

This document explains how the Auto Footstep plugin works and how to set it up.

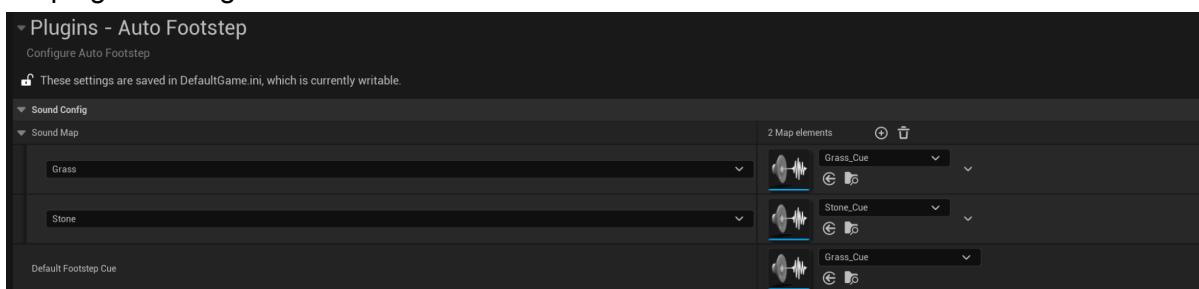
## Introduction

Auto Footstep is a plugin for Unreal Engine 5 that automatically detects when a foot touches the ground, made in C++ and designed to be used from Blueprint.

The system contains several configuration variables that allow tweaking it to match your needs, from multiple feet to how the ground detection works.

## General Configuration

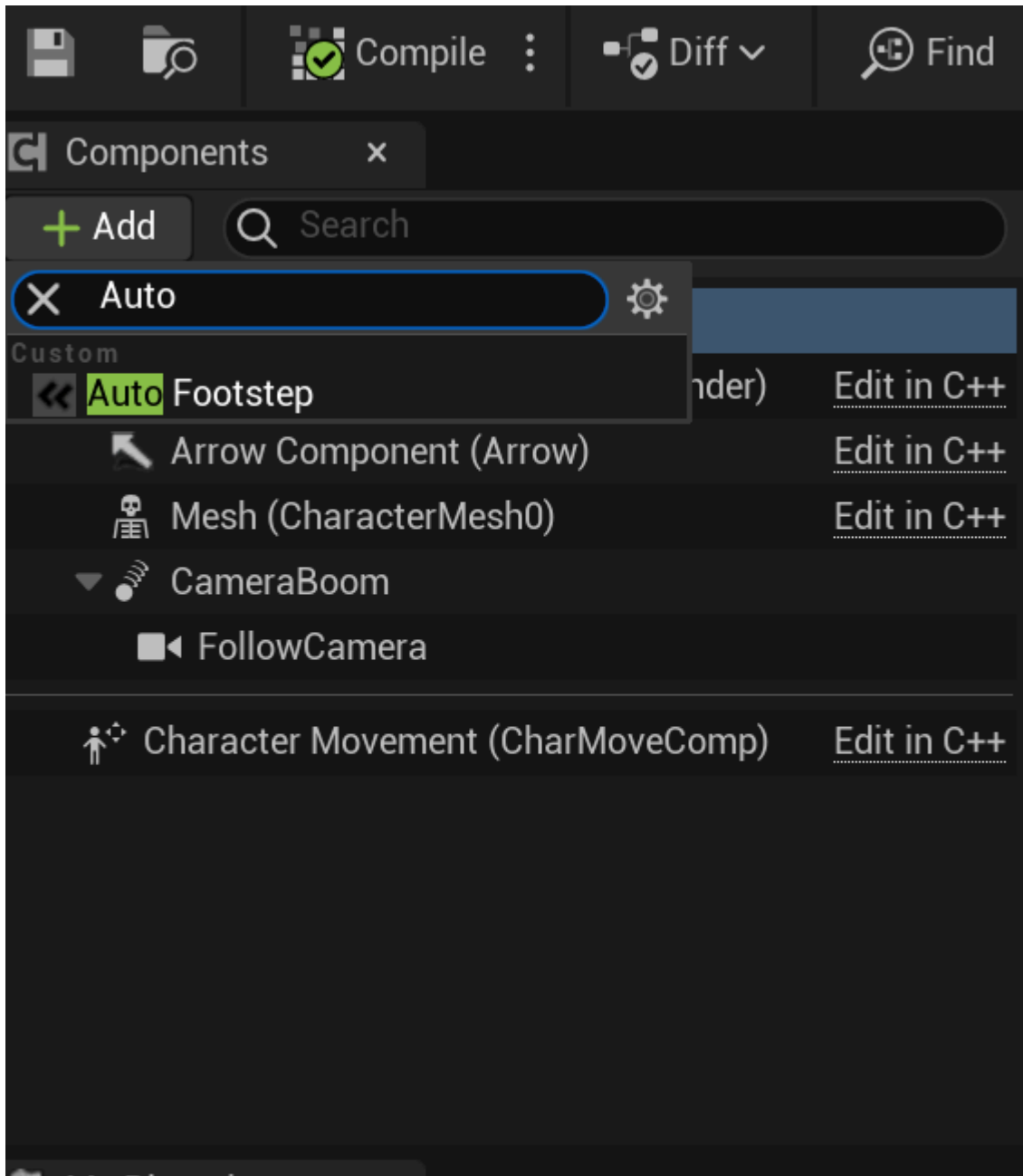
The plugin can be configured in the Project Settings, go to “Edit -> Project Settings...”, then scroll down to the “Plugins” section until you find “Auto Footstep”, click on it and you’ll see the plugin’s configuration.



Sound Map allows setting up different sound cues based on the detected physical surface. Default Footstep Cue is the sound that will be played on ground detection if no physical surface is found or if physical surface detection is disabled.

## Usage

To use the system, create a new character or use an existing one, add a new component and search for “Auto Footstep”.



Now in the details panel look for “Footstep Detection Data”, configure the “Foot Socket Name” for each of your character’s feet and adjust its Socket Offset, check the “Draw Debug” to draw the sphere overlaps while playing so you can tweak the Socket Offset to your character, it should barely touch the ground.



If your character's skeletal mesh component name is different from the default, adjust it in the "Target Mesh Component Name" property.

The other properties can usually be left as default, if required they can be tweaked to match your character and improve ground detection.

## Component Details Panel

The component's details panel contains the following properties that can be configured:

- Footstep Detection Data:
  - Foot Socket Name: name of the skeletal mesh socket for the foot.
  - Socket Offset: offset location to apply to the overlap for ground detection in world space.
  - Collision Detection Radius: radius of the sphere used for ground detection.
  - Overlap Check Distance: how much distance between overlaps to perform an overlap (lower values yield more accurate results but impact performance).
- Footstep Delay Between Triggers: how much time to wait for each independent foot between footstep detections.
- Trigger Footstep Sound: uses the built-in system to trigger sound cues configured in Project Settings.
- Check Physical Material: performs an additional check on ground detection to determine the physical material of the ground.
- Draw Debug: allow drawing debug sphere overlaps on each foot.
- Target Mesh Component Name: name of the skeletal mesh component to use.
- Collision Channels: collision channels to use for ground detection.
- Actors to Ignore: array of actors to ignore during ground detection.

▼ Footstep Properties			
▼ Footstep Detection Data		2 Array elements	↩
▼ Index [ 0 ]		4 members	▼ ↩
	Foot Socket Name	foot_l	
	▼ Socket Offset	0.0	0.0 -8.0 ↩
	X	0.0	
	Y	0.0	
	Z	-8.0 ↩	
	Collision Detection Radius	5.0	
	Overlap Check Distance	1.0	
▼ Index [ 1 ]		4 members	▼ ↩
	Foot Socket Name	foot_r	
	▼ Socket Offset	0.0	0.0 -8.0 ↩
	X	0.0	
	Y	0.0	
	Z	-8.0 ↩	
	Collision Detection Radius	5.0	
	Overlap Check Distance	1.0	
	Footstep Delay Between Triggers	0.5	
	Trigger Footstep Sound	<input checked="" type="checkbox"/>	
	Check Physical Material	<input checked="" type="checkbox"/>	
▼ Debug			
	Draw Debug	<input checked="" type="checkbox"/> ↩	
▼ Mesh Properties			
	Target Mesh Component Name	CharacterMesh0	
▼ Collision Channels		2 Array elements	
	Index [ 0 ]	WorldStatic	▼
	Index [ 1 ]	WorldDynamic	▼
▼ Mesh			
	Actors to Ignore	0 Array element	