# Easy Door System Documentation

# Overview

The **Easy Door System** is a powerful, modular tool designed to simplify door interactions in Unity projects. It supports multiple door types, customizable animations, and a versatile lock and key system, making it perfect for any genre of game. With drag-and-drop prefabs and detailed customization options, developers can integrate seamless door mechanics quickly and effortlessly.

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# 1. Features

**Door Types:**

- **Hinged Doors (Single)**:
  - Rotate via physics or simple transform rotation.
  - Support for auto-opening/closing with customizable speed and angles.
- **Sliding Doors (Single/Double)**:
  - Move horizontally, vertically, or split from the center.
  - Inspired by sci-fi or modern designs.

**Lock and Key System:**

- Lock doors with specific keys.
- Reusable or single-use keys.
- Pop-up UI prompts for locked doors:
  - " Door Unlocked [KeyType] Used" (if the key is available).
  - "Locked: [KeyType] Needed" (if the key is missing).

**Customization:**

- Easy-to-use inspector fields for adjusting door types, triggers, and key types.
- Compatible with custom door models and frames.

**Included Assets:**

- Drag-and-drop prefabs for:
  - Single hinged door.
  - Single sliding door.
  - Double sliding door.
- Bonus **FirstPersonCharacterControllerWithPusher** for testing door interactions.

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# 2. Setup Instructions
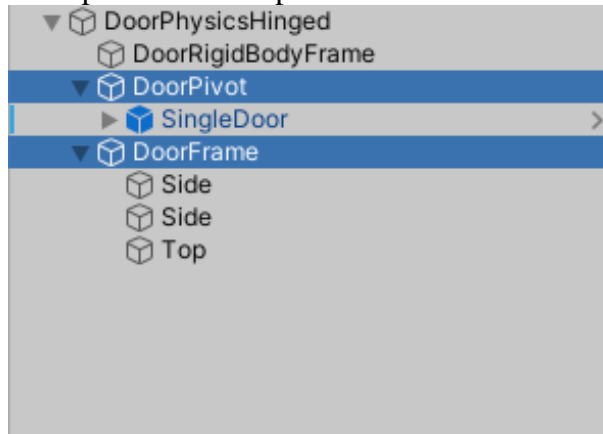
1. **Add the Prefab:**
   - Drag and drop a door prefab into your scene.
   - Place it in the desired location.

2. **Customize the Door:**
   - Open the Inspector panel for the door GameObject.
   - Adjust door type, open/close speed, and or key types etc..

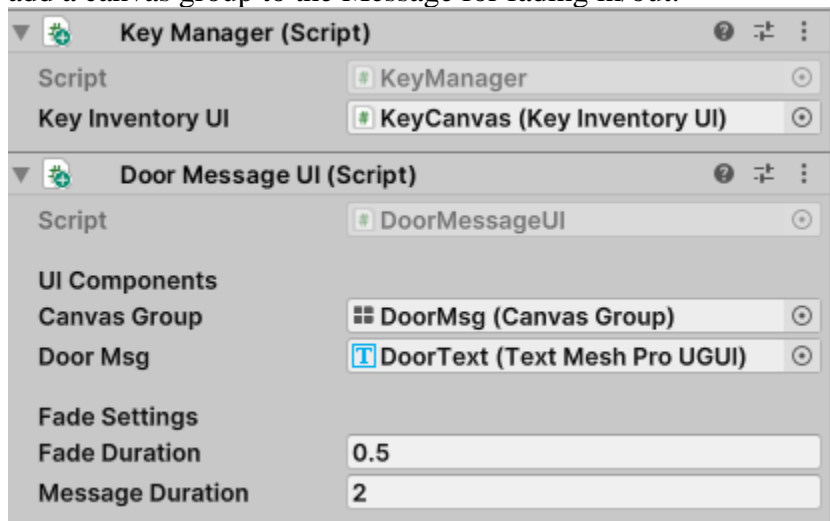| ▼ # ✓ **Door Controller (Script)** | ❷ ⇄ ⋮ |
|---|---|
| Script | # DoorController ⊙ |
| **Set Door Type** | |
| Door Type | Hinge Spring ▼ |
| **Hinge Settings** | |
| Top Joint | 🪣 DoorPivot (Hinge Joint) ⊙ |
| Bottom Joint | 🪣 DoorPivot (Hinge Joint) ⊙ |
| Hinge Motor Force | 100 |
| Hinge Motor Velocity | 90 |
| **General Settings** | |
| Open Angle | 90 |
| Min | 0 |
| Max Out | -90 |
| Max In | 90 |
| Door Pivot | ⬢ DoorPivot ⊙ |
| Is Open | ☐ |
| **Lock and Key Settings** | |
| Key Type | Red |
| Is Locked | ☐ |
| One Use Key | ☐ |
| Aud | ◀ None (Audio Source) ⊙ |
| ▼ Door Clips | 2 |
| = Element 0 | ♫ 321087__benjaminnelan__door-locl ⊙ |
| = Element 1 | ♫ 321085__benjaminnelan__open-do ⊙ |
| | + - |

o Add your own door model as a child of the DoorPivot component being sure to leave the DoorPivot transform, rotation to 0,0,0 and the scale to 1,1,1, use the same procedure to replace the doorframe under the DoorFrame component.
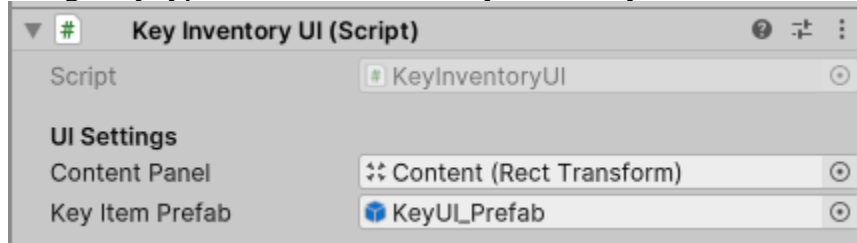
▼ 🔲 DoorPhysicsHinged
　　🔲 DoorRigidBodyFrame
　▼ 🔲 DoorPivot
　　▶ 🔷 SingleDoor　　　　　　　　　　＞
　▼ 🔲 DoorFrame
　　🔲 Side
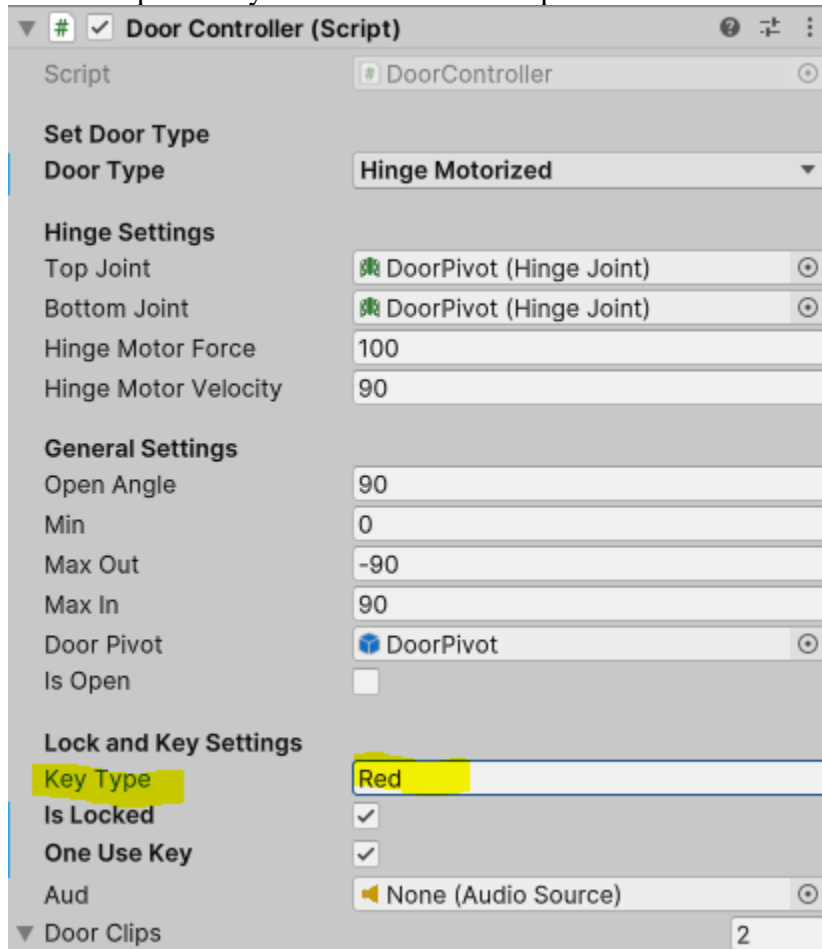　　🔲 Side
　　🔲 Top

o
3. **Add a Lock and Key (Optional):**
   o Attach a `KeyManager` to your player. Assign the Key canvas and add the Door Message UI  component and assign a TextMeshPro Text Component, Be sure to add a canvas group to the Message for fading in/out.

▼ 🔯　**Key Manager (Script)**　　　　　❓ 🎚 ⋮
Script　　　　　　　　　# KeyManager　　　　　⊙
Key Inventory UI　　　　# KeyCanvas (Key Inventory UI)　⊙

▼ 🔯　**Door Message UI (Script)**　　　❓ 🎚 ⋮
Script　　　　　　　　　# DoorMessageUI　　　　⊙

**UI Components**
Canvas Group　　　　　▦ DoorMsg (Canvas Group)　⊙
Door Msg　　　　　　　🔤 DoorText (Text Mesh Pro UGUI)　⊙

**Fade Settings**
Fade Duration　　　　　0.5
Message Duration　　　　2

   o Assign key types and icons to the **Key Inventory UI**.

▼ #　**Key Inventory UI (Script)**　　　❓ 🎚 ⋮
Script　　　　　　　　　# KeyInventoryUI　　　　⊙

**UI Settings**
Content Panel　　　　　✛ Content (Rect Transform)　⊙
Key Item Prefab　　　　🔷 KeyUI_Prefab　　　　⊙

  o Set the required key for the door in its inspector.



4. **Test the Interaction:**
  o Enter Play Mode and approach the door with your player.
  o Test both locked and unlocked scenarios to ensure proper functionality.

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# 3. Inspector Fields

**Door Script Settings:**

- `Door Type`: Hinged or sliding.
- `Open Speed`: How quickly the door opens/closes.
- `Trigger Area`: The collider that triggers door interaction.

**Key System Settings (Optional):**

- `Key Type`: The specific key (string value of key) needed to unlock the door.
- `UI Prompt`: Customize the message displayed to the player.

# 4. Bonus Features

- **FPS Controller with Pusher**:
  - Included as a free bonus for testing door interactions.
  - Easily swap out for your preferred controller.
- **Pop-Up UI System**:
  - Dynamically displays door-related messages.
  - Fully customizable and player-friendly.

# 5. Benefits

- **User-Friendly**: Designed with developers in mind for quick integration.
- **Highly Customizable**: Works with any door model or frame.
- **Scalable**: Easily adaptable to projects of any size or complexity.

# 6. Additional Notes

- This system is designed to work seamlessly with Unity's physics and transform movement.
- For advanced setups or unique use cases, refer to the included example scenes.

# 7. License

The Easy Door System is provided as a commercial asset. Redistribution or resale outside the Unity Asset Store is prohibited without prior permission.

# 8. Support

For further assistance, please visit **ConAirGames.com** or email **support@currently.com**. Detailed tutorials and example projects are available for download.