
|---|
| **Position #1: Monarchy vs Theocracy** <br> Occupied by a king if Position #5 is occupied by a queen. <br> Otherwise, the field is occupied by a bishop. |
| **Position #2: Commander of the Army** <br> Occupied by a rook if the last digit of the serial number is odd. <br> Otherwise, the field is occupied by a knight. |
| **Position #3: A Matter of Regents** <br> Occupied by a queen if there are less than two rooks on the board. <br> Otherwise, the field is occupied by a king. |
| **Position #4: The Iron Tower** <br> Always occupied by a rook. <br> *"Neither of two evils must thy strike claim; Instead smite the darkness between the same."* |
| **Position #5: Conflict between Good and Evil** <br> Occupied by a queen if the field is white. <br> Otherwise, the field is occupied by a rook. |
| **Position #6: The Scepter, the Sword and the Crosier** <br> Occupied by a queen if there are no other queens on the board. <br> Otherwise, occupied by a knight if there are no other knights on the board. <br> Otherwise, the field is occupied by a bishop. |

## Chess Board Reference

Use the following graphic as a reference for the chess board layout
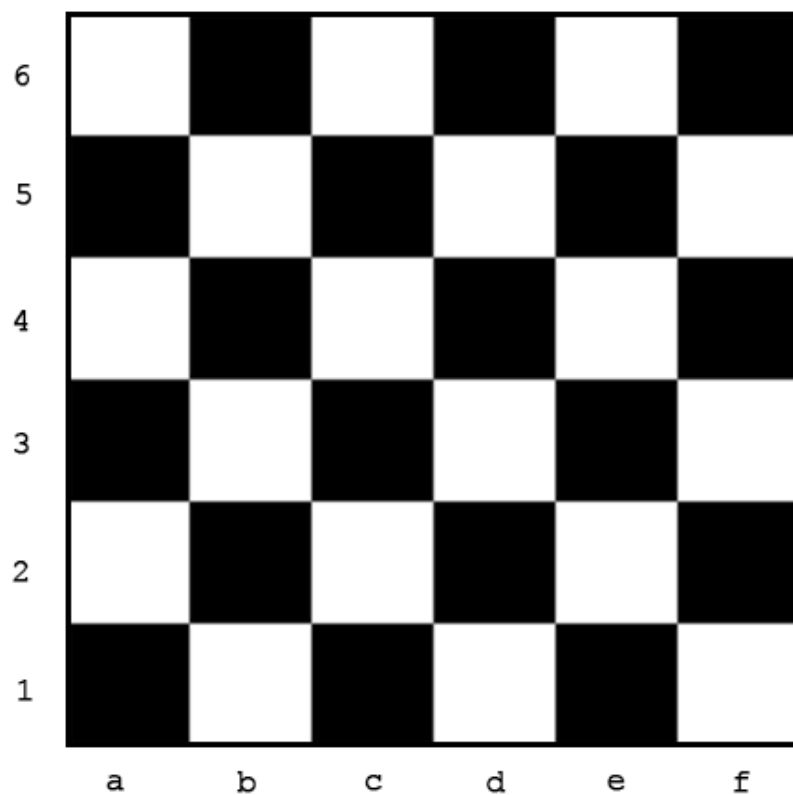
# On the Subject of Color Flash

*It's easy to identify colors. Red, Blue, Green, etc. Turns out it's a bit harder when you display a word color in a different color though...*



- A color flash module will repeatedly flash a sequence of 8 different words representing colors in different colors.
- The possible colors are Red, Yellow, Green, Blue, Magenta and White.
- There is also a Yes button and a No button on the module.
- Only <u>one</u> of the Yes and No buttons need to be pressed to disarm the module, but must be pressed at the correct time according to the rules below.
- The color of the last word in the sequence determines which set of rules to follow below.
- Follow the rules down from the top-most rule, down to the bottom-most rule for the block that applies to your module.

---
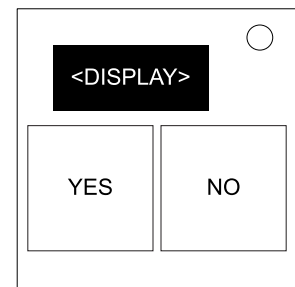
**The color of the last word in the sequence is Red:**

If Green is used as the word at least three times in the sequence, press Yes on the third time Green is used as either the word or the color of the word in the sequence.

Otherwise, if Blue is used as the color of the word exactly once, press No when the word Magenta is shown.

Otherwise, press Yes the last time White is either the word or the color of the word in the sequence.

---

**The color of the last word in the sequence is Yellow:**

If the word Blue is shown in Green color, press Yes on the first time Green is used as the color of the word.

Otherwise, if the word White is shown in either White or Red color, press Yes on the second time in the sequence where the color of the word does not match the word itself.

Otherwise, count the number of times Magenta is used as either the word or the color of the word in the sequence (the word Magenta in Magenta color only counts as one), and press No on the color in the total's position (e.g. a total of 4 means the fourth color in sequence).

Continuation of previous table...

---

**The color of the last word in the sequence is Green:**

If a word occurs consecutively with different colors, press No on the fifth entry in the sequence.

If Magenta is used as the word as least three times in the sequence, press No on the first time Yellow is used as either the word or the color of the word in the sequence.

Otherwise, press Yes on any color where the color of the word matches the word itself.

---

**The color of the last word in the sequence is Blue:**

If the color of the word does not match the word itself three times or more in the sequence, press Yes on the first time in the sequence where the color of the word does not match the word itself.

If the word Red is shown in Yellow color, or the word Yellow is shown in White color, press No when the word White is shown in Red color.

Otherwise, press Yes the last time Green is either the word or the color of the word in the sequence.

---

**The color of the last word in the sequence is Magenta:**

If a color occurs consecutively with different words, press Yes on the third entry in the sequence.

If the number of times the word Yellow appears is greater than the number of times that the color of the word is Blue, press No the last time the word Yellow is in the sequence.

Otherwise, press No on the first time in the sequence where the color of the word matches the word of the seventh entry in the sequence.

---

**The color of the last word in the sequence is White:**

If the color of the third word matches the word of the fourth word or fifth word, press No the first time that Blue is used as the word or the color of the word in the sequence.

If the word Yellow is shown in Red color, press Yes on the last time Blue is used as the color of the word.

Otherwise, press No.

# On the Subject of Colored Squares

*There is order in chaos. A pattern in the colors. Find it, and all will become clear.*
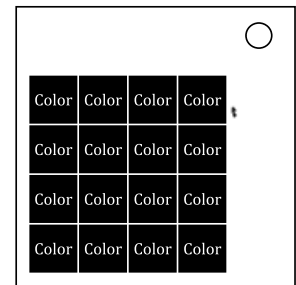
- Press all squares in the correct group to progress the module.
- Pressing a square will cause it to light up white. Light all squares to disarm the module.
- Press the color group containing the fewest squares to begin, then use the table to determine the next group to press in each stage.
- "Group" refers to all squares of a particular color, or all unlit squares in the topmost row or leftmost column containing unlit squares.
- Pressing an incorrect square will result in a strike and reset the module.
- Lit squares will remain lit for the duration of the module, but unlit squares may change color in each stage.

| Currently Lit Squares | Previous Group of Squares Pressed | | | | | | |
|---|---|---|---|---|---|---|---|
| | Red | Blue | Green | Yellow | Magenta | Row | Column |
| 1 | Blue | Column | Red | Yellow | Row | Green | Magenta |
| 2 | Row | Green | Blue | Magenta | Red | Column | Yellow |
| 3 | Yellow | Magenta | Green | Row | Blue | Red | Column |
| 4 | Blue | Green | Yellow | Column | Red | Row | Magenta |
| 5 | Yellow | Row | Blue | Magenta | Column | Red | Green |
| 6 | Magenta | Red | Yellow | Green | Column | Blue | Row |
| 7 | Green | Row | Column | Blue | Magenta | Yellow | Red |
| 8 | Magenta | Red | Green | Blue | Yellow | Column | Row |
| 9 | Column | Yellow | Red | Green | Row | Magenta | Blue |
| 10 | Green | Column | Row | Red | Magenta | Blue | Yellow |
| 11 | Red | Yellow | Row | Column | Green | Magenta | Blue |
| 12 | Column | Blue | Magenta | Red | Yellow | Row | Green |
| 13 | Row | Magenta | Column | Yellow | Blue | Green | Red |
| 14 | Red | Blue | Magenta | Row | Green | Yellow | Column |
| 15 | Column | Row | Column | Row | Column | Row | Column |

# On the Subject of Combination Locks

*This looks like a combination lock. I thought I was disarming this bomb, not unlocking it.*

*See Appendix B of original manual for battery identification reference.*
*See Appendix Two Factor for two factor identification reference.*
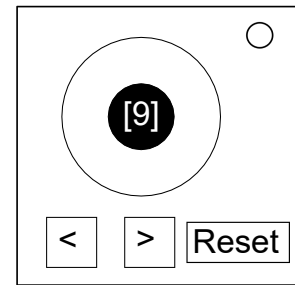
Like a typical combination lock, this requires 3 numbers to unlock. Turn the dial to the right to the first number. Then turn it to the left for the second number. Finally, turn it to the right for the last number. That will unlock it!

If sequential numbers in the code are the same, perform a full revolution back to the same number.

## How to decode the combination:

Each number ranges from 0-19. Refer to the table to determine each number. Be careful if there are two factor codes present because they change periodically!

---

### First number:

1. Add the least significant digit of each two factor code together.
2. If there are no two factor codes, use the last digit of the serial number plus the number of solved modules.
3. Add the number of batteries.
4. Subtract 20 if the result is over 19.

---

### Second number:

1. Add the most significant digit of each two factor code together.
2. If there are no two factor codes, use the number of modules on the bomb (including needy modules).
3. Add the number of solved modules.
4. Subtract 20 if the result is over 19.

---

### Third number:

1. Add the first two numbers together.
2. Subtract 20 if the result is over 19.

# On the Subject of Connection Check

*What is this, some kind of circuit visualization? I don't even care anymore...*

- This module contains 4 number pairs placed on each side of 4 LEDs and a "Check" button.
- To disarm this module, you must follow these steps:
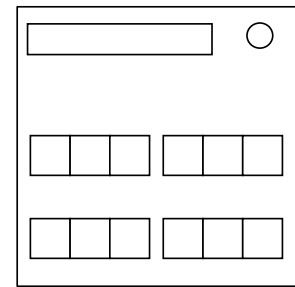
  1. Find out in which chart you will be loking for connections, using the rules given below.
  2. For each LED look at the numbers on each side of it and check if there is a line connecting the circles denoted with those numbers in the right chart.
  3. If there is such a connection, switch the LED to GREEN, otherwise switch it to RED.
  4. Press the "CHECK" button. If LED positions are correct, the module will disarm. Otherwise the bomb will register a strike.

*To determine the right chart on the next page you will need a character of the bomb's serial number. Use the following rules to find out which character you need. Then, on the next page, search for that character in the codes that label the charts. The chart with a code containing your character is the chart you are looking for.*

---

If all of the numbers on this module are **distinct,** use the **last** character of the serial number.

Otherwise, if there is **more than one "1"** on the module, look at the **first** character of the serial number.

Otherwise, if there is **more than one "7"** on the module, look at the **last** character of the serial number.

Otherwise, if there are **at least three "2"** on the module, look at the **second** character of the serial number.

Otherwise, if there is **no "5"** on the module, look at the **fifth** character of the serial number.

Otherwise, if there are **exactly two "8"s** on the module, look at the **thirs** character of the serial number.

Otherwise, if there are **more than one 6 batteries** or **no batteries** on the bomb, look at the **last** character of the serial number.

Otherwise, **count the number of batteries** on the bomb. Use that number to decide which character of the serial number you should look at. E.g.: if there are 3 batteries, look at the third character of the serial number.

SLIM
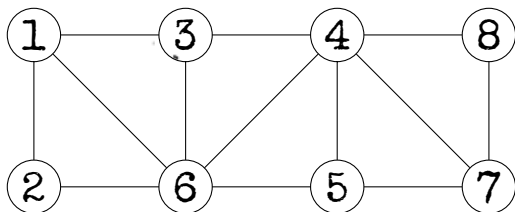
15BRO
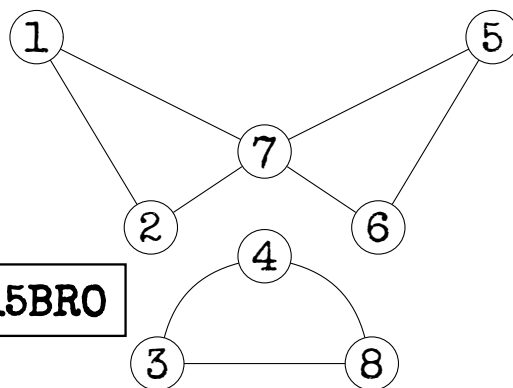
2ODGT
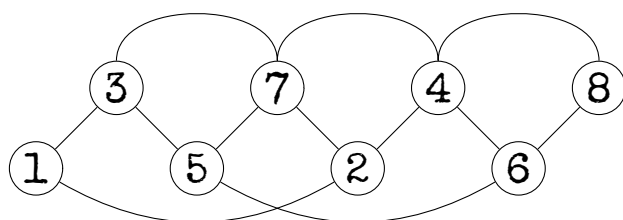
34XYZ
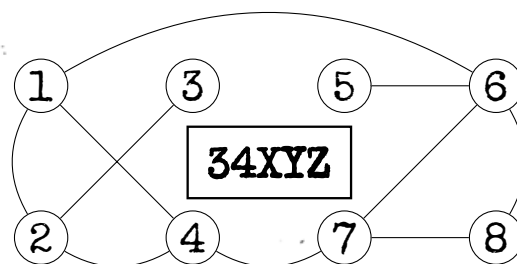
7HPJ
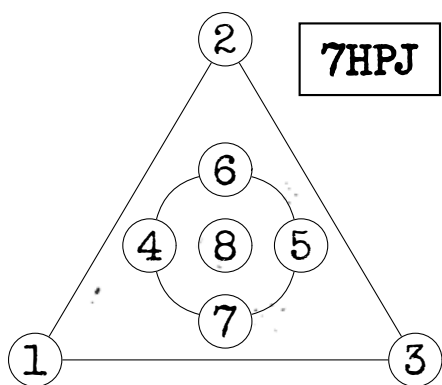
6WUF
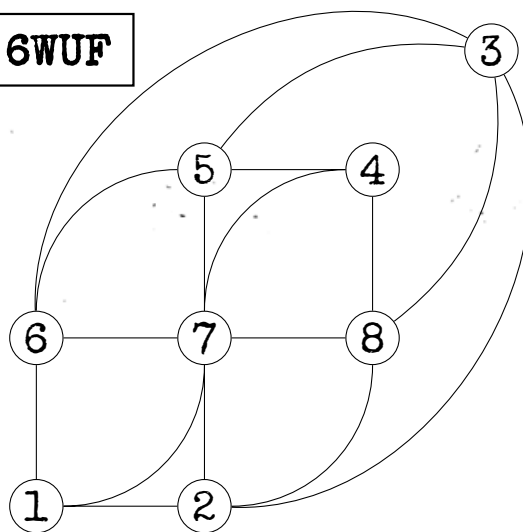
8CAKE
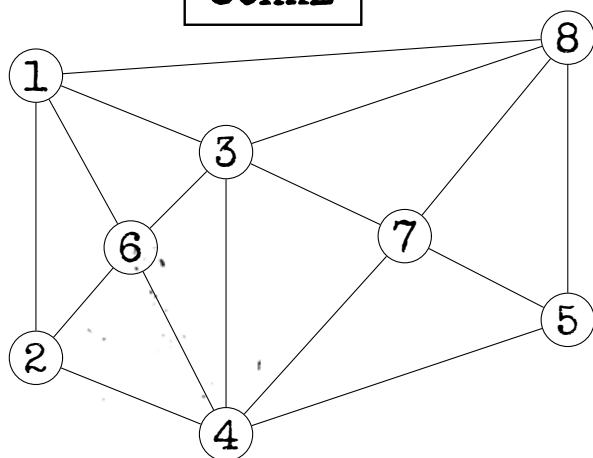
9QVN
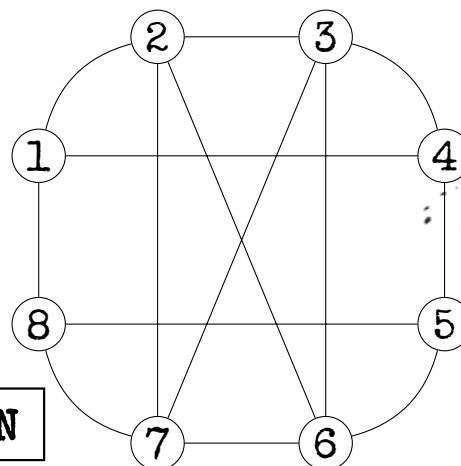
# On the Subject of Crazy Talk

*Nothing. Literally nothing. Blank. Nada.*

1. Text will appear on a display.
2. Find the exact match and the action in the table below.
3. Flip the switch <u>down</u> when the bomb timer has the number before the forward slash in the seconds column.
4. Flip the switch back <u>up</u> when the bomb timer has the number after the forward slash in the seconds column.

| Display | Action | Display | Action |
|---|---|---|---|
| ← ← → ← → → | 5/4 | NO REALLY. | 5/2 |
| 1 3 2 4 | 3/2 | ← LEFT → LEFT → RIGHT | 5/6 |
| LEFT ARROW LEFT WORD RIGHT ARROW LEFT WORD RIGHT ARROW RIGHT WORD | 5/8 | ONE AND THEN 3 TO 4 | 4/7 |
| | | STOP TWICE | 7/6 |
| BLANK | 1/3 | LEFT | 6/9 |
| LITERALLY BLANK | 1/5 | .. | 8/5 |
| FOR THE LOVE OF ALL THAT IS GOOD AND HOLY PLEASE FULLSTOP FULLSTOP. | 9/0 | PERIOD PERIOD | 8/2 |
| AN ACTUAL LEFT ARROW LITERAL PHRASE | 5/3 | THERE ARE THREE WORDS NO PUNCTUATION READY? STOP DOT PERIOD | 5/0 |
| FOR THE LOVE OF – THE DISPLAY JUST CHANGED, I DIDN'T KNOW THIS MOD COULD DO THAT. DOES IT MENTION THAT IN THE MANUAL? | 8/7 | NOVEBMER OSCAR SPACE, LIMA INDIGO TANGO ECHO ROMEO ALPHA LIMA LIMA YANKEE SPACE NOVEMBER OSCAR TANGO HOTEL INDEGO NOVEMBER GOLF | 2/9 |
| ALL WORDS ONE THREE TO FOR FOR AS IN THIS IS FOR YOU | 4/0 | FIVE WORDS THREE WORDS THE PUNCTUATION FULLSTOP | 1/9 |
| LITERALLY NOTHING | 1/4 | THE PHRASE: THE PUNCTUATION FULLSTOP | 9/3 |
| NO, LITERALLY NOTHING | 2/5 | EMPTY SPACE | 1/6 |
| THE WORD LEFT | 7/0 | ONE THREE TWO FOUR | 3/7 |
| HOLD ON IT'S BLANK | 1/9 | IT'S SHOWING NOTHING | 2/3 |
| SEVEN WORDS FIVE WORDS THREE WORDS THE PUNCTUATION FULLSTOP | 0/5 | LIMA ECHO FOXTROT TANGO SPACE ALPHA ROMEO ROMEO OSCAR RISKY SPACE SIERRA YANKEE MIKE BRAVO OSCAR LIMA | 1/2 |
| THE PHRASE THE WORD STOP TWICE | 9/1 | | |
| THE FOLLOWING SENTENCE THE WORD NOTHING | 2/7 | ONE 3 2 4 | 3/4 |
| | | STOP. | 7/4 |
| ONE THREE TO FOR | 3/9 | .PERIOD | 8/1 |
| THREE WORDS THE WORD STOP | 7/3 | NO REALLY STOP | 5/1 |
| DISREGARD WHAT I JUST SAID. FOUR WORDS, NO PUNCTUATION. ONE THREE 2 4. | 3/1 | 1 3 TOO 4 | 2/0 |
| 1 3 2 FOR | 1/0 | PERIOD TWICE | 8/3 |
| DISREGARD WHAT I JUST SAID. TWO WORDS THEN TWO DIGITS. ONE THREE 2 4. | 0/8 | | |
| WE JUST BLEW UP | 4/2 | | |

| Display | Action | Display | Action |
|---|---|---|---|
| 1 3 TOO WITH 2 OHS FOUR | 4/2 | THIS ONE IS ALL ARROW SYMBOLS NO WORDS | 2/8 |
| 1 3 TO 4 | 3/0 | ← | 6/3 |
| STOP DOT PERIOD | 5/0 | THE WORD STOP TWICE | 9/4 |
| LEFT LEFT RIGHT LEFT RIGHT RIGHT | 6/7 | ← ← RIGHT LEFT → → | 6/1 |
| IT LITERALLY SAYS THE WORD ONE AND THEN THE NUMBERS 2 3 4 | 4/5 | THE PUNCTUATION FULLSTOP | 9/2 |
| ONE IN LETTERS 3 2 4 IN NUMBERS | 3/5 | 1 3 TOO WITH TWO OS 4 | 4/1 |
| WAIT FORGET EVERYTHING I JUST SAID, TWO WORDS THEN TWO SYMBOLS THEN TWO WORDS: ← ← RIGHT LEFT → → | 1/6 | THREE WORDS THE PUNCTUATION FULLSTOP | 9/9 |
| 1 THREE TWO FOUR | 3/6 | OK WORD FOR WORD LEFT ARROW SYMBOL TWICE THEN THE WORDS RIGHT LEFT RIGHT THEN A RIGHT ARROW SYMBOL | 6/0 |
| PERIOD | 7/9 | | |
| .STOP | 7/8 | DOT DOT | 8/6 |
| NOVEBMER OSCAR SPACE, LIMA INDIA TANGO ECHO ROMEO ALPHA LIMA LIMA YANKEE SPACE NOVEMBER OSCAR TANGO HOTEL INDIA NOVEMBER GOLF | 0/7 | LEFT ARROW | 6/8 |
| | | AFTER I SAY BEEP FIND THIS PHRASE WORD FOR WORD BEEP AN ACTUAL LEFT ARROW | 7/2 |
| LIMA ECHO FOXTROT TANGO SPACE ALPHA ROMEO ROMEO OSCAR WHISKEY SPACE SIERRA YANKEE MIKE BRAVO OSCAR LIMA | 6/5 | ONE THREE 2 WITH TWO OHS 4 | 4/3 |
| | | LEFT ARROW SYMBOL | 6/4 |
| NOTHING | 1/2 | AN ACTUAL LEFT ARROW | 6/2 |
| THERE'S NOTHING | 1/8 | THAT'S WHAT IT'S SHOWING | 2/1 |
| STOP STOP | 7/5 | THE PHRASE THE WORD NOTHING | 2/6 |
| RIGHT ALL IN WORDS STARTING NOW ONE TWO THREE FOUR | 4/9 | THE WORD ONE AND THEN THE NUMBERS 3 2 4 | 4/8 |
| THE PHRASE THE WORD LEFT | 7/1 | ONE 3 2 FOUR | 3/8 |
| LEFT ARROW SYMBOL TWICE THEN THE WORDS RIGHT LEFT RIGHT THEN A RIGHT ARROW SYMBOL | 5/9 | ONE WORD THEN PUNCTUATION. STOP STOP. | 0/9 |
| | | THE WORD BLANK | 0/1 |
| LEFT LEFT RIGHT ← RIGHT → | 5/7 | FULLSTOP FULLSTOP | 8/4 |
| NO COMMA LITERALLY NOTHING | 2/4 | | |
| HOLD ON CRAZY TALK WHILE I DO THIS NEEDY | 2/1 | | |

# On the Subject of Cryptography

*WLMY ETGXFD EQCD ED PQKW WT CMFF EZYDFB.*

*SEE APPENDIX CD43 FOR AN EXCERPT OF "A CHRISTMAS CAROL".*
*SEE APPENDIX CD44 FOR FREQUENT LETTERS AND WORDS.*

This module will display ciphertext which contains a
sentence from Charles Dickens' "A Christmas Carol" (aka the
plaintext). The plaintext has been encrypted via a substituion cypher, meaning
each letter in the alphabet is substituted for a different letter.

- The letter E will always mean the letter E.
- Apart from the letter E, no letter can substitute itself.
- All punctuation has been removed from the ciphertext.
- Above the display are five keys each with a letter that is found in the
  plaintext.
- Once the ciphertext is decrypted, press each key only once, in order that
  they appear in the plaintext.
- Entering the incorrect sequence will gain a strike, try the sequence again
  from the beginning.

NOTE: The meaning of the word colors is currently unknown, however you can
safely ignore them.

YUQE
QWEQ
EE WEE
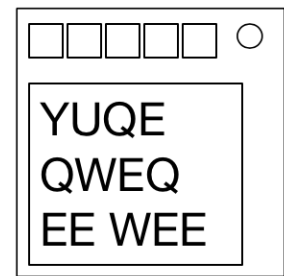
# APPENDIX CD43

Excerpt from Charles Dickens' "A Christmas Carol".

**Scrooge** knew he was dead? **Of** course he did. **How** could it be otherwise? **Scrooge** and he     5,4,5,12
were partners for I don't know how many years. **Scrooge** was his sole executor, his sole     21
administrator, his sole assign, his sole residuary legatee, his sole friend, and sole
mourner. **And** even Scrooge was not so dreadfully cut up by the sad event, but that he was     36
an excellent man of business on the very day of the funeral, and solemnised it with an
undoubted bargain. **The** mention of Marley's funeral brings me back to the point I started     14
from. **There** is no doubt that Marley was dead. **This** must be distinctly understood, or     8, 18
nothing wonderful can come of the story I am going to relate. **If** we were not perfectly     67
convinced that Hamlet's Father died before the play began, there would be nothing more
remarkable in his taking a stroll at night, in an easterly wind, upon his own ramparts,
than there would be in any other middle-aged gentleman rashly turning out after dark in
a breezy spot -- say Saint Paul's Churchyard for instance -- literally to astonish his
son's weak mind.

**Scrooge** never painted out Old Marley's name. **There** it stood, years afterwards, above the     7, 12
warehouse door: Scrooge and Marley. **The** firm was known as Scrooge and Marley. **Sometimes**     8, 18
people new to the business called Scrooge Scrooge, and sometimes Marley, but he answered     7
to both names. **It** was all the same to him.

**Oh**! **But** he was a tight-fisted hand at the grind-stone, Scrooge! **A** squeezing, wrenching,     1, 10,9
grasping, scraping, clutching, covetous, old sinner! **Hard** and sharp as flint, from which     15
no steel had ever struck out generous fire; **secret**, and self-contained, and solitary as an     8
oyster. **The** cold within him froze his old features, nipped his pointed nose, shrivelled     18
his cheek, stiffened his gait; **made** his eyes red, his thin lips blue and spoke out shrewdly     16
in his grating voice. **A** frosty rime was on his head, and on his eyebrows, and his wiry     15
chin. **He** carried his own low temperature always about with him; **he** iced his office in the     10, 7
dogdays; **and** didn't thaw it one degree at Christmas.     8

**External** heat and cold had little influence on Scrooge. **No** warmth could warm, no wintry     9, 9
weather chill him. **No** wind that blew was bitterer than he, no falling snow was more     24
intent upon its purpose, no pelting rain less open to entreaty. **Foul** weather didn't know     8
where to have him. **The** heaviest rain, and snow, and hail, and sleet, could boast of the     20
advantage over him in only one respect. **They** often 'came down' handsomely, and Scrooge     9
never did.

**Nobody** ever stopped him in the street to say, with gladsome looks, `My dear Scrooge, how     18
are you? **When** will you come to see me?' **No** beggars implored him to bestow a trifle, no     7, 37
children asked him what it was o'clock, no man or woman ever once in all his life
inquired the way to such and such a place, of Scrooge. **Even** the blind men's dogs appeared     9
to know him; **and** when they saw him coming on, would tug their owners into doorways and     16
up courts; **and** then would wag their tails as though they said, `No eye at all is better     22
than an evil eye, dark master!'

**But** what did Scrooge care! **It** was the very thing he liked. **To** edge his way along the     5,7,27
crowded paths of life, warning all human sympathy to keep its distance, was what the
knowing ones call `nuts' to Scrooge.

# On the Subject of Cracking Cryptography

*There is no doubt that The Defuser was dead.*

Note: For use by those familiar with the original manual. Contact Nanthelas on Discord with any corrections.

## Sentences

| Words | Letters | Text |
|---|---|---|
| 4 | 2 6 2 3 | Of course he did. |
| 5 | 7 4 2 3 | Scrooge knew he was dead? |
| 5 | 3 5 2 2 | How could it be otherwise? |
| 5 | 3 4 3 7 | But what did Scrooge care! |
| 7 | 7 5 7 3 | Scrooge never painted out Old Marley's name. |
| 7 | 2 3 3 3 | It was all the same to him. |
| 7 | 2 4 3 6 | he iced his coffee in the dogdays; |
| 7 | 4 4 3 4 | When will you come to see me?" |
| 7 | 2 3 3 4 | It was the very thing he liked. |
| 8 | 5 2 2 5 | There is no doubt that Marley was dead. |
| 8 | 3 4 3 5 | The firm was known as Scrooge and Marley. |
| 8 | 6 3 13 3 | secret, and self-contained, and solitary as an oyster. |
| 8 | 3 5 4 2 | and didn't thaw it one degree at Christmas. |
| 8 | 4 7 5 4 | Foul weather didn't know where to have him. |
| 9 | 1 9 9 8 | A squeezing, wrenching, grasping, scraping, clutching, covetous, old sinner! |
| 9 | 8 4 3 4 | External heat and cold had little influence on Scrooge. |
| 9 | 2 6 5 4 | No warmth could warm, no wintry weather chill him. |
| 9 | 4 5 4 4 | They often "came down" handsomely, and Scrooge never did. |
| 9 | 4 3 5 4 | Even the blind men's dogs appeared to know him; |
| 10 | 3 2 3 1 | But he was a tight-fisted hand at the grindstone, Scrooge! |
| 10 | 2 7 3 3 | He carried his own low temperature always about with him; |
| 12 | 5 2 5 5 | There it stood, years afterwards, above the warehouse door: Scrooge and Marley. |

| Words | Letters | Text |
|---|---|---|
| 12 | 7 3 2 4 | Scrooge and he were partners for I don't now how many years. |
| 14 | 3 7 2 7 | The mention of Marley's funeral brings me back to the point I started from. |
| 15 | 4 3 5 2 | Hard and sharp as flint, from which no steel had ever struck out generous fire; |
| 15 | 1 6 4 3 | A frosty rime was on his head, and on his eyebrows, and his wiry chin. |
| 16 | 4 3 4 3 | made his eyes red, his thin lips blue and spoke out shrewdly in his grating voice. |
| 16 | 3 4 4 3 | and when they saw him coming on, would tug their owners into doorways and up courts; |
| 18 | 4 4 2 10 | This must be distinctly understood, or nothing wonderful can come of the story I am going to relate. |
| 18 | 9 6 3 2 | Sometimes people new to the business called Scrooge Scrooge, and sometimes Marley, but he answered to both names. |
| 18 | 3 4 6 3 | The cold within him froze his old features, nipped his pointed nose, shrivelled his cheek, stiffened his gait; |
| 18 | 6 4 7 3 | Nobody ever stopped him in the street to say, with gladsome looks, "My dear Scrooge, how are you? |
| 20 | 3 8 4 3 | The heaviest rain, and snow, and hail, and sleet, could boast of the advantage over him in only one respect. |
| 21 | 7 3 3 4 | Scrooge was his sole executor, his sole administrator, his sole assign, his sole residuary legatee, his sole friend, and sole mourner. |
| 22 | 3 4 5 3 | and then would wag their tails as though they said, "No eye at all is better than an evil eye, dark master!" |
| 24 | 2 4 4 4 | No wind that blew was bitterer than he, no falling snow was more intent upon its purpose, no pelting rain less open to entreaty. |
| 27 | 2 4 3 3 | To edge his way along the crowded paths of life, warning all human sympathy to keep its distance, was what the knowing ones call "nuts" to Scrooge. |

## APPENDIX CD44

Word and Letter Frequency in Charles Dickens' "A Christmas Carol".



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

### Frequent 2 letter words

- 16x TO
- 11x NO
- 10x HE
- 9x IN
- 8x OF
- 7x IT

### Frequent 3 letter words

1. 23x AND
2. 22x THE
3. 22x HIS
4. 14x WAS
5. 11x HIM
6. 4x OUT

### Frequent 4 letter words

1. 6x SOLE
2. 4x THAT

### Frequent 5 letter words

1. 4x THERE
2. 4x WOULD

### Frequent 6 letter words

1. 4x MARLEY

### Frequent 7 letter words

1. 12x SCROOGE

### Frequent 8 letter words

1. 2x BUSINESS

### Frequent 9 letter words

1. 2x SOMETIMES

# On the Subject of Emoji Math

*Math is easy. But is it easy when the numbers are in another language? Let's find out.*

Decipher the characters on the display into numbers and solve the answer to the question. Enter the answer with the keypad and press '=' to submit it. Use '-' to toggle the negative sign for negative answers. There's no delete button so press those buttons carefully!

For example: =(+=( translates to 1+1
The answer to enter is 2.

| Character | Number |
|:---:|:---:|
| :) | 0 |
| =( | 1 |
| (: | 2 |
| )= | 3 |
| :( | 4 |
| ): | 5 |
| =) | 6 |
| (= | 7 |
| :| | 8 |
| |: | 9 |

# On the Subject of English Tests

*You've lived all your life writing however you wanted without giving a second thought to who would be reading what you misspelled. But now, your life depends on your grammar and orthography, and this bomb is <u>very</u> nitpicky. You should of paid more attention in you're English class.*

*...Oh, carp.*

*See Appendix: Grammar for more information.*

| Question 1/3 ○ |
| --- |
| We need to *diffuse* this bomb quickly. |
| diffuse defuse |
| ◄ SUBMIT ► |

- An English sentence with one *italic* word or phrase will be displayed on the large LCD display.
- Your goal is to select the correct word that fills in the blank.
- If multiple words appear to complete the sentence correctly, remember that this module is a pedantic prescriptivist!
- There are three rounds. Correctly complete all the sentences to disarm the module.
- If a mistake is made during the course of the test, the question number will reset to 1.

# Appendix: Grammar

*for use with the English Test module*

This appendix contains a brief overview of some grammatical distinctions used in the English Test module and Needy English Test module.

The **subject** is what is doing the action, and the **object** is what is receiving the action. e.g. In "I buy milk." I is the subject and <u>milk</u> is the object.

| |
|---|
| **their:** belonging to them; **there:** that place; **they're:** they are |
| **your:** belonging to you; **you're:** you are |
| **I, he, she, we, they:** used in subjects; **me, him, her, us, them:** used in objects |
| **less:** used with uncountable nouns; **fewer:** used with countable nouns |
| **who:** used in subjects; **whom:** used in objects |
| **defiantly:** rebelliously; **definitely:** without doubt |
| **lead:** the metal or the present tense; **led:** the past tense and past participle |
| **cite:** declare a quoted source; **site:** location; **sight:** a view or vision |
| When you don't **lay** something else down, you **lie** down. <br> The past tense of <u>lay</u> is **laid**. Confusingly, the past tense of <u>lie</u> is **lay**! |
| **Literally** means <u>word for word</u>. If you had "literally died" watching a video, your family and friends would be crying at your funeral about now. |
| If you write "should **of**", "could **of**", "would **of**", or "might **of**", no educated gentleman will take you seriously. <br> Remember, "I <u>do</u>" is to "I <u>have done</u>" as "I could <u>do</u>" is to "I could <u>have done</u>". <br> (Exceptions apply, but very <u>very</u> rarely!) |
| **its:** belonging to it; **it's:** it is |
| **capital:** main city in a territory, money you put up to borrow something, or THIS KIND OF LETTER; **capitol:** big building, usually in a <u>capital</u> |
| **affect:** usually a verb, but noun when it means "display of emotion"; **effect:** almost always a noun; **impact:** physical force |
| **i.e.:** short for Latin *id est,* or "that is"; **e.g.:** short for Latin *exemplī grātiā,* or "for example" |
| **peak:** summit; **peek:** sneak a look; **pique:** excite (usually interest) |
| **allot:** partition; **a lot:** very much; **alot:** (never correct) |
| **lose:** opposite of gain; **loose:** opposite of tight |
| **than:** (used to compare two things); **then:** at the time, or right after that |
| **complement:** when two parts complete each other; **compliment:** You look good today! |
| **farther:** physical distance; **further:** figurative distance |
| **number:** used for countable nouns; **amount:** used for uncountable nouns |

## <u>Appendix: Grammar (Cont'd)</u>

| |
|---|
| **to:** used in infinitives or destination; **too:** as well, or overly; **two:** 2 |
| **accept:** This is fine; **except:** One of these things is not like the others |
| **threw:** past tense of "throw"; **through:** in at one side/end and out at the other |
| **defuse:** stop a bomb; **diffuse:** light softening out. Use "defuse" for tension. |
| **statue:** monument; **stature:** body height; **statute:** code of law |
| **stationary:** completely still; **stationery:** writing utensils |
| **by:** beside, from the mind of, etc.; **buy:** trade money for goods; **bye:** see you later |
| **breath:** the noun; **breathe:** the verb |
| **drink:** present tense; **drank:** past tense; **drunk:** past participle and adjective |
| **discreet:** secret or carefully subtle; **discrete:** separate |
| **seas:** plural of sea; **sees:** a form of "to see"; **seize:** to grab or take by force; **C's:** more than one C |
| **weather:** condition of the outside air; **whether:** if it is or if it isn't |
| **raise:** to make something go up; **rays:** narrow beams of light; **raze:** get rid of hair with a razor, or similarly destroy a wide area |
| **wander:** frolic; **wonder:** ponder |
| **die:** stop living, or a small cube for randomness; **dice:** more than one die |
| **meat:** flesh; **meet:** to see someone else; **mete:** to deal out something unpleasant |
| **palate:** roof of your mouth; **palette:** board to mix paint on, or a combination of colors; **pallet:** plates that cargo gets placed on |
| In this module, **racket:** a loud noise; **racquet:** a netted stick or paddle with which to hit a ball. (Especially in US English, racket can be used for both senses.) |
| **perfect:** 100% good or correct; **prefect:** person in a position of power, like an official or a heir |

**Other pairs/sets of words include:** ad/add, aloud/allowed, altar/alter, arc/ark, baited/bated, base/bass, blew/blue, brake/break, carat/caret/carrot/karat, ceiling/sealing, cent/scent/sent, cereal/serial, choral/coral/corral, coarse/course, creak/creek, dear/deer, discussed/disgust, elicit/illicit, everyday/every day, faint/feint, faze/phase, find/fined, flair/flare, flea/flee, gait/gate, idle/idol/idyll, lighting/lightning/lightening, loan/lone/lend, oar/or/ore, pail/pale, pair/pare/pear, poor/pore/pour, praise/prays/preys, precedence/precedents/presidents, right/rite/wright/write, road/rode/rowed, ring/wring, role/roll, seam/seem, stairs/stares, steal/steel, straight/strait, though/thought/through/thorough, vain/vane/vein, vary/very, wait/weight, and weak/week.

For lack of space, the differences for these words have been omitted, but they should be fairly common knowledge to most English speakers.

# On the Subject of Follow the Leader

*Child's play. Just follow the leader. Only if you fail to follow, the penalty is somewhat more explosive.*

This module contains 8-12 wires connecting numerically labeled plugs in a looping sequence. Each wire leads from one plug to the next plug that contains a wire in ascending numerical order. A wire leading from plug 1 is considered to be "wire 1".
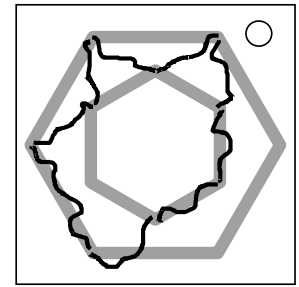
Progress through the module by first determining the starting wire, then checking whether to cut each wire in the sequence. Each wire will need to be either cut or left uncut based on the state of the previous wire(s) in the sequence.

## Determine Start Position

Follow the first rule below that applies:

1. If an RJ-45 port is present and there is a wire leading from plug 4 <u>directly</u> to plug 5, begin at that wire.
2. Otherwise, if there is a wire that begins at a plug matching the number of batteries on the bomb, begin with that wire.
3. Otherwise, if there is a wire that begins at a plug matching the first numeral of the serial number, begin at that wire.
4. Otherwise, if there is a lit indicator with the label CLR, disregard all further instructions and cut all wires present on this module in descending numerical order.
5. If none of the above apply, the start position is the plug containing a wire earliest in numerical order.

## Cutting Wires

- <u>Always</u> cut the wire at the starting plug. Then progress to the next wire.
- From this position, cut the wires as directed by the steps in the following table. The starting step corresponds to the first letter in the serial number. If the serial number contains no letters, begin at step A.
- When progressing to the next wire, also progress to the next step alphabetically in the table to determine whether to cut the wire.
- "Previous wire(s)" may refer to wires beyond the original starting position in the sequence.
- If the wire at the starting plug is red, green, or white, progress through the steps in reverse alphabetical order instead.

| Step | Cut this wire if: |
|------|-------------------|
| A or N | The previous wire is not yellow or blue or green. |
| B or O | The previous wire leads to an even numbered plug. |
| C or P | The previous wire should be cut. |
| D or Q | The previous wire is red or blue or black. |
| E or R | Two of the previous three wires share a color. |
| F or S | Exactly one of the previous two wires are the same color as this wire. |
| G or T | The previous wire is yellow or white or green. |
| H or U | The previous wire should not be cut. |
| I or V | The previous wire skips a plug. |
| J or W | The previous wire is not white or black or red. |
| K or X | The previous two wires are different colors. |
| L or Y | The previous wire does not lead to a position labeled 6 or less. |
| M or Z | Exactly one or neither of the previous two wires are white or black. |

# On the Subject of Following the Leader

*Don't step out of line.*

<u>Note:</u> For use by those familiar with the original manual. Contact Nanthelas on Discord with any corrections.

<u>All numbers refer to wires that originate at that numbered plug.</u>

## Starting Wire

- If RJ-45 Port and Wire from 4 to 5, start at 4.
- Otherwise, start at number of batteries (if it exists).
- Otherwise, start at first numerical SN digit (if it exists).
- Otherwise, if Lit CLR, cut all from highest to lowest.
- Otherwise, start at lowest numbered wire.

## Cutting Wires

- Always cut first wire.
- Go through chart starting with first SN letter.
- If Start is Red/Green/White, **REVERSE ORDER.**

| Letter | Cut If |
|--------|--------|
| A/N | Previous is Red, White, or Black. |
| B/O | Current starts at even. |
| C/P | Previous was cut. |
| D/Q | Previous is Red, Blue, or Black. |
| E/R | Of previous 3, 2 share a color. |
| F/S | Exactly 1 of previous 2 matches current color. |
| G/T | Previous is Yellow, White, or Green. |
| H/U | Previous was <u>NOT</u> cut. |
| I/V | Previous skips a plug. |
| J/W | Previous is Yellow, Blue, or Green. |
| K/X | Previous 2 are different colors |
| L/Y | Previous leads to ≥7 |
| M/Z | Of previous 2, at most 1 White or Black. |

# On the Subject of Foreign Exchange Rates

*If bombs were stock brokers...*

Defusing this module requires the expert to have a device that can connect to the World Wide Web.

| G | B | P |
|---|---|---|
| U | S | D |
| 1 | 2 | 3 |

This module has the ability to connect to the internet and query the state of foriegn exchange rates. There should be a three times three grid of keys, each with a light emitting diode. DO NOT PRESS ANY KEY ON THIS MODULE WHILE THE LIGHT EMITTING DIODES ARE FLASHING IN SEQUENCE.

The keys are grouped by rows:

| |
|---|
| Top row: ISO 4217 alphabetic code for the base currency.[1][2] |
| Middle row: ISO 4217 alphabetic code for the target currency.[1][2] |
| Bottom row: Value of currency to convert. |

## All light emitting diodes have turned green:

Enter the following uniform resource locator into your internet capable device:
http://api.fixer.io/latest?base=XXX&symbols=YYY
Replace XXX with the ISO 4217 alphabetic code for the base currency.
Replace YYY with the ISO 4217 alphabetic code for the target currency.
You will receive data in a Javascript object notation format, look for {"YYY": NUMBER}, where NUMBER will be the exchange rate. Using the exchange rate, convert the number in the bottom row to the target currency, round that number down and take note of the 2nd digit from the left[4]. Press the Nth key where N is the noted number (count keys from left to right, top to bottom)[5].

## All light emitting diodes have turned red:

In this case the module failed to query today's currecy rates. Get the ISO 4217 numeric code for the target currency's country and take note the 2nd digit from the right. Press the Nth key where N is the noted number (count keys from left to right, top to bottom)[5].

[1]: If there is more than one battery on the bomb, the base currency code and target currecy code is swapped.
[2]: This may instead be the ISO 4217 numeric code.
[3]: Note the currency rates are updated around 4PM CET.
[4]: In the case the converted currency is less than 10, the noted number is 0.
[5]: In the case the noted number is 0, press the top left key.

# On the Subject of Foreign Exchange Rates

*If bombs were stock brokers...*

**≥ 2 batteries:** swap base and target currency.

## If buttons are green:

- URL: http://api.fixer.io/latest?
  base=**base**&symbols=**target**
- Round **down.**
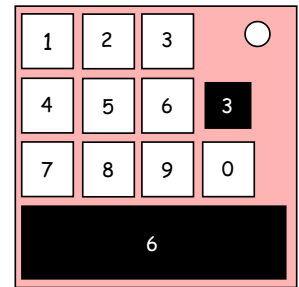- Press 2nd **most** significant digit (1 if zero).

## If buttons are red:

| AUD | 3 | GBP | 2 | KRW | 1 | RUB | 4 |
|-----|---|-----|---|-----|---|-----|---|
| BGN | 7 | HKD | 4 | MXN | 8 | SEK | 5 |
| BRL | 8 | HRK | 9 | MYR | 5 | SGD | 1 |
| CAD | 2 | HUF | 4 | NOK | 7 | THB | 6 |
| CHF | 5 | IDR | 6 | NZD | 5 | TRY | 4 |
| CNY | 5 | ILS | 7 | PHP | 1 | USD | 4 |
| DKK | 1 | INR | 5 | PLN | 8 | ZAR | 1 |
| EUR | 7 | JPY | 9 | RON | 4 |     |   |

| G | B | P |
|---|---|---|
| U | S | D |
| 1 | 2 | 3 |

# On the Subject of Forget Me Not

*This one likes attention, but not too much attention.*

- The main display will update on each solved module. The current display stage is shown on the smaller display.
- Add the displayed number to the corresponding number gained from the chart below, and record the least significant digit from the total. This is the calculated number for that stage.
- When all other modules have been completed, the display will turn blank.
- Press the calculated numbers on the keypad in the order they were obtained.
- If an incorrect calculated number is entered, the button for the displayed number for that stage turns green.

---

First number:

- If the bomb has an unlit CAR indicator, the number is 2.
- Otherwise, if the bomb has more unlit indicators than lit indicators, the number is 7.
- Otherwise, if the bomb has no unlit indicators, the number is the amount of lit indicators.
- Otherwise, the number is the last digit of the serial.

---

Second number:

- If the bomb has a serial port and 3 or more digits in the serial, the number is 3.
- Otherwise, if the previous calculated number was even, the number is the previous calculated number plus 1.
- Otherwise, the number is the previous calculated number minus 1.

---

All other numbers:

- If either of the previous two calculated numbers were 0, the number is the largest digit in the serial.
- Otherwise, if both of the previous two calculated numbers were even, the number is the smallest odd digit in the serial, or 9 if no such digit exists.
- Otherwise, the number is the most significant digit of the sum of the previous two calculated numbers.