DIGITAL

DICE

User Manual

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Quick Start Guide

Rolling Dice

Method 1: Button Press

1. **Short press** the button to roll your configured dice
2. Watch the animated roll
3. Results stay on screen for your configured duration

Method 2: Shake to Roll

(When accelerometer is enabled)

1. Simply shake the device
2. Dice will automatically roll with animation
3. Results display automatically

> **Quick Tip:** The shake-to-roll feature is perfect for quick games and adds a tactile element to your digital dice experience!

Entering the Menu

- **Long press** the button (hold for approximately 2 seconds)
- Release when menu appears on screen

Button Controls

Action	Function
Short Press	Roll dice / Navigate menu options
Long Press (2 sec)	Enter menu / Select menu option

Menu System

Main Menu

Navigate through options with short presses. Long press to select.

Menu Option	Description
Dice	Configure which dice to roll
Roll History	View your last 6 rolls
Configuration	Adjust device settings
Exit	Return to standby mode

Dice Configuration

Configure any combination of dice up to **8 total dice**.

Available Dice Types

Die Type	Sides	Description
Coin	2	Heads/Tails
D4	4	4-sided die
D6	6	6-sided die
D8	8	8-sided die
D10	10	10-sided die
D12	12	12-sided die
D20	20	20-sided die

How to Configure

1. Enter Main Menu → Select "Dice"

2. Navigate to desired dice type

3. Long press to cycle through counts (0-8)

4. System enforces 8 dice maximum total

5. Select "Back" when finished

> **Example:** You can configure 2×D6 + 1×D20 + 1×D4 = 4 dice total

Roll History

View your last 6 rolls in chronological order:

- **Last:** Most recent roll

- **n-2, n-3, etc.:** Previous rolls

> **Note:** Results are displayed in order from smallest to largest dice type:
> **Coin → D4 → D6 → D8 → D10 → D12 → D20**

Configuration Settings

Brightness

Options: 25%, 50%, 75%, 100%

Adjusts display contrast for different lighting conditions.

Time to Clear

Range: 1.0 - 5.0 seconds (in 0.5s increments)

How long dice results remain on screen before auto-sleep. Useful for giving players time to record results.

> **Recommended:** Use 2-3 seconds for fast-paced games, 4-5 seconds when players need to write down results.

Stagger Time

Range: 0 - 5 frames

Animation delay between multiple dice. Higher values create a more dramatic sequential rolling effect.

- **0:** All dice animate simultaneously
- **1-2:** Slight delay, subtle effect
- **3-5:** Pronounced sequential animation

Accelerometer

Options: On / Off

- **On:** Shake device to roll dice
- **Off:** Button-only operation (saves power)

> **Power Saving:** Disabling the accelerometer extends battery life during extended gaming sessions.

Technical Specifications

Hardware Components

Display	128×64 OLED (SH1106 controller), I2C interface @ 0x3C
Processor	ESP32-C3 @ 80MHz (reduced from default 160MHz for power efficiency)
Accelerometer	LSM6DS3 6-axis IMU (I2C @ 0x6B)
Interface	Single button (active-low with pull-up) + motion sensing

Functional Capabilities

Maximum Dice	8 simultaneous dice
Roll History	Last 6 rolls retained in flash memory
Configuration Storage	All settings automatically saved to non-volatile memory

DIGITAL DICE

Perfect for tabletop games,

decision making, and any time

you need a fair random roll.

Key Features:

✓ All settings automatically saved

✓ Roll history preserved

✓ Low-power deep sleep mode

✓ Shake-to-roll capability

✓ Up to 8 dice simultaneously