

# Stacker

By Daniel Bernstein  
& Daniel Espinosa

**Stacker** is a fast paced arcade game in which the objective is to stack 8 consecutive dots on top of each other. The game keeps track of your score depending on which level you are in. The difficulty is entirely customizable by the player using a knob. If the player fails, the game instantly restarts, which leads to quick and easy replayability.

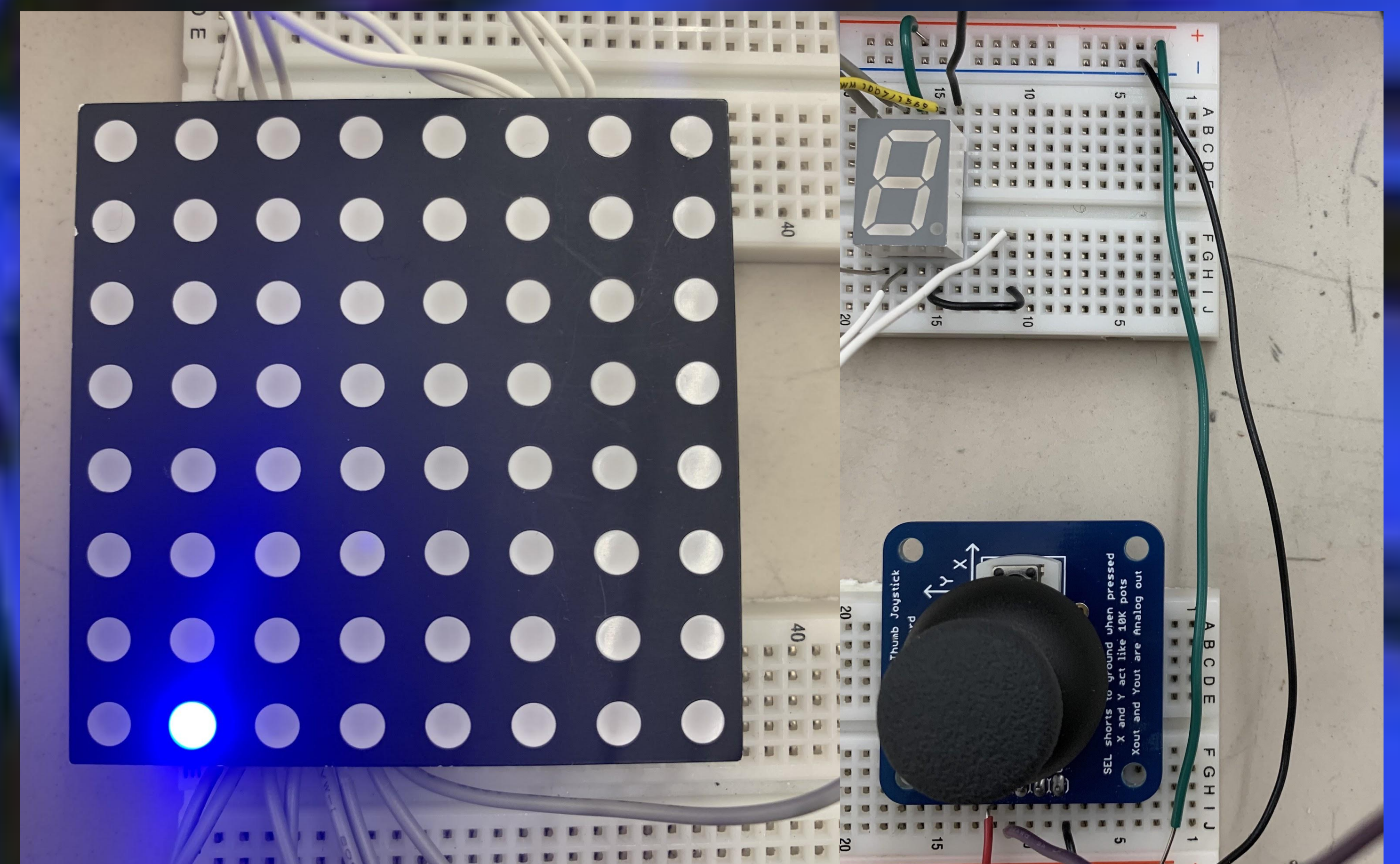
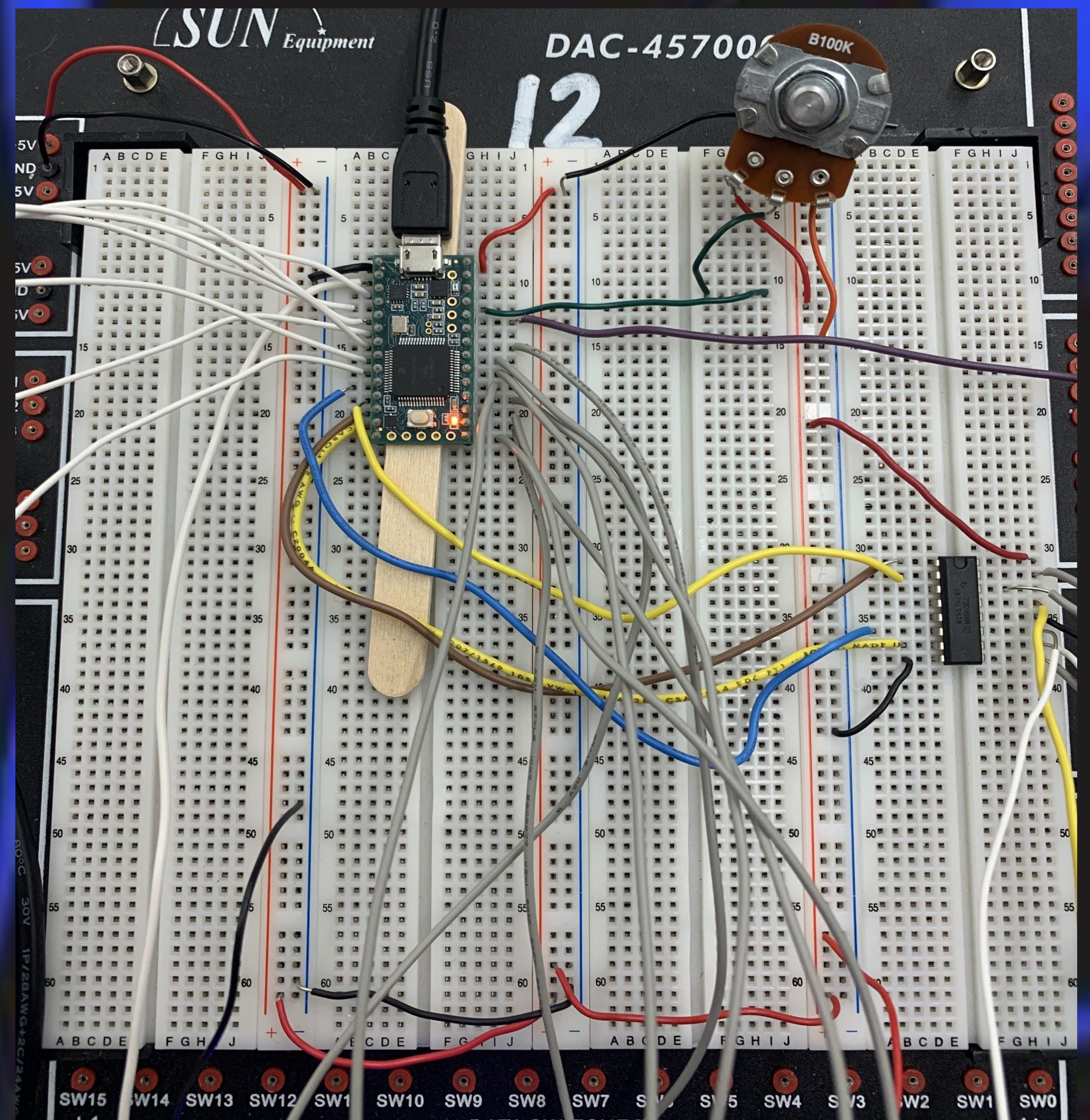
## How does it work?

Our circuit uses a Teensy board, connected to an accelerometer, an analog joystick and a 8×8 RGB LED matrix. Code in the Teensy keeps track of the dot's position, maps it to the correct coordinate and plots it in the LED matrix. When the player toggles the joystick up, the dot's position is compared to the previous dot's, and if they match, they are stacked! Failing to do so instantly resets the game. Good luck & have fun!

## Components used:

74LS47 IC  
Bluefruit Joystick  
Arduino Microcontroller  
7 Segment Display  
8×8 RGB LED Array  
100kΩ Potentiometer

PHYS336 Colgate University, 2021



## Circuit Diagram

