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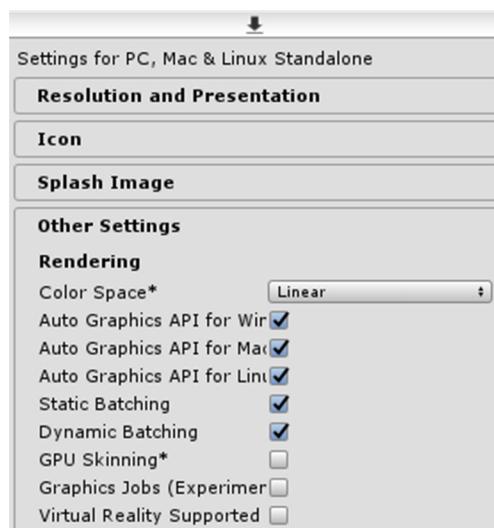
Thank you for buying **Low Poly FPS Pack!**

This guide goes through the basics of the asset and how to use it, feel free to contact me if you have any questions (contact information can be found at the end of this guide).

## Lighting

To get the best looking lighting I would recommend using the **Linear Color Space**, you can change this by going to **Edit > Project Settings > Player**, and under **Other Settings** change the **Color Space** from **Gamma** to **Linear**.

More information about color space can be found on Unity's tutorial page:  
<https://unity3d.com/learn/tutorials/topics/graphics/choosing-color-space>

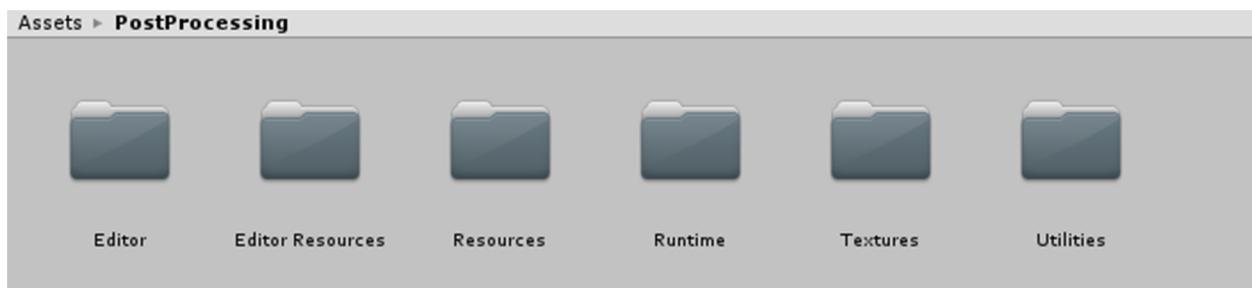


# Image Effects (Optional)

For the promotional images and trailer video I used image effects from Unity's **Post Processing Stack**, which can be found on the Unity Asset store for free! This step is optional but I will go through the settings I used. (If you don't wish to use image effects from the post processing stack you can skip this step.)

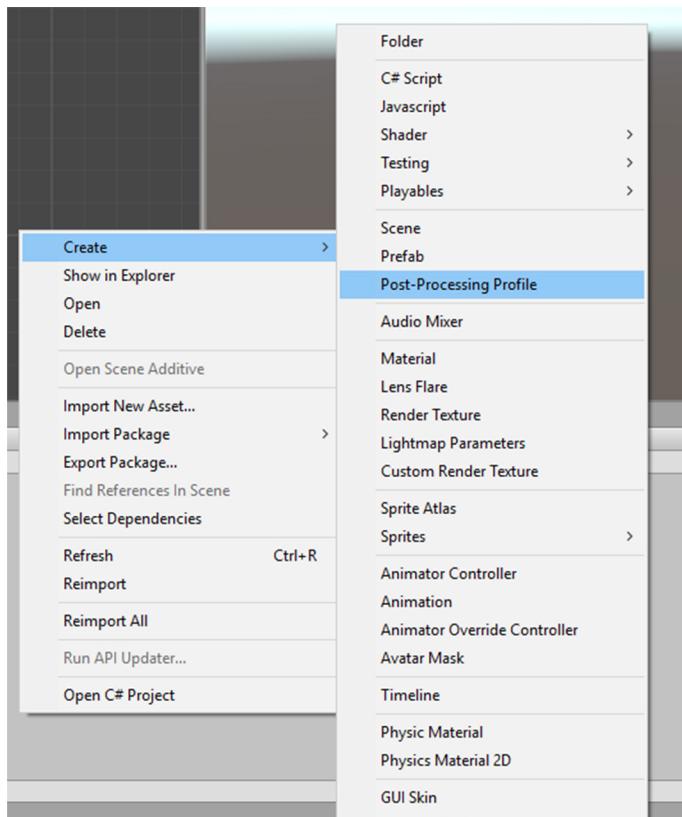
## 1. Import Post Processing Stack

First import the post processing stack from the Unity Asset Store:



## 2. Create A New Post-Processing Profile

When the post processing stack has finished importing, create a new post processing profile by right clicking inside the folder area and choose **Create > Post-Processing Profile**.



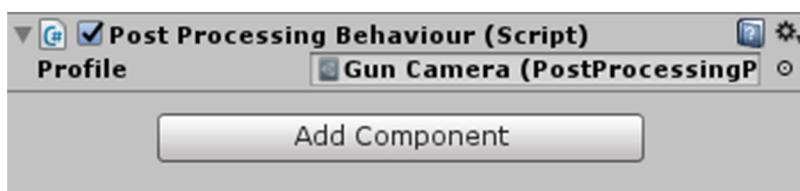
# Image Effects (Optional)

## 3. Add Post-Processing Profile To The Camera

Give the new post-processing profile a name, then go to the camera that you wish to use and add the **Post Processing Behaviour** script included with the post processing stack.



In the post processing behaviour script, assign the profile you just created.

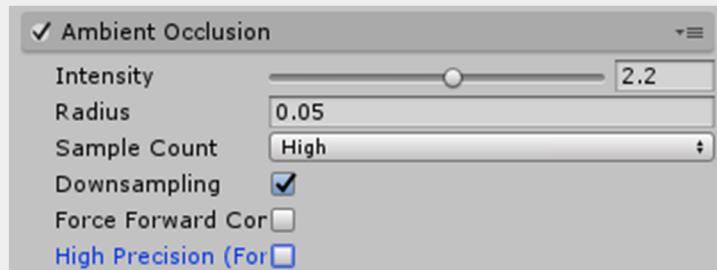


## 4. Image Effects Settings

Select the post-processing profile in the folder and go to the inspector to change the settings, these are the values and settings that I used:

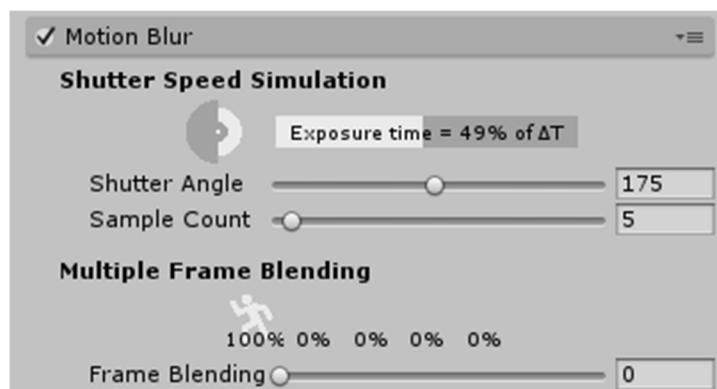
### 5. Ambient Occlusion

- Intensity : **2.2**
- Radius: **0.05**
- Sample Count: **High**



### 6. Motion Blur

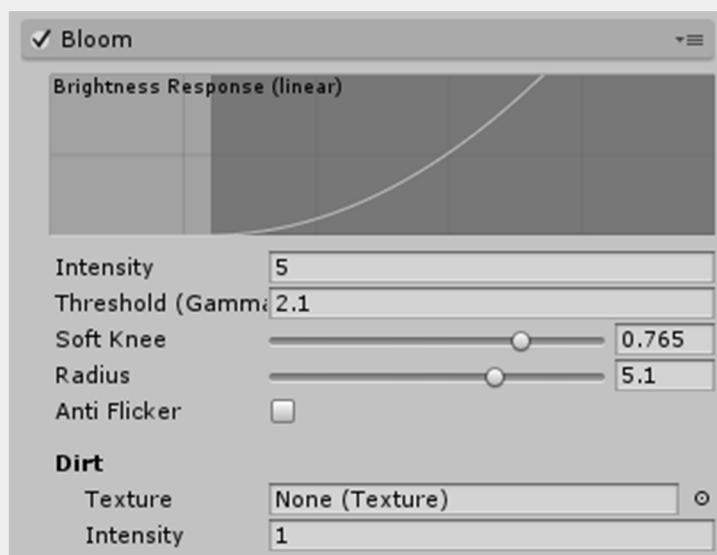
- Shutter Angle: **175**
- Sample Count: **5**
- Frame Blending: **0**



## Image Effects (Optional)

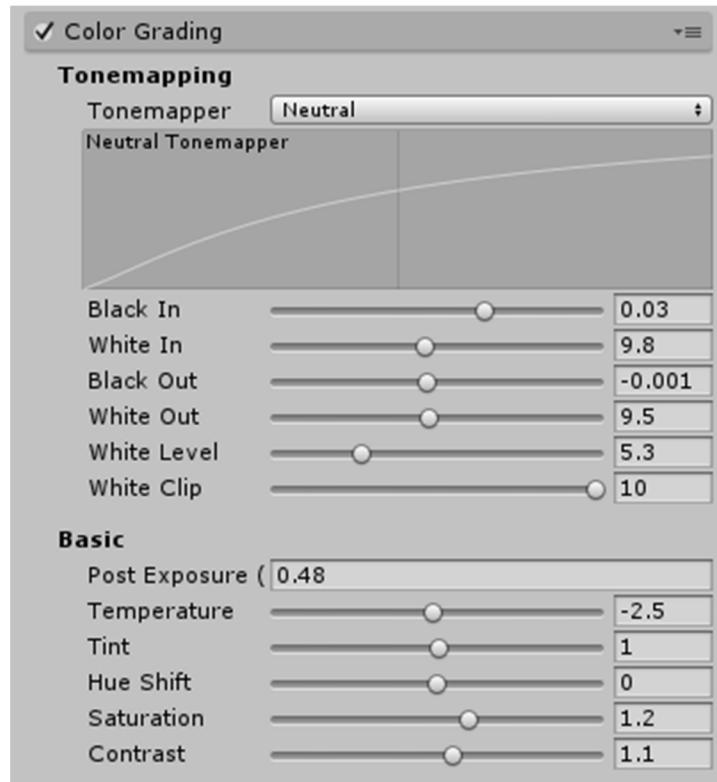
### 7. Bloom

- Intensity : **5**
- Threshold: **2.1**
- Soft Knee: **0.765**
- Radius: **5.1**



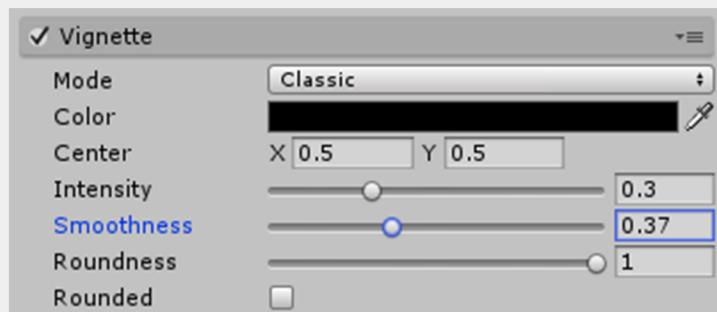
### 8. Color Grading

- Tonemapper: **Neutral**
- Black In: **0.03**
- White In: **9.8**
- Black Out: **-0.001**
- White Out: **9.5**
- White Level: **5.3**
- White Clip: **10**
  
- Post Exposure: **0.48**
- Temperature: **-2.5**
- Tint: **1**
- Hue Shift: **0**
- Saturation: **1.2**
- Contrast: **1.1**



### 9. Vignette

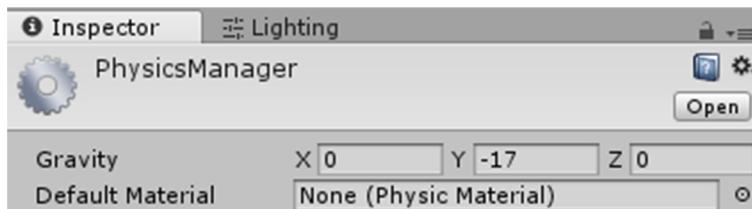
- Mode: **Classic**
- Color: **Black**
- Center: **X 0.5, Y 0.5**
- Intensity: **0.3**
- Smoothness: **0.37**
- Roundness: **1**



# Gravity Settings

The gravity settings are important to get the casing physics looking right. The value that I used is **-17** on the y axis, to change the gravity settings, go to **Edit > Project Settings > Physics**, and in the gravity settings, set the **Y** value to **-17**.

(You can try with different values to see what looks best.)



# Tags

The bullet prefab uses different tags to detect what object it has collided with, this is also used for the demo scene prefabs, such as the explosive barrel, gas tank, and target. To add these tags, in the inspector, click on the **Tag** drop down menu, and go to **Add Tag**.

Add these tags:

## - ExplosiveBarrel

(Used on the explosive barrel prefab in the demo scenes.)

## - GasTank

(Used on the gas tank prefab in the demo scenes.)

## - Target

(Used on the target prefab in the demo scenes.)

## - Metal

(Used to spawn the metal impact prefab when the bullet collides with objects.)

## - Blood

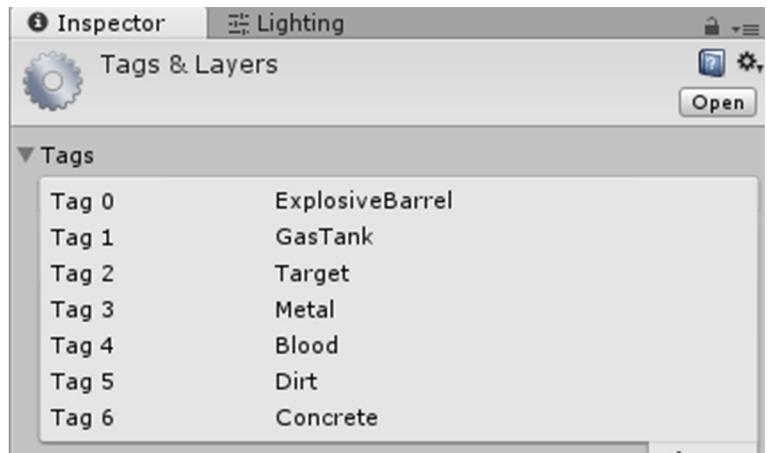
(Used to spawn the blood impact prefab when the bullet collides with objects.)

## - Dirt

(Used to spawn the dirt impact prefab when the bullet collides with objects.)

## - Concrete

(Used to spawn the concrete impact prefab when the bullet collides with objects.)



# Using The Example Prefabs

This asset comes included with many example prefabs, these can be found in the folder **Prefs > Example\_Prefabs > Arms**, they are set-up with scripts and a basic fps controller, ready to use.



To start using them, click and drag any of the example prefabs from the folder into your scene view. Go into play mode to test them.

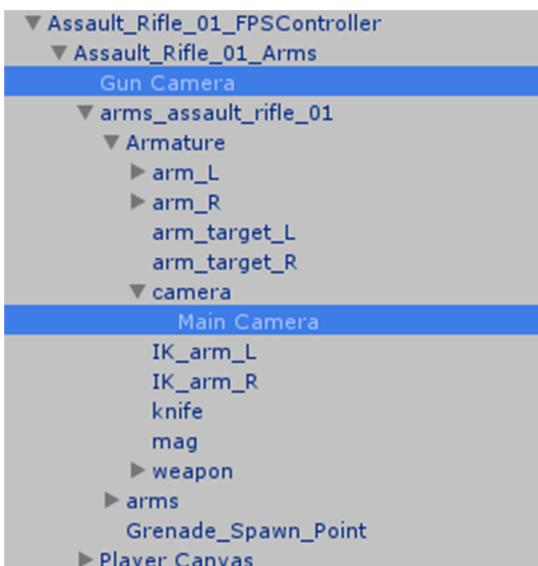


## Layers

The arm model in the example prefab is assigned to a layer called **WeaponLayer**.

This will make it appear as if the weapon and arm model is always on the top layer, useful for not having the weapon clip through objects, but also allows us to use a different field of view value for the weapon and arm model. If you wish to use a different field of view value you can change the **Default FOV** value in the gun scripts.

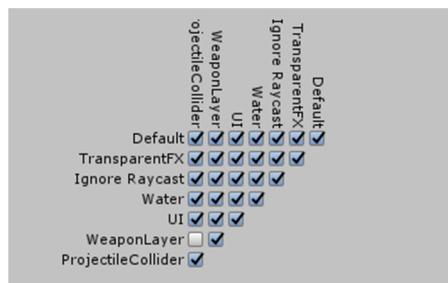
The example prefabs are set-up using two render cameras. The **Gun Camera** is used to display only the weapon and arm model, and only renders the **WeaponLayer**. The **Main Camera** is used to render everything else.



### Layer Collision

To avoid having the bullet and projectiles collide with the fps controller, they use different layers, make sure that **WeaponLayer** and **ProjectileCollider** does not collide.

To check this, go to **Edit > Project Settings > Physics**.



# Controls

The default controls for all the gun prefabs are:

## Timescale

You can change the timescale value using the number keys 1-5.

- **Number 1** key to set normal timescale.
- **Number 2** key to set 50% timescale.
- **Number 3** key to set 25% timescale.
- **Number 4** key to set 10% timescale.
- **Number 5** key to set 0% timescale (pause game).

## Movement

- **Mouse** to look around.
- **WASD** keys to walk.
- **W key + Left Shift** to run.
- **Space Bar** to jump.

## Weapon

- **Left Click** to shoot.
- Hold **Right Click** to aim.
- **R** key to reload.
- Press **T** key to inspect weapon.
- Press **E** key to holster weapon, and **E** key again to take out weapon.

## Melee

- **F** key to use knife attack 1.
- **Q** key to use knife attack 2.

## Grenade

- Press **G** key to throw a grenade.



# Using Scopes & Attachments

This asset also comes included with scopes and attachments, the main gun scripts have customizable scope and attachment functionality.

The example prefabs already have the scopes and attachments set-up and ready to use, they can be enabled and disabled in the main gun script attached to the weapon.

## How It Works

The script loads all the settings at start, so all changes to the attachments should be done in edit mode.

In order for the animations to work properly, only one scope should be enabled at a time, this can be done by checking the **Scope 1-4** booleans.

If you wish to use the iron sights, enable **Iron Sights** and make sure no scope is currently enabled.

If you want the iron sights to be visible while using a scope, enable **Always Show Iron Sights**, if you want to hide them while using a scope, disable it.

There is also a silencer attachment that can be enabled by checking the **Silencer** boolean.

### Scope 1-4 Texture

This is the sight texture used for the scope effect, you can use this to customize the scope, the scope texture sprites can be found in the folder

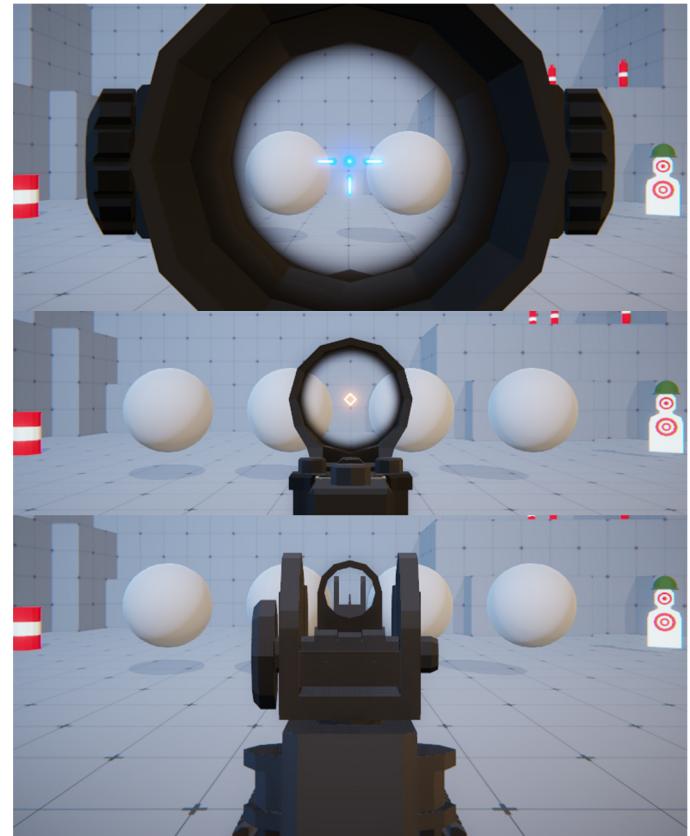
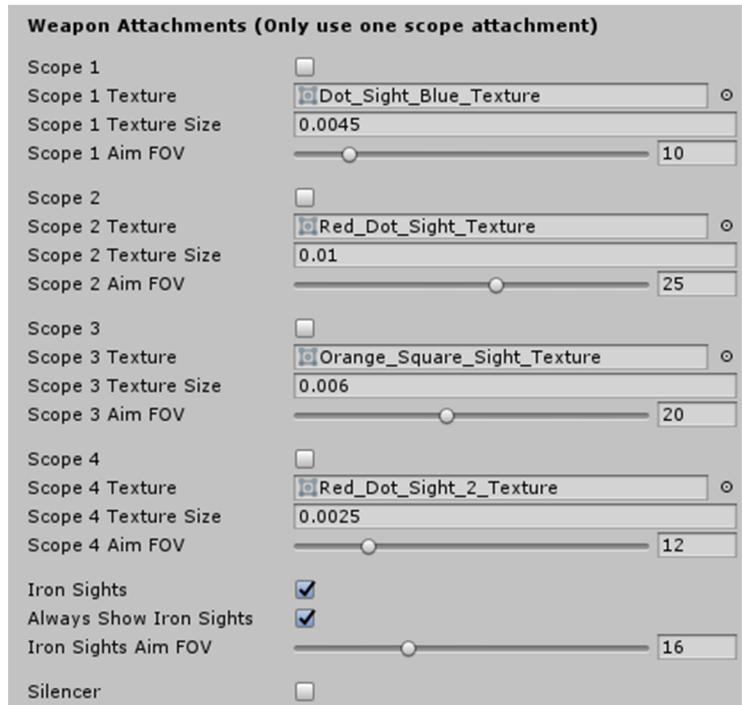
**Components > Textures\_&\_Sprites > Scope\_Textures.**

### Scope 1-4 Texture Size

This value modifies the scale of the sight texture, increase the value to make the sight bigger.

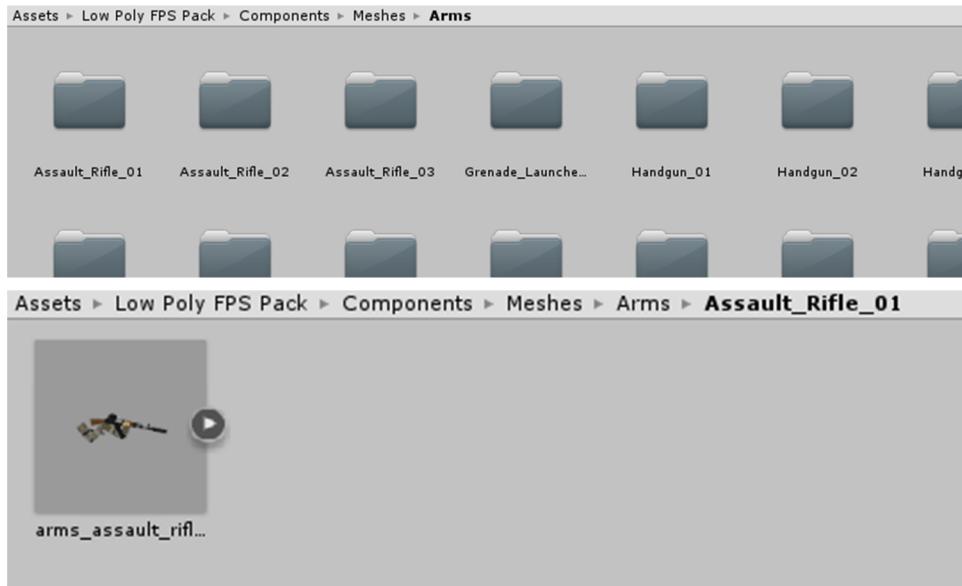
### Scope / Iron Sights Aim FOV

This value is used when aiming, a lower FOV value will make the scope appear more zoomed in/closer to the camera (This value only affects the **Gun Camera**).

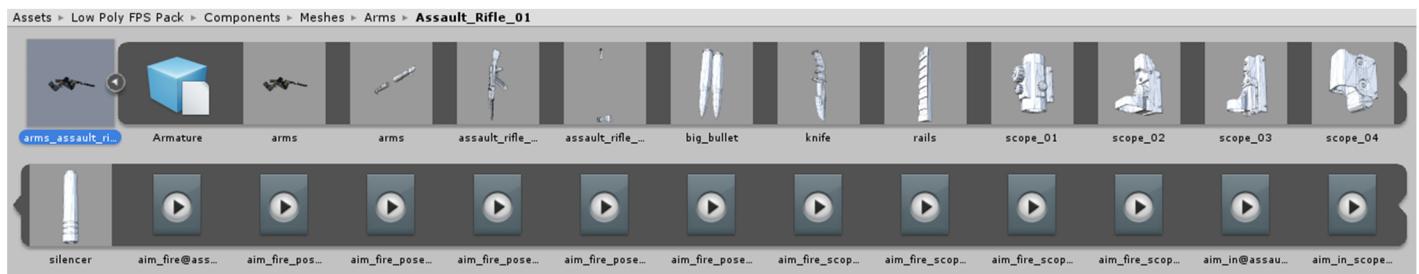


# Using Models & Animations

If you wish to use the models and animations separately, they can be found in the folder **Components > Meshes > Arms**. The gun models are also separate, and can be found in the folder **Components > Meshes > Guns**.



The animations are attached to each arm model, they can be found by selecting the arm model, and expanding it by clicking the arrow icon.



## Animation List

You can also see the full list of animations by selecting the arm model, and going to the **Animations** tab in the inspector.

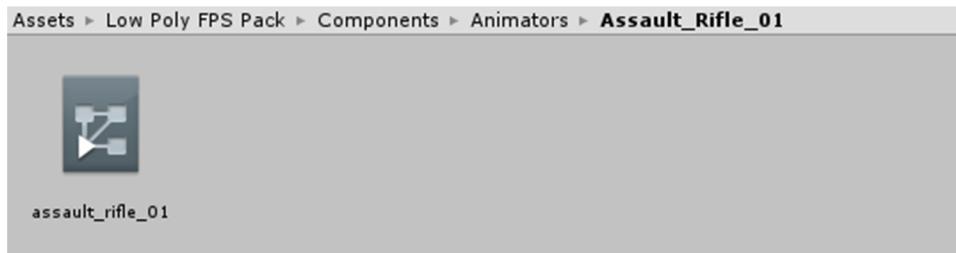
By default all animations use this naming convention:  
**animation\_name@weapon\_name\_00**

Clips	Start	End
aim_fire@assault_rifle_01	1.0	8.0
aim_fire_pose@assault_rifle_01	0.0	1.0
aim_fire_pose_scope_01@assault_rifle_01	0.0	1.0
aim_fire_pose_scope_02@assault_rifle_01	0.0	1.0
aim_fire_pose_scope_03@assault_rifle_01	0.0	1.0
aim_fire_pose_scope_04@assault_rifle_01	0.0	1.0
aim_fire_scope_01@assault_rifle_01	1.0	8.0
aim_fire_scope_02@assault_rifle_01	1.0	8.0
aim_fire_scope_03@assault_rifle_01	1.0	8.0
aim_fire_scope_04@assault_rifle_01	1.0	8.0
aim_in@assault_rifle_01	1.0	10.0
aim_in_scope_01@assault_rifle_01	1.0	10.0
aim_in_scope_02@assault_rifle_01	1.0	10.0
aim_in_scope_03@assault_rifle_01	1.0	10.0
aim_in_scope_04@assault_rifle_01	1.0	10.0
aim_out@assault_rifle_01	1.0	12.0
aim_out_scope_01@assault_rifle_01	1.0	12.0
aim_out_scope_02@assault_rifle_01	1.0	12.0

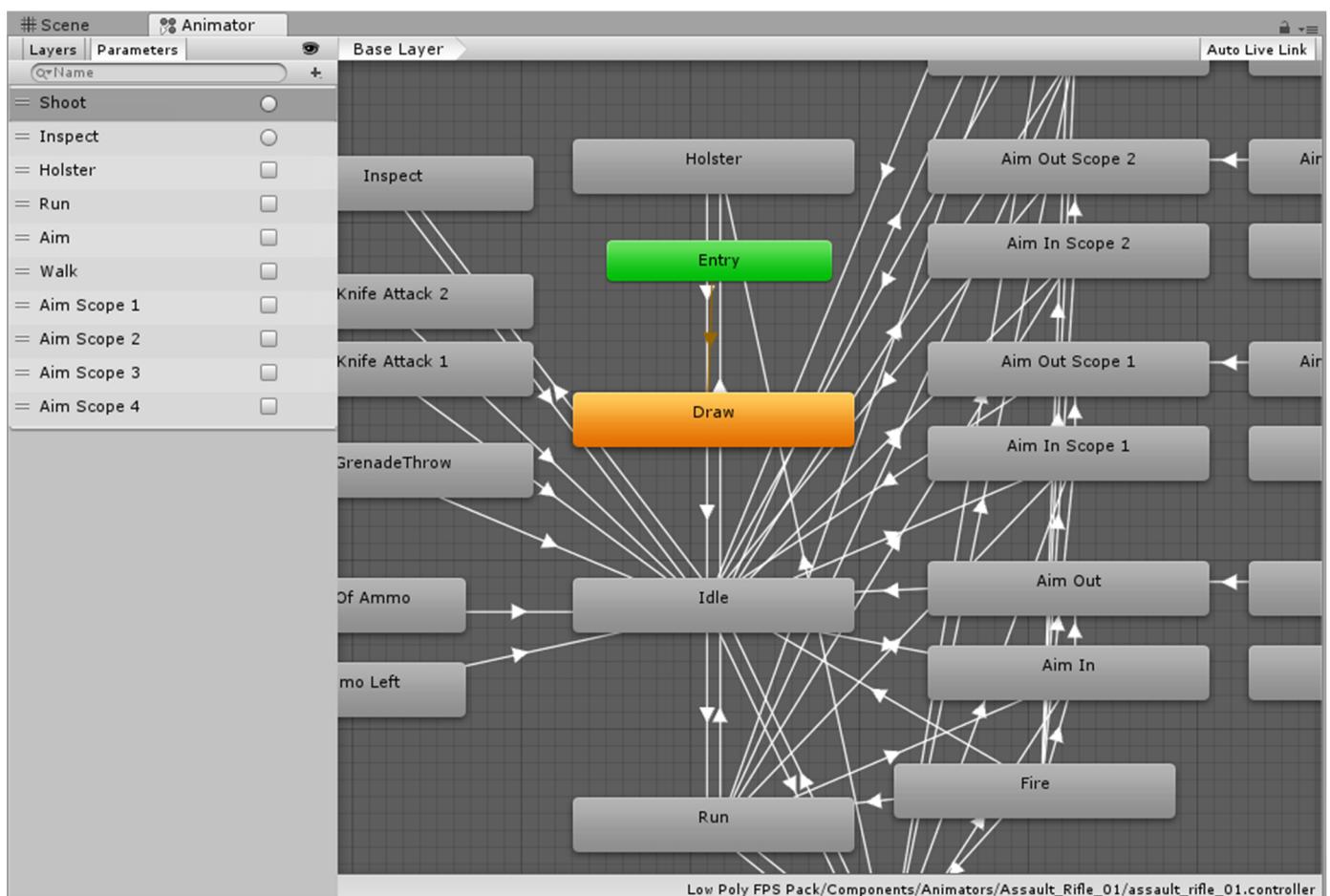
# Using Models & Animations

## Animator Controllers

The example prefabs use animator controllers to handle all the animations, they can be found in the folder **Components > Animators**.



Open the animator controller to see how it can be used for the different animations:

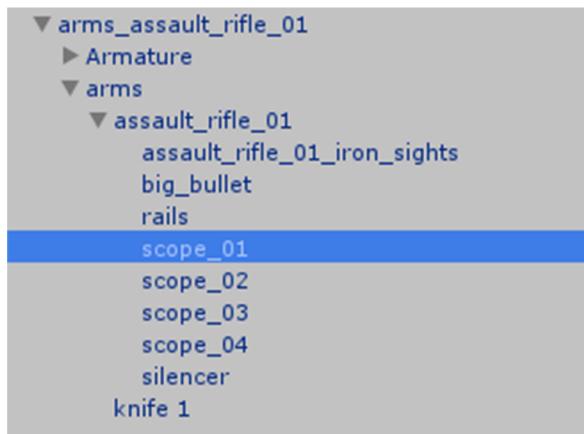


Have a look at the included example prefabs to see how the animator controllers and animations can be used.

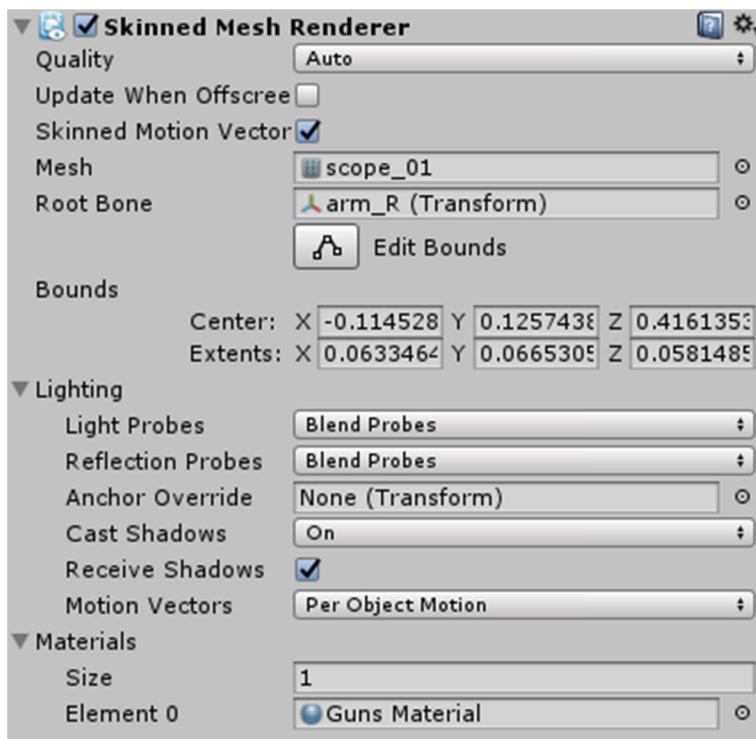
# Using Models & Animations

## Hide & Show Weapon Attachments

When importing the arm models into your scene all the attachments will be visible by default, you can hide them by expanding the arm model in the hierarchy and finding the attachment renderers under **arms**.



Select the attachment that you wish to hide, and in the inspector simply disable the **Skinned Mesh Renderer** component, this will hide the selected attachment, have a look at the example prefabs to see how this can be used.



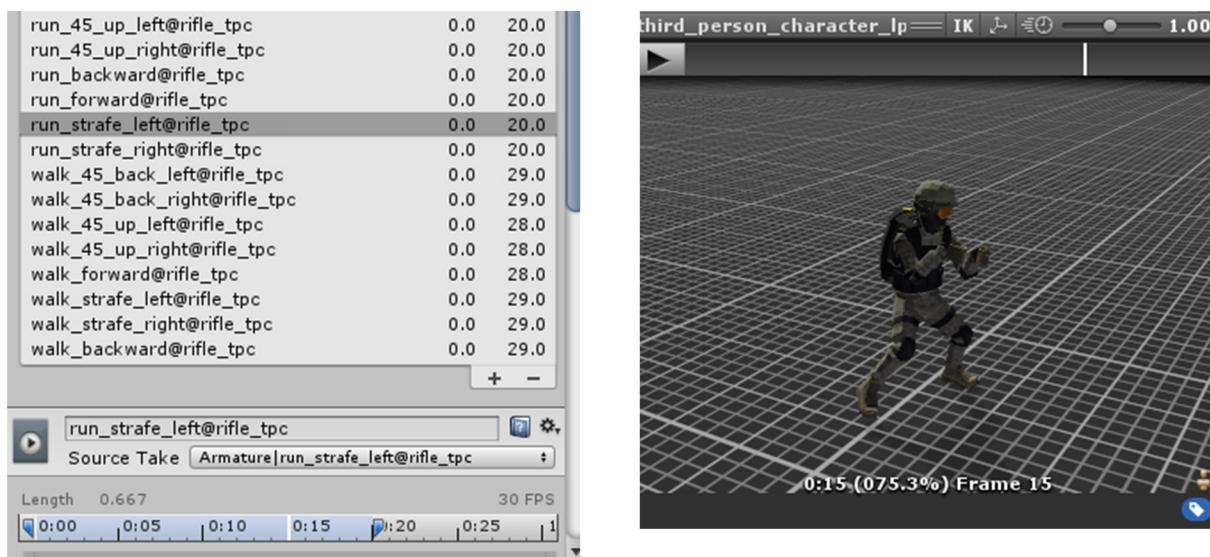
# Using The Third Person Character Model

In version 3.2 a third person character model has been added, this can be found in the folder **Low Poly FPS Pack > Third\_Person\_Character > Components > Meshes > Character**. The character model is using a humanoid type rig, and is mecanim ready, meaning that any humanoid type animations can be used with the model.

## Included Animations

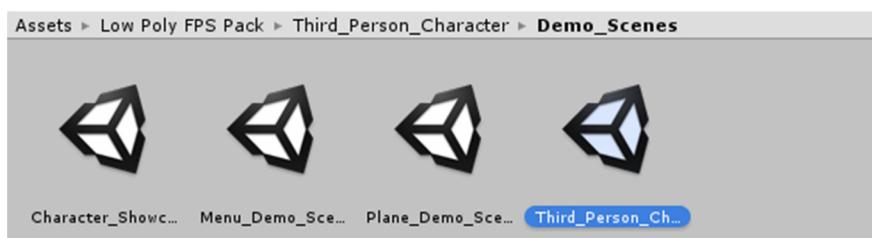
The character currently comes included with animations for the rifle and handgun weapon, they can be found in the folder **Low Poly FPS Pack > Third\_Person\_Character > Components > Animations**. The animations consist of basic movement animations such as running, walking, strafing, jumping, and also shooting and reloading.

To preview the animations, select the .fbx file and select an animation clip from the inspector, then hit the play button in the preview window.



## Using animations on the character model

To use the animations on the character model you first need to create an animator controller, the asset comes included with a demo scene to get you started, it can be found in the folder **Low Poly FPS Pack > Third\_Person\_Character > Demo\_Scenes > Third\_Person\_Character\_Demo\_Scene.unity**.



In the scene, select the third person character model and open the Animator window, it has a simple animator controller attached, with the basic run animations assigned, this is an example of how the animations can be used with the character.

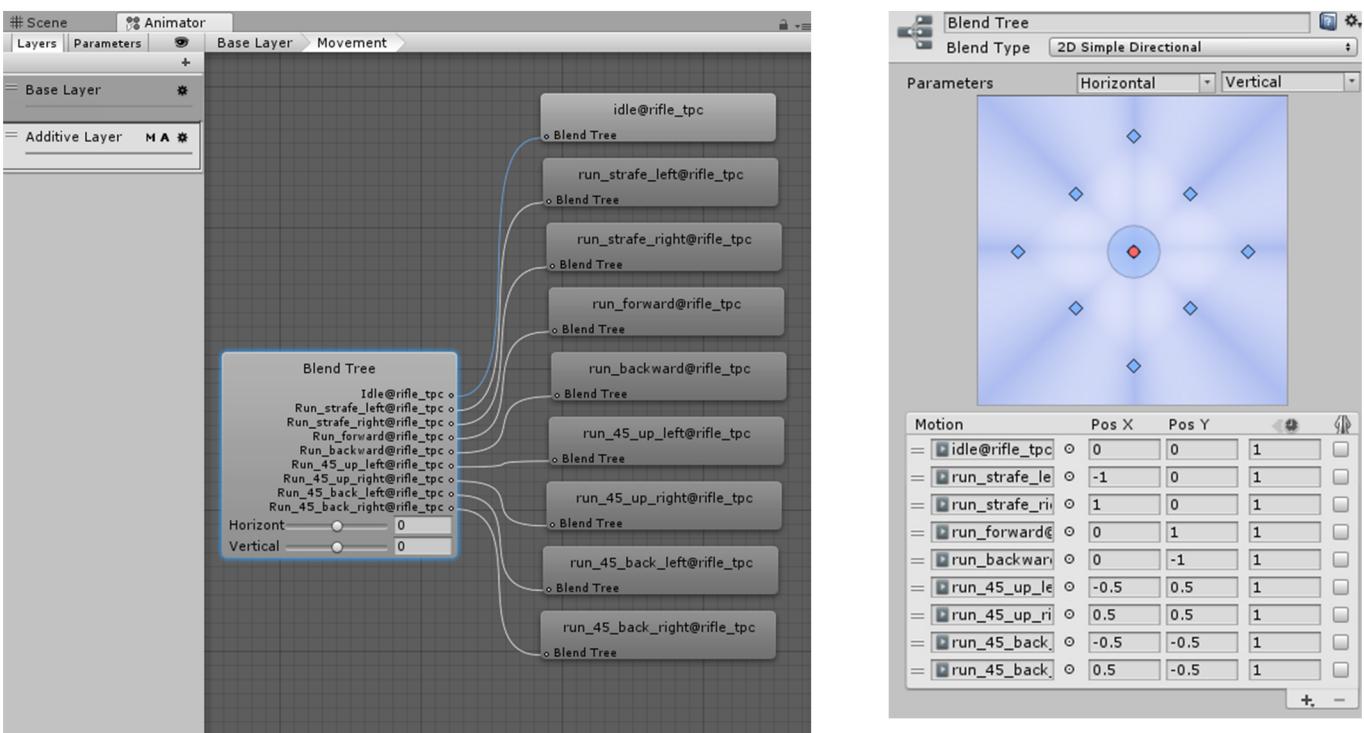
# Using The Third Person Character Model

## Assign Animations

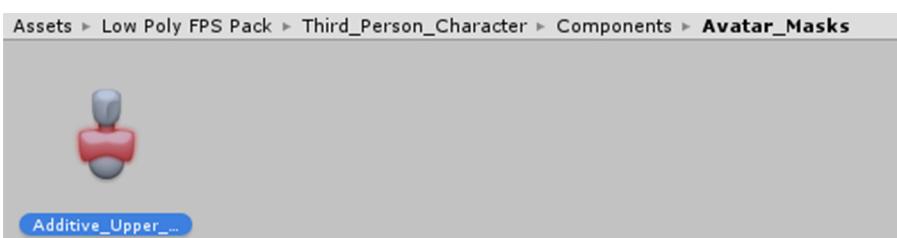
To assign animations to the animator controller you can simply drag and drop them from the animation file (expand the animation file by pressing the arrow next to it, this will display all the animation clips), or search for them by name.



The animator controller in the demo scene is set-up using a blend tree, this can be used to blend between the different animation clips and create nice seamlesss transitions.



The animator controller also uses a secondary additive layer that is played on top of the base layer, this is used for animations such as reloading, grenade throwing, and shooting. The additive layer has an avatar mask assigned to it, the avatar mask is used to define which bones should be affected by the animations on the additive layer.

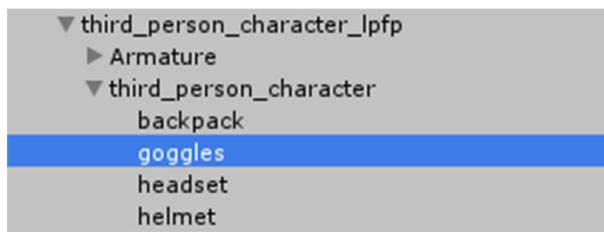


# Using The Third Person Character Model

## Character Props & Attachments

By default the character model has a few different props attached to it, these include: Backpack, helmet, goggles and headset. These can be toggled on and off by disabling the **Skinned Mesh Renderer** component attached to them in the inspector.

The props can be found in the character model hierarchy, under **third\_person\_characer\_lpfp > third\_person\_character**.



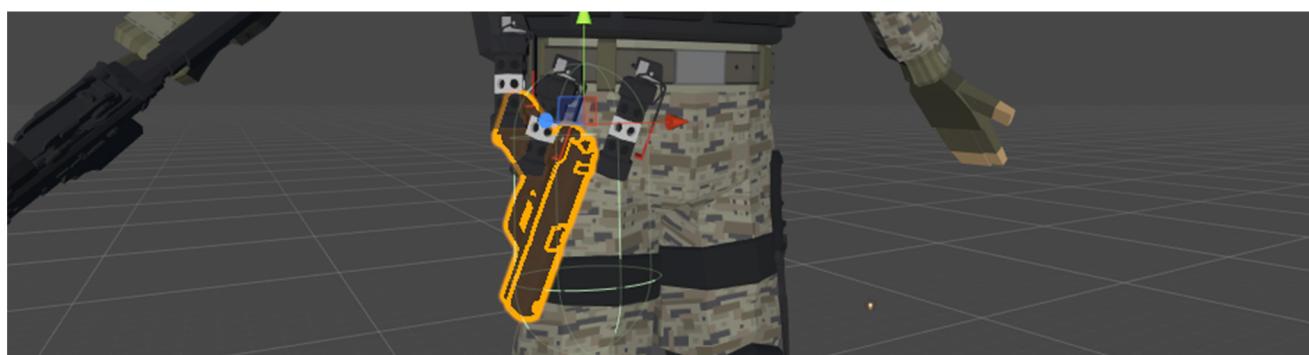
## Attaching Weapons & Objects To The Character

Any 3D-model can be attached to the character, for example if you want to attach a different weapon to the right hand, you can drag and drop a model to the right hand bone in the character hierarchy. The right hand bone can be found in the character rig, under:

```
↓ Armature
↓ root
↓ hips
↓ spine
↓ chest
↓ shoulder_R
↓ upper_arm_R
↓ lower_arm_R
↓ hand_R
```

```
↓ third_person_character_lpfp
↓ Armature
↓ root
↓ hips
↓ spine
↓ chest
↓ neck
↓ shoulder_L
↓ shoulder_R
↓ upper_arm_R
↓ lower_arm_R
↓ hand_R
↓ f_index_01_R
↓ f_middle_01_R
↓ thumb_01_R
↓ Assault_Rifle_02
```

You can also attach objects to the backpack by placing them under the “spine” or “chest” bone, or attaching a handgun to the leg by placing it under the “upper\_leg\_R” bone, and so on. Have a look at the included demo scenes to see examples on how it can be done.



# Using The Third Person Character Model

## Using The Demo Scenes

The asset comes included with four different demo scenes for the third person character model. For the promotional images and videos I have used the **Post Processing Stack** from **Unity** to give them a more cinematic look. (See page 2 on how to import and use the post processing stack).

### Post Processing Settings:

These are the settings I have used for **Plane\_Demo\_Scene** and **Menu\_Demo\_Scene**:

#### 1. Ambient Occlusion

- Intensity: **1**
- Radius: **0.075**
- Sample Count: **High**

#### 2. Motion Blur

- Shutter Angle: **270**
- Sample Count: **10**
- Frame blending: **0**

#### 3. Bloom

- Intensity: **4**
- Threshold: **1.18**
- Soft Knee: **0.518**
- Radius: **6.47**
- Anti Flicker: **Yes**

#### Dirt

- Texture: (Lens dirt texture included with the post processing asset)
- Intensity: **6**

#### 4. Color Grading

- Tonemapper: **Neutral**
- Black In: **0.014**
- White In: **4.5**
- Black Out: **0.026**
- White Out: **10.6**
- White Level: **15.4**
- White Clip: **10**

#### Basic

- Post Exposure: **1.5**
- Temperature: **-12**
- Tint: **-5**
- Hue Shift: **0.5**
- Saturation: **0.8**
- Contrast: **1.32**

#### 5. Chromatic Aberration

- Intensity: **0.2**

#### 6. Vignette

- Mode: **Classic**
- Center: **x0.5, y0.5**
- Intensity: **0.28**
- Smoothness: **0.645**
- Roundness: **1**



# Using The Third Person Character Model

## Using The Demo Scenes - Character Controller Example

The asset also comes included with a demo scene showing how the third person character can be used, it is called **Third\_Person\_Character\_Demo\_Scene**. You can go into play mode to test a few of the different animations.



The controls for **Third\_Person\_Character\_Demo\_Scene** are:

Movement Animations:

- Press **W** key to play "run\_forward"
  - Press **E** key to play "run\_45\_up\_right"
  - Press **D** key to play "run\_strafe\_right"
  - Press **X** key to play "run\_45\_back\_right"
  - Press **S** key to play "run\_backwards"
  - Press **Z** key to play "run\_45\_back\_left"
  - Press **A** key to play "run\_strafe\_left"
  - Press **Q** key to play "run\_45\_up\_left"
- 
- Press **T** key to play "idle" animation

Weapon:

- **Left Click** to shoot
- Hold **Right Click** to zoom in
  
- **R** key to play reload animation

Grenade:

- Press **G** to throw a grenade

# Contact & Support

## Need Support?

Send me an email including your invoice number, and I will get back to you as soon as possible!

### Email

[davidstenfors.contact@gmail.com](mailto:davidstenfors.contact@gmail.com)

### Website

<https://www.davidstenfors.com/#!/contact>

## Have suggestions or feedback?

Leave a post in the Unity forum thread, link can be found in the asset store description.

## Twitter

Follow me on twitter to see what I'm currently working on!

@DavidStenfors

## Youtube

Subscribe to me on youtube:

[www.youtube.com/DavidStenfors](https://www.youtube.com/DavidStenfors)