

FPS Animated Weapon Pack

This pack contains three PBR guns, rigged and animated for use in first person shooters. All textures are 4096x4096. Each weapon has a demonstration animation controller and scripts. All scripts are heavily commented to be easily understandable.

If you have any questions or concerns you can contact the developer at blacklight28@gmail.com

Getting Started

Setting up the demo scene:

- Import the **First Person Character** from the **Unity Standard Assets**.
- Open the demo scene and drag in the **FPSController** prefab.
- On the **FirstPersonCharacter** object's camera component:
 - Change the *Near Clipping Plane* to **0.025**.
 - You can also change the *Field of View*. The weapons should work with anything between **60** and **90**.
- Drag and drop the prefabs from the FPS Weapons folder into the scene as children of the camera of FPSController. Ensure that their rotation matches the camera (all zeros) and their position is **X: 0, Y: -0.3** and **Z: 0**.
- Ensure that the weapons are inactive in the scene. Uncheck the checkbox next to their names in the Inspector.
- Add **WeaponController.cs** to the Camera.
- Click Play to start the demo.
 - Use **LMB** to shoot, **RMB** to aim, **R** to reload, and **TAB** to switch weapons.

Models and Animations

Each weapon has an animated mesh with arms and a separate static mesh. The static meshes have been divided up into multiple parts and include bullets and shell casings.

For best results position the animated weapon **0.3** units **below** the camera.

Each weapon includes animations for movement and multiple animations for shooting (both from the hip and while aiming). Some weapons have special animations for different functions.

Pistol Animations

- Idle
- Walk
- Run
- Aim
- Shoot
- AimShoot
- Raise
- Lower
- Jump
- Land

- Reload01
- Reload02
- SlideStop

SMG Animations

- Idle
- Walk
- Run
- Aim
- Shoot Semi-auto
- AimShoot Semi-auto
- Shoot Auto
- AimShoot Auto
- Raise
- Lower
- Jump
- Land
- Reload
- Uncocked

Shotgun Animations

- Idle
- Walk
- Run
- Aim
- Shoot
- AimShoot
- Raise
- Lower
- Jump
- Land
- Reload Start
- Reload Single
- Reload Finish

The pistol's *SlideStop* and SMG's *Uncocked* animations are used as visual indicators to show when the weapon is empty. These animations are played on a masked layer of the animation controller that overrides the base animations. These animations are referred to as *Empty Magazine* animations in this documentation.

The SMG has two variants of shooting animations: automatic and semi-automatic. Both sets are similar, however the automatic animations are slightly shorter for use with a high rate of fire.

The shotgun has three reload animations that are designed to be used together. *Reload Start* plays at the beginning of a reload. It leads into *Reload Single*, a looped animation that contains an event that adds to the magazine every time the animation is played. When the *WeaponScript* detects an interruption to the reload or when the magazine is full, *Reload Finish* is played.

Each shooting animation also contains an animation event to spawn a casing at the correct time and to check if the *Empty Magazine* animations should be played.

The animations that require animation events have been duplicated to allow them to be edited within Unity. The *ReadOnly* versions have **_RO** on the end of their names. *ReadOnly* versions will not save any animation events added to them when you close Unity.

Scripts

WeaponController.cs

This script demonstrates weapon switching. It activates and deactivates the weapons as the player switches between them, playing appropriate animations.

Weapons	This is an array of the player's weapons.
CurWeapon	Integer uses to determine the currently equipped weapon in <i>Weapons</i> array.

WeaponScript.cs

This script handles weapon's animation controller and is designed to work with two reload types.

Au_Shot	The audio clip to be played when shooting
Mag Size	Maximum size of the magazine
Mag	The current ammo in the magazine
Load Type	Which reload type to use. <i>Magazine</i> mode will fill the magazine in one go. <i>Single</i> will add one bullet at a time. This requires more animation.
Rof	Rate of fire. This is the delay between shots.
Automatic	Determines whether the weapon will fire continuously if the trigger is held down, or fire only once with each trigger pull.
Acceleration	The speed at which the movement animations change.
Casing	The casing prefab.
Casing Spawn	Child object of the weapon that determines where the casing should be spawned.
Casing Force	Relative force that is applied to the casing.

CasingScript.cs

This script is designed to work with *WeaponScript*. When a casing is created by the *WeaponScript*, it is parented to the weapon object. This is to prevent the casing from passing through the weapon model if the player happens to be moving when shooting. *CasingScript* detaches the casing's parent after a short delay so it can properly interact with the world.

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