

# Gamepad Vibration System for Game Creator 2

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**Version:** 1.0

**Category:** Custom / Vibration



# Overview

**Gamepad Vibration System for Game Creator 2 - PRO** is a Unity asset that enables vibration feedback on any compatible gamepad.

## Features:

- Adjustable low/high motor intensity (left/right).
- Pulsed or continuous vibration with adjustable duration and interval.
- Optional fade-out for natural feel.
- Global intensity multiplier for dynamic scaling.
- Priority system for overlapping vibrations.
- Works with PS4, Xbox, Nintendo Pro, and other Input System-compatible controllers.

## Platform Compatibility Note

This system is designed to work with **Unity Input System on PC platforms**.

It supports:

- PS4 / PS5 controllers
- Xbox controllers
- Nintendo Switch Pro controllers
- Other compatible gamepads


👉 when used on **PC (Editor or Standalone builds)**.

⚠ Console builds (PlayStation, Xbox, Nintendo Switch) may require **platform-specific vibration implementation using native SDKs**.

The controller must be **connected and recognized by Unity**: `Gamepad.current` should not be `null`.

# Prerequisites and Requirements

## Unity and Packages

- **Unity 2020.3 LTS or later** is recommended (for compatibility with the modern Input System).
  - **Input System Package** must be installed:
    - Open **Window** → **Package Manager**
    - Search for **Input System**
    - Install it
  - Enable the Input System:
    - **Edit** → **Project Settings** → **Player** → **Other Settings** → **Active Input Handling**  
→ select **Input System Package (New)** or **Both**
-  If you only use the old Input Manager, these scripts will not work correctly.
- Make sure **Game Creator 2** is installed.

## Important Considerations

- Avoid using **continuous full-intensity vibrations** to prevent player fatigue.
- **GamepadVibrationGC2Manager** handles **overlapping vibrations**, summing intensities and automatically applying fade-out.
- Always test with **multiple controllers** if your game is intended for cross-platform play.

## Component: GamepadVibrationGC2

The component can be added to any GameObject. It allows you to trigger vibrations in response to gameplay events.

### Inspector Settings

#### Vibration Settings

Setting	Type	Range	Description
<b>lowFrequency</b>	float	0 – 1	Intensity of the left (low-frequency) motor.
<b>highFrequency</b>	float	0 – 1	Intensity of the right (high-frequency) motor.
<b>duration</b>	float	>0	Duration of each vibration pulse in seconds.

#### Pulses

Setting	Type	Range	Description
<b>pulses</b>	int	1+	Number of vibration repetitions.
<b>interval</b>	float	≥0	Time between pulses in seconds.

#### Global Intensity

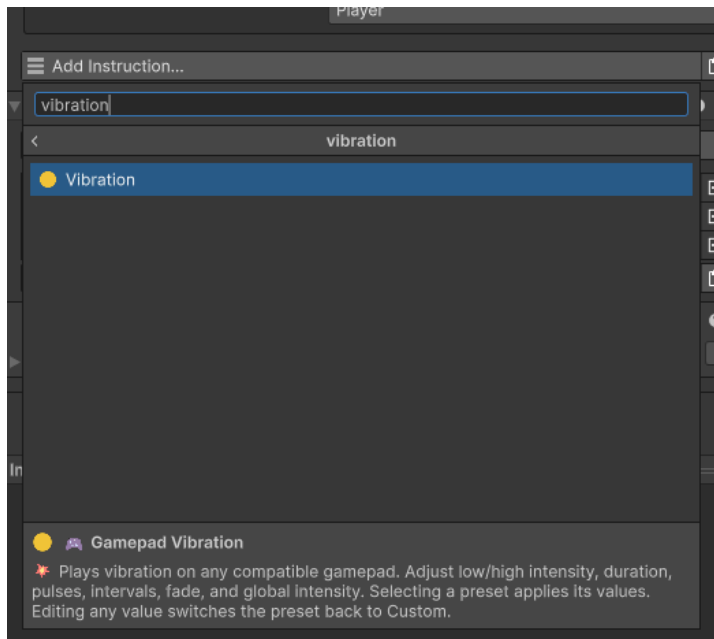
Setting	Type	Range	Description
<b>globalIntensity</b>	float	0 – 1	Multiplier for overall vibration intensity.

#### Fade Out

Setting	Type	Description
<b>fadeOut</b>	bool	Gradually decreases vibration intensity over duration.

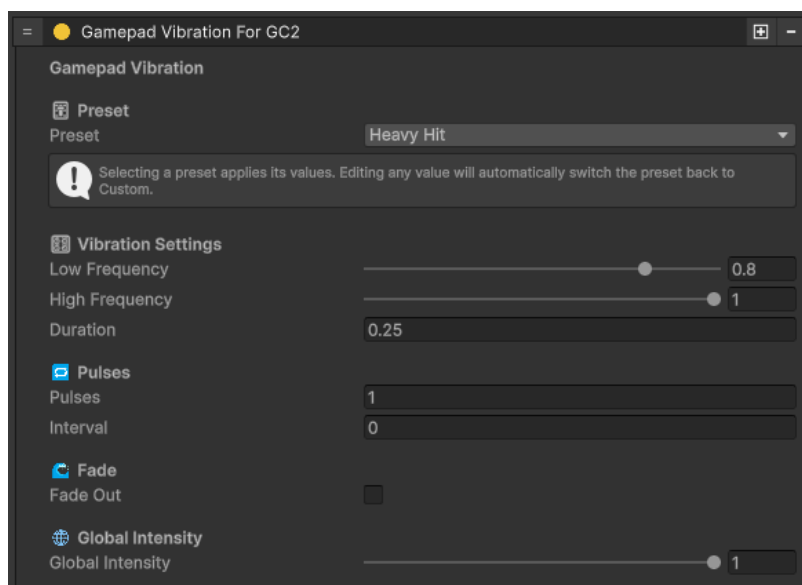
## How to use:

1. Open your **Visual Scripting Graph** (Game Creator 2).
2. Add an **Instruction Node**.
3. From the instruction list, search for **Vibration** and select the Gamepad Vibration For GC2.



## Configure Parameters

### Inspector Settings:



## Recommended Parameters

Action	Low Motor	High Motor	Duration	Pulses	Interval	Fade Out	Notes
Light Hit	0.2	0.5	0.1s	1	0	✗	Small impact feedback
Heavy Hit	0.8	1.0	0.25s	1	0	✗	Strong melee attacks
Explosion	1.0	0.8	0.6s	2	0.1s	✓	Area damage
Heartbeat	0.7	0.3	0.15s	2	0.2s	✗	Low health / suspense
Continuous Danger	0.3	0.3	1s	1	0.1s	✗	Fire, poison, hazards
DOT (Damage Over Time)	0.4	0.4	0.5s	3	0.1s	✓	Bleeding or ongoing damage

Adjust values to match game feel and comfort.

## Tips

- Use **higher frequencies** for sharp impacts (hits, gunshots).
- Use **low frequencies** for heavy or environmental effects (explosions, earthquakes).
- Combine **pulses + interval** for rhythmic effects (heartbeat, danger zones).
- Enable **fade-out** for more natural and immersive feedback.

## Best Practices

1. **Use fade-out for natural feel** on repeated vibrations.
2. **Set priority** for boss attacks or critical events.
3. **Adjust global intensity dynamically** for accessibility.
4. **Limit continuous vibration** to moderate intensity for comfort.
5. **Test across multiple controllers** (PS4, Xbox, Switch Pro, generic).

## Package Contents

- `Scripts/` – `GamepadVibrationGC2.cs`, `GamepadVibrationGC2Manager.cs`, `GamepadVibrationForGC2Drawer.cs`
- `Demo/` – `Demo.unity` (demo of vibration)
- `Documentation/` – `Documentation.pdf` (this manual)
- `Materials/` – Shader and prefab used on demo scene.