

Moving platforms character controller

A smooth controller for mecanim that supports moving platforms. The character automatically exerts realistic forces on the platform. The controller also shows a clever way of using animation layers to blend animations, e.g. the crouch layer have access to all the WASD animations.

The character will walk on, and follow, any collider or trigger. The character will exert realistic force on any object it can walk on, if the object has a rigidbody component and is not tagged "DontForceMe".

Setup

Perform the steps in the list below. To your help there is an example scene included in the package, with a character already set up.

- Change the file InputManager.asset file in the ProjectSettings folder to the input manager included in the InputManager folder. Change the extension on the old file from .asset to .old and on the new file from .changeToExtensionasset to .asset.
- Add, to your character, an Animator component, a valid avatar, and the AnimatorMP RuntimeAnimatorController. Check box Animate physics. Press play and check that the character is stomping in idle.
- Add scripts HashIDs, AnimatorController and GetWASD. Press play and check that you can move in all directions and turn slowly.
- Add the SimpleFootIK script and assign the character's hips to the masterRootBone in the inspector. Add a footstep sound to the audio source. Press play and check that auto assigning of the legs was completed. If auto assigning failed: Uncheck box autoAssignLegs and assign legs manually in the inspector.
- Add the MoveTransform script.

parameters

There are a few parameters for you to tune the controller to your liking. For most applications the parameters are good as delivered.

In the GetWASD script you may set the mouse sensitivity and the speed for the walk, run and sprint animations. The SimpleFootIK script has parameters for the footstep sound volume and smoothing of the feet motion. You may also limit the maximum step height and the maximum angle of the feet. The moveTransform script allow you to set the mass and moment of inertia of your character. The jump speed is adjustable and the parameter slopeJump is a setting for how much the characters vertical speed before the jump is affecting the jump speed.

Best wishes
Patrik
Lead developer

This is beta. There may be some loose ends that you will have to fix yourself. There is no rigidbody on the example character so it will run straight through walls.