# On the Subject of Tenpins

Nice Spare!

- This module displays bowling pins arranged in a triangle formation, colored using additive color mixing, and a bowling ball colored red, green, or blue.
- When the triangle is broken down into the red, green, and blue channels, three separate splits can be found.
- Use the features of the pins in the channel that correspond to the courrent color of the bowling ball to deterine valid times to press the bowling ball.
- Pressing the bowling ball at a valid time will cause it to change color. When the bowling ball has been pressed for all three channels, the module will solve.
- Pressing the bowling ball at an invalid time will cause a strike.
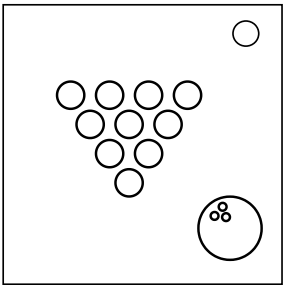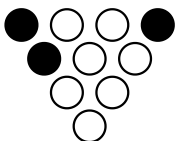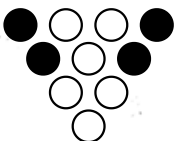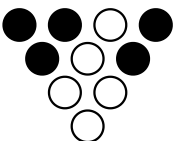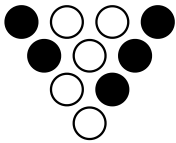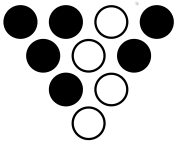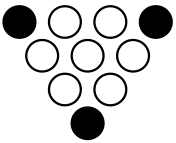
Types of splits

These are the splits that can appear on the module. Black circles represent pins present.

- If none of the splits use a pin, it will not appear.
- A split may be inverted, meaning all the pins that would be present aren't, and all the pins that wouldn't be present are.
- Splits may be rotated so that any of the three corner pins is pin 1 (the bottom pin in the graphics below).
- Splits may also be mirrored across the y-axis (relative to pin 1).

Goal Posts	Cincinnati	Woolworth Store*
Lily	**3-7 Split**	**Cocked Hat**

* This split will never be mirrored.

4-7-10 Split	Big Four	Greek Church
(pin diagram)	(pin diagram)	(pin diagram)
Big Five	Big Six	HOW
(pin diagram)	(pin diagram)	(pin diagram)

Determining valid times

Use the following tables to determine what times are valid to press the bowling ball. N is the seconds digits of the timer when the bowling ball is pressed. Both conditions must be met.

	Red	Green	Blue
Pins are normal	$N \% 20 < 10$	$4 < N \% 20 < 15$	$2 < N \% 20 < 13$
Pins are inverted	$N \% 20 > 9$	$7 < N \% 20 < 18$	$6 < N \% 20 < 17$

For the following table, if the split is HOW, and the other two splits use the same column, use that column. Otherwise, use the column that is not used by either of the other splits.

However, if there are multiple HOWs present, a red one will use the 1st column, a green one will use the 2nd column, and a blue one will use the 3rd column.

	Pin 1 is S	Pin 1 is NW	Pin 1 is NE
Goal Posts	N % 10 = 7	N % 10 = 2	N % 10 = 1
Cincinnati	N % 10 = 5	N % 10 = 1	N % 10 = 3
Woolworth Store	N % 10 = 9	N % 10 = 8	N % 10 = 4
Lily	N % 10 = 2	N % 10 = 9	N % 10 = 3
3-7 Split	N % 10 = 8	N % 10 = 5	N % 10 = 8
Cocked Hat	N % 10 = 6	N % 10 = 0	N % 10 = 2
4-7-10 Split	N % 10 = 3	N % 10 = 1	N % 10 = 4
Big Four	N % 10 = 7	N % 10 = 4	N % 10 = 1
Greek Church	N % 10 = 5	N % 10 = 7	N % 10 = 6
Big Five	N % 10 = 1	N % 10 = 3	N % 10 = 5
Big Six	N % 10 = 0	N % 10 = 6	N % 10 = 9
HOW	N % 10 = 4	N % 10 = 2	N % 10 = 0

Black
Red
Yellow
Magenta
White
Green
Cyan
Blue