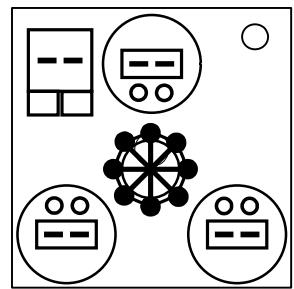


## On the Subject of Manometers

A story of pressure ...

This module contains three manometers, a screen and a valve. In order to solve the module, you must set the screen to the target pressure, then use the three manometers to set the pressure of the module to as close as they can possibly get to the target without going over.



The pressure of the module is equal to the sum of the pressures displayed on the three manometers, which can be changed using the + and - buttons below the screen.

Be careful, each manometer has a maximum pressure. If this maximum pressure is exceeded, the module will reset and incur a strike.

If the target pressure can't be reached, don't panic, just pressurize each manometer to its maximum pressure and turn the big red valve in the center of the module. However, if the target pressure can be reached, or at least one manometer is not at its maximum pressure, turning the valve will reset the module and incur a strike.

### Step 1: Determining the target pressure

The target pressure is determined by the colors of the buttons and screen in the top left corner of the module.

Determine the value of the + button, - button, and screen using the table COLORS. The target pressure is calculated by the following formula:

$$(-\text{button value}) \times (\text{screen value}) / (+\text{button value})$$

If the result is a decimal number, round it to the nearest integer (10.5 will be 10).

If the target pressure is greater than 35, continually subtract 6 until it is less than or equal to 35. If the target pressure is less than 11, continually add 4 until it is greater than or equal to 11.

Then, set the screen to the target pressure by using + and - buttons, and submit by pressing on the screen. Submitting an incorrect target pressure will reset the module and incur a strike.

Afterwards, the manometers will activate and the sound of pressurized air escaping can be heard for 30 seconds. If the module is not solved before the sound stops, it will reset and incur a strike.

## Step 2: Determining the maximum pressure of each manometer

When the manometers activate, a screen will activate on each manometer, with a colored text on it.

The table COLOR shows all the possible combinations of manometer colors, as well as giving their maximum pressure. Find the cell in the table COLOR corresponding to the manometer combination you have on the module.

Afterwards, determine how many cells to shift to find the correct maximum pressure values. In the center of the cell matching the colors of the manometers on the bomb, three conditions are written, with numbers next to them and an arrow. Starting at the base of the arrow and moving in the direction shown, find the first condition that applies. Consider the number by that condition. If no condition applies, instead use the number at the bottom of the cell.

This number tells how many cells to shift in the COLOR table. A positive number instructs to move that many cells forward in reading order; a negative number instructs to move that many cells backwards in reading order, with the table looping if necessary. The cell finished on gives the actual maximum pressures for each manometer, with each matching to the corresponding space on the module.

**Table COLOR:**

<table border="1"> <tr> <td style="text-align: center;">4</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">           ↑February: +4            ↑TRN*: +1            AA≤D: +2         </td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">+2</td> <td></td> </tr> </table>	4				↑February: +4 ↑TRN*: +1 AA≤D: +2				3	4	+2		<table border="1"> <tr> <td style="text-align: center;">9</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">           ↑Vowel S/N: +1            ↑CLR: -5            CAR*: +2         </td> </tr> <tr> <td style="text-align: center;">10</td> <td style="text-align: center;">9</td> <td style="text-align: center;">+5</td> <td></td> </tr> </table>	9				↑Vowel S/N: +1 ↑CLR: -5 CAR*: +2				10	9	+5		<table border="1"> <tr> <td style="text-align: center;">10</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">           ↑AA&gt;2: +2            LEGO: -2            Wednesday: +3         </td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">5</td> <td style="text-align: center;">-5</td> <td></td> </tr> </table>	10				↑AA>2: +2 LEGO: -2 Wednesday: +3				2	5	-5		<table border="1"> <tr> <td style="text-align: center;">10</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">           ↓May : +3            FRK : -8            AA&gt;D: +2         </td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">-2</td> <td></td> </tr> </table>	10				↓May : +3 FRK : -8 AA>D: +2				6	7	-2	
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<p><b>10</b></p> <p>↓ DVI: -1 PS2: -3 Parallel: +4</p> <p>9 8 +2</p>	<p><b>4</b></p> <p>↓ BOB*: +21 July: -5 Parallel: +1</p> <p>3 2 -3</p>	<p><b>6</b></p> <p>↑ RJ45<math>\geq 2</math>: -3 Plates<math>&gt;2</math>: -1 Thursday: +5</p> <p>8 9 -3</p>	<p><b>2</b></p> <p>↓ &gt;5pm: +2 AA=Ind: -2 FRQ*: +3</p> <p>7 6 +5</p>
<p><b>3</b></p> <p>↓ &gt;8PM: +9 SND*: -15 CAR: +3</p> <p>5 2 +2</p>	<p><b>7</b></p> <p>↑ Orange screen: +1 FRQ: -4 Ports<math>\geq 3</math>: +5</p> <p>6 10 +4</p>	<p><b>10</b></p> <p>↑ Saturday: +1 April: +2 BOB: +3</p> <p>8 10 -2</p>	<p><b>10</b></p> <p>↓ Blue screen: +1 January: +6 2 strikes: -4</p> <p>6 4 +2</p>
<p><b>9</b></p> <p>↑ Dr. Doctor: +2 IND*: -8 Even month: +1</p> <p>7 5 -4</p>	<p><b>6</b></p> <p>↓ Str.&gt;Ind.: +2 CLR*: -2 AA=Str.: +3</p> <p>5 9 +2</p>	<p><b>6</b></p> <p>↓ RJ45: +2 D=1: -2 Bat<math>&gt;2</math>: +3</p> <p>8 2 +5</p>	<p><b>5</b></p> <p>↓ SIG*: +3 NSA: +2 Ind.&gt;2: +5</p> <p>1 3 -2</p>
<p><b>8</b></p> <p>↑ D=Serial: -6 SIG: -1 SIG*: +5</p> <p>9 7 +4</p>	<p><b>8</b></p> <p>↓ &lt;5min left: -3 NSA: -1 Sunday: +4</p> <p>8 9 +4</p>	<p><b>4</b></p> <p>↓ TRN*: +1 PS2: -2 Christmas: +5</p> <p>2 5 +1</p>	

**Glossary:**

- **FRK:** The indicator is off
- **FRK\*:** The indicator is on
- **Even month:** Even months are February, April, June, August, October and December
- **Serial:** is port present
- **S/N:** Serial Number
- **D:** D Batteries
- **AA:** AA Batteries
- **Bat.:** Battery count
- **D=Serial:** D count = Serial count
- **Ind.:** Indicators
- **Str.:** Strikes
- **Blue screen:** is the top left screen blue
- **>8PM:** Is it 8PM or more
- **Hold.:** Holders
- **Dr. Doctor and LEGO are modules**

**Table COLORS:**

	Black	Blue	Orange	Yellow	Purple
<b>Minus</b>		2	3	4	
<b>Plus</b>		1	2	1	
<b>Screen</b>	8	5	7	9	6