

# Not Wii Sports User Manual

Team 7

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# 1 Introduction

Welcome to Not Wii Sports! We've created an immersive bowling experience that brings the excitement of bowling right to your computer. Using advanced motion controls and voice commands, you can enjoy a realistic bowling experience. This manual will walk you through everything you need to know to get started and become a virtual bowling champion.

## 2 System Requirements

### 2.1 Hardware/Software Requirements

Everything you need to get "rolling" (ba dum tsss):

- A computer running MacOS
- A webcam for tracking your movements (built-in on Macs)
- A microphone for voice commands (built-in on Macs)
- Our motion-controlled remote (included with the game) for realistic bowling motion
  - Sparkfun ESP32-C6 Qwiic Pocket
  - Sparkfun 9dof IMU
  - Lithium Ion Battery
  - Soft Power Button (Optional)
  - Qwiic and JST connectors
  - A small piece of wood and some velcro

## 3 Setup and Installation Instructions

### 3.1 First-Time Setup

To set up the game, copy the file `bowling-setup.sh` from our GitHub (180D-FW-2024/Team7) to your local machine. Then run the following commands:

```
chmod +x bowling-setup.sh
./bowling-setup.sh
source ~/.zshrc
```

This downloads all the necessary software to run the game.

## 3.2 How to Run the Game

Once the setup script has been run, you can run the following command from any directory and the game will start up:

```
play-bowling
```

If you are using our signature remote control, simply press the soft-power switch to turn it on. It will connect automatically.

# 4 User Interface Overview

## 4.1 Game Controls

Our control system is designed to feel natural and intuitive:

- **Motion Controller:** Just like real bowling, your hand movement determines how the ball rolls. The ESP32 controller tracks your swing to set the ball's speed.
- **Body Position:** Use your body movement to position yourself on the lane - the camera tracks you and moves your character accordingly.
- **Voice Commands:** Want to add players? Just say their names! The game understands voice commands for up to two players. At the beginning of the game, the welcome screen will walk you through adding players.

## 4.2 Display Elements

Everything you need to know is right on screen:

- **Scoreboard:** Keeps track of your game just like a real bowling alley

- **Position Guide:** Shows exactly where you're standing relative to the lane
- **Pin Display:** See which pins are still standing

## 5 Game Features

### 5.1 Game Modes

Choose how you want to play:

- **Single-Player:** Perfect your technique solo
- **Two-Player:** Challenge a friend to a full game

### 5.2 Scoring System

We handle all the math - you focus on bowling:

- Follows standard bowling rules
- Automatically calculates spares and strikes
- Keeps running totals updated in real-time

### 5.3 Control Options

Play your way:

- Use motion controls for the most realistic experience
- To play using manual controls, simply click instead of using our signature remote

## 6 Known Issues and Troubleshooting

### 6.1 Common Issues

#### 6.1.1 Startup Messages

During startup:

- Press 'Record' to enter your name and verify
- The game transition might take a few seconds - that is normal

### 6.1.2 Getting the Best Experience

For the best gameplay:

- Play in a well-lit room for better motion tracking
- Make sure you are playing with no one standing behind you – this may cause interference with the position detection
- Speak clearly in a quiet room for voice commands
- Keep the controller charged
- Make sure you have enough space to move

### 6.1.3 Installation Tips

If the game does not work when you run it, it is possible that we missed a dependency. Let us know so that we can add that dependency to `bowling-setup.sh`.

## 6.2 Quick Solutions

Having trouble? Try these fixes:

- **Voice commands not working?** Try moving somewhere quieter
- **Motion tracking issues?** Check your lighting and camera position
- **Controller not responding?** If the remote disconnects for any reason, simply toggle the switch and it should automatically reconnect!

## 6.3 Game Flow

Here's how a typical game session works:

1. **Player Setup:** Enter player names using voice commands at the start screen
2. **Starting the Game:** Player 1 begins, followed by Player 2 (in two-player mode)
3. **Each Turn:**
  - Position yourself by moving left or right in front of the camera
  - Use the IMU controller to swing and release the ball
  - Each player gets up to two rolls per frame to knock down all 10 pins
  - Watch your score update automatically based on pins knocked down
4. **Scoring Rules:**
  - **Open Frame:** If you don't knock down all pins in two rolls, your score is the total pins knocked down
  - **Spare:** Knock down all pins in two rolls to get a spare. Your bonus is the pins from your next roll
  - **Strike:** Knock down all pins on your first roll. Your bonus is the pins from your next two rolls
5. **Final Frame:**
  - Get a spare? You earn one bonus ball
  - Get a strike? You earn two bonus balls
  - These bonus balls help calculate your final score
6. **Game Completion:** The game ends after all players complete 3 frames plus any earned bonus rolls

*This manual is regularly updated to include new features and helpful tips. Check our repository for the latest version.*