Unity Parkour Animations Asset

None

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1. Overview

Parkour Animations is a unity package for Unity 2019+, but should work with all Unity versions that support the Humanoid animation type.

This package contains a complete set of 60+ Root Motion Animations (and In-Place versions for each, as appropriate) for realistic, dynamic, fast-paced parkour.

At first release, Root Motion Animation counts (not counting any mirrored or sprint/run variations) are as follows:

- Miscellaneous (landing, tricks, midair, etc) - 15
- Vaults (climbing/jumping over obstacles) - 13
- Mantles (cllmbing/jumping onto a platform) - 6
- Ledges (ledge grabs, jumps, and drops) - 9
- Walls (tic-tac's, wall jumps) - 16

Important

While there are demo scenes, supporting scripts, and a skinned character model included, this asset is purely an animation pack. No character or animator controllers are included beyond what is shown in the demo videos.

The package also includes: * One Skinned Character model with a face mask and blue hair * Demo scenes showing off many of the animations and demonstrating use of built-in Unity Hand IK to match hands up with obstacles and platforms. These are simply provided for demonstration and learning purposes, and aren't presented as a tutorial or guide of any kind.

Note

NOTE: This is not a generic locomotion package and does not contain walking, running, sprinting animations beyond one sprint loop and one idle loop for use in the demo scenes.

There is no affiliation between this package/publisher and Kubold, but this package was independently built to match up well with and compliment Movement Animset Pro

This pack is growing, with more animations to be added periodically based both on planned additions and user feedback (see Discord link below to give feedback)!

For support and requests, use our Discord or email threepeatgames@gmail.com.

1.1 Naming conventions

Animations are typically named as follows:

- [action description]-[entry pose or animation]-to-[exit pose or animation]
- Looping animations will typically only include [action-description]

1.2 Recommendations

1.3 Movement Animset Pro Integration

Movement Animset Pro (MAP) is highly recommended:

- Sprint (sprint-loop-smooth) and Idle (parkour-idle) animations are provided, but MAP's sprint and idle animations are far superior
- All sprint animations are built to match up with MAP's SprintFwdLoop animation
- All run animations are built to match up with MAP's RunFwdLoop animation
- All idle animations are built to match up with MAP's Idle animations
- MAP contains great stationary hard landing to idle, and sprint/run start and stop animations.

1.4 Achieving Realistic/Good Results With These (or any) Animations

Root Motion and In-Place animations are provided, as appropriate, but two important factors in achieving realistic results with parkour animations are:

- Motion Warping
- Hand and Foot Inverse Kinematics (IK)

1.4.1 Motion Warping

> **Important**
>
> This asset contains NO motion warping functionality.

In a broad sense, motion warping is the act of modifying the root motion of an animation event to better match the environment and specific usage. For example, if the user is running towards an obstacle and presses a button to parkour vault over that obstacle, there are several variables that drive a realistic looking animation event:

- Distance to the obstacle
- Height of the obstacle
- Available space beyond the obstacle to complete the maneuver
- Difference in ground height between the characters starting location and on the far side of the obstacle

Motion warping solves the problem of adjusting the position of the character during the animation to match well with the environment.

Motion warping can take several forms:

- Purely implemented in script to directly modify your character model's Transform
- Direct modification of the Root Motion curves in the animations themselves (only do this on a duplicated animation and always make backups!)
- Use of an asset with motion warping capabilities. Two such assets are Motion Matching for Unity (which includes a powerful and highly customizable motion event system) and Game Creator 1 (which contains motion warping aspects in the Traversal and Melee modules). At the time this assets publication, no dedicated motion warping assets yet exist on the unity store.

Often, motion warping is enough to get hands and feet to properly line up with the ground, obstacles, platforms, and walls, but when it isn't, Hand and Foot IK can help solve that last mile towards realism and connectivity/immersion with the environment.

1.4.2 Hand and Foot IK

Hand and Foot IK allows you to specify a target location for an extremity (like a hand or a foot; also known as an "effector") along with the amount you want the extremity to be pulled to that target location. This amount is the IK weight, which is [0,1], were 0 means no IK is being performed, and 1 means the effector will be locked to the target, pending the feasibility of that action given the location of the rest of the character. There are many great tutorials on Youtube regarding IK

in Unity, and Final IK is highly recommended, but the DemoQuickRun scene in **Assets/Plugins/Threepeat/Scenes** demonstrates the use of IK to put the character's hands onto the obstacles during mantle actions.

1.5 Support

Please let us know via discord or email if you experience any issues with the pack or if there are any improvements that can be made. Discord is also the best way to learn about our upcoming animation packs and motion-matching-based locomotion and parkour controllers.

For support and requests, use our Discord or email threepeatgames@gmail.com.