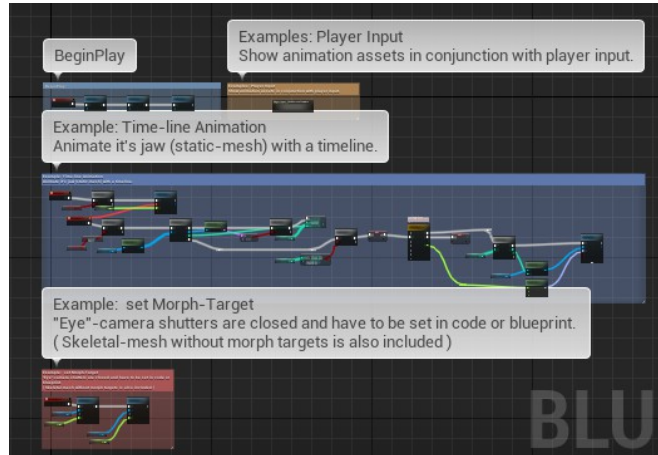


# Robot Rifleman

## Character Blueprint



The blueprint includes a few examples, attachments, and a third person template. Built as a foundation to support the art assets, and to work in conjunction with player input.



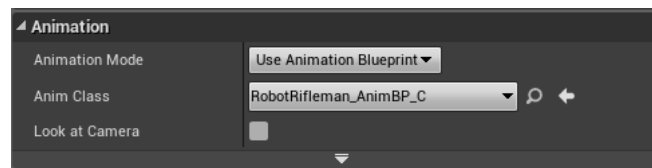
When you first add the character to a new scene it will be the plain robot frame without any attachments. The rifle can be equipped by the player (see Inputs).

### Details Menu

*Most new things in details is rather self explanatory.*

### Animation

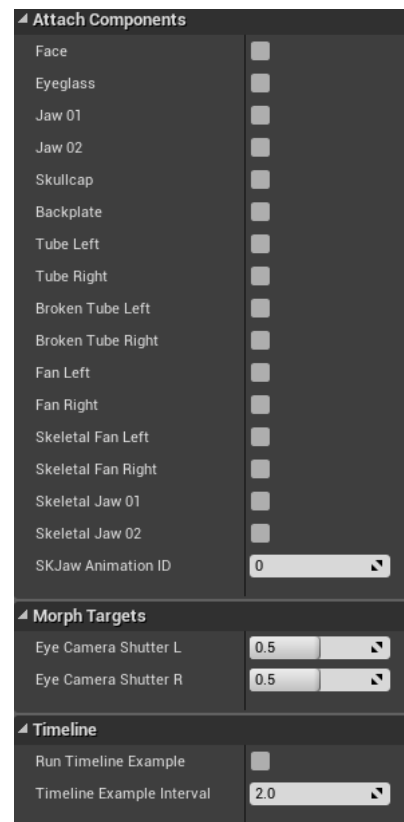
'Look at Camera'. This will make the robot look into the camera when possible.



### Attach Components

Attach static and skeletal meshes to the character.

Note: *If nothing happens when trying to select an item, its slot is taken by an item with higher priority.*



### Morph Targets

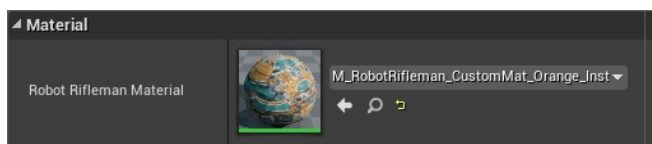
Set camera shutters value from closed to open. Simple example located in the event graph.

### Timeline

Animate jaw static mesh components within a timeline. Example located in event the graph.

### Material

To make the material changes on all parts of the character, the material has to be set in a variable under the 'Material' category.

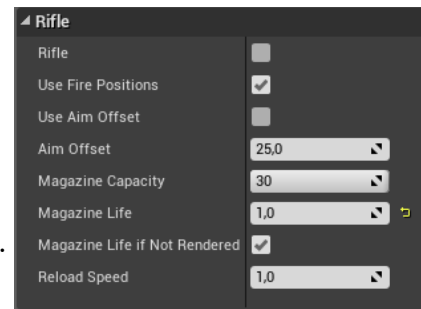


## Rifle

Rifle: Character starts with its rifle equipped.

### Use Fire Positions:

The character comes with specific poses when firing the rifle, these are called fire positions in this blueprint and can be used instead of the standard animations while aiming and shooting.



### Aim Offset:

Without aim offset (default), the character will always default its pitch to zero, disregarding the camera. 'Use Aim Offset' to begin aiming in the same direction as the camera is looking (both in yaw and pitch). It's inconvenient to look at the characters behind to aim in front of it. That's why it can offset the aim in degrees, 25.0 is the default.

### Magazine Capacity:

Number of rounds in the magazine.

*The last five rounds in the magazine will disappear as they are fired.*

### Magazine Life:

Set life spawn (how many seconds it will remain until destroyed) on dropped magazines, any negative value will let them remain.

### Magazine Life if Not Rendered:

Magazine life is only going to count down overtime when the magazine actor isn't rendered.

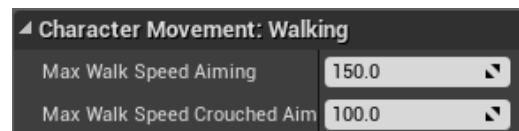
*If interrupted, it has to begin from the beginning, again.*

### Reload Speed:

Change reload speed.

## Character Movement: Walking

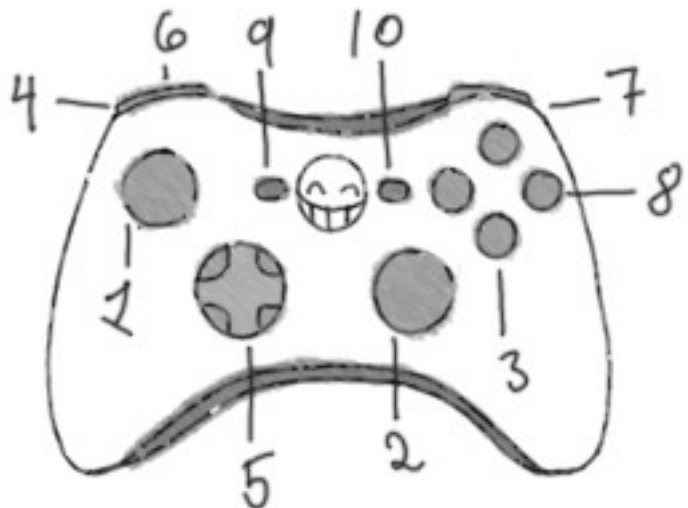
Two custom variables have been added to change max walk speed and max walk speed crouched to a different value when aiming.



## Inputs

Inputs are set in project configuration .ini

- |                  |                        |
|------------------|------------------------|
| 1. Move          | [ W A S D ]            |
| 2. Look          | [ Mouse Axis ]         |
| 2. Fire selector | [ F ]                  |
| 3. Jump          | [ SPACE ]              |
| 4. Crouch        | [ Left Shift ]         |
| 5. Equip Rifle   | [ E ]                  |
| 6. Aim           | [ Right mouse button ] |
| 7. Shoot         | [ Left mouse button ]  |
| 8. Toggle Crouch | [ C ]                  |
| 9. Lock Aim      | [ X ]                  |
| 10. Toggle Aim   | [ Z ]                  |



# Robot Rifleman

## Materials



### Custom character material

Includes a range of different customizable parameters for color, metallic, roughness, and emissive. Almost any surface type can be altered with a parameter except for chrome, rubber, and small plastic parts.

### Basic character material

The less expensive alternative to the custom material. It includes a color map instead of layered masks, and a basic setup for roughness and metallic with parameters for the metal hull, edge wear, plastic cover, and springs.

*Tip: Image masks for creation of new color/albedo- maps included.*

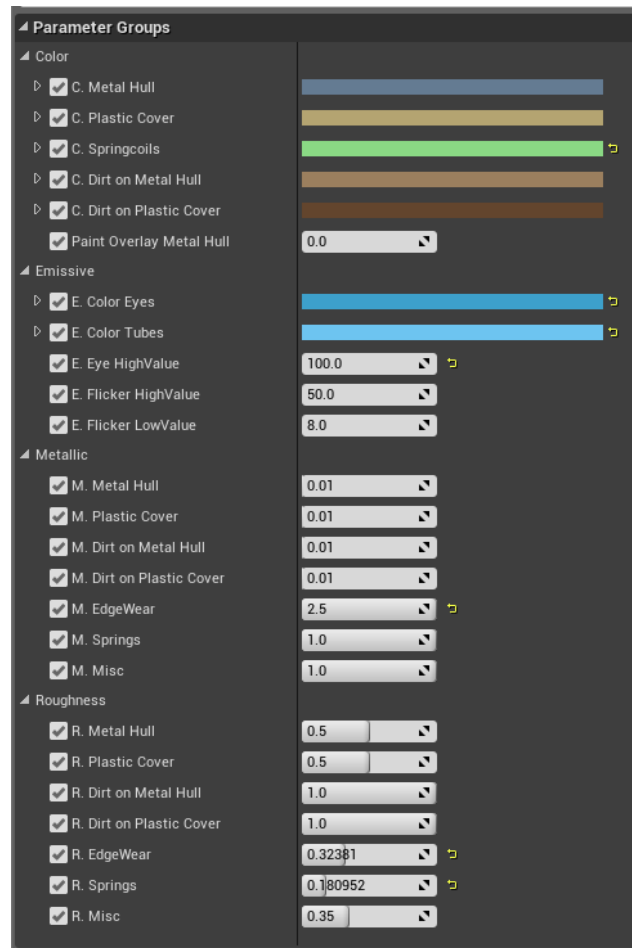
*( See Create albedo/color- texture maps for character material.)*

### Rifle and magazine material

Customizable color and overall roughness.

### Transparent material

Customizable color, opacity and refraction.



### Grey material

Customizable color, metallic, roughness and specular.

*Image: Customizable character material instance.*

*Note: Character materials have “use Morph Target” checked to work with the skeletal mesh that includes them. If the skeletal mesh without morph targets is used. It's recommended to uncheck this feature in the character's material as well.*

*Note: Rifle and magazine texture samples are placed in folders named after a resolution size to match the character. The folder names are not displaying the actual resolution size of its content.*

# Robot Rifleman (Content included in .zip folder)

Create albedo/color- texture maps for character material.

Kind of important: Chosen painting software must be able to use folders, masks and layers.

1. Export 'RobotRifleman\_Albedo\_White' base color texture from UE4 and use it as background/base.

2. Create a folder structure with your layers on top of the background. Folders should look like this:

- .....
- Plastic [ Plastic mask ]
- Plastic dirt [ Plastic dirt mask ]
- Fill color (dirt on plastic)
- Fill color (plastic)
  
- Metal [ Metal mask ]
- Metal Dirt [ Metal dirt mask ]
- Fill color (dirt on metal)
- Fill color (paint on metal)
  
- Springs [ Springs mask ]
- Fill color (springs color)
  
- Base Texture (RobotRifleman\_Albedo\_White)
- .....

3. Create a black mask for each folder and paste the new mask into it.

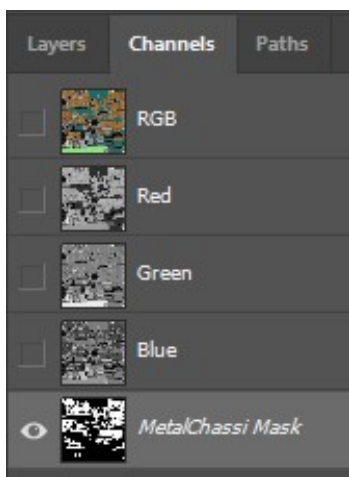


Image: Mask layer

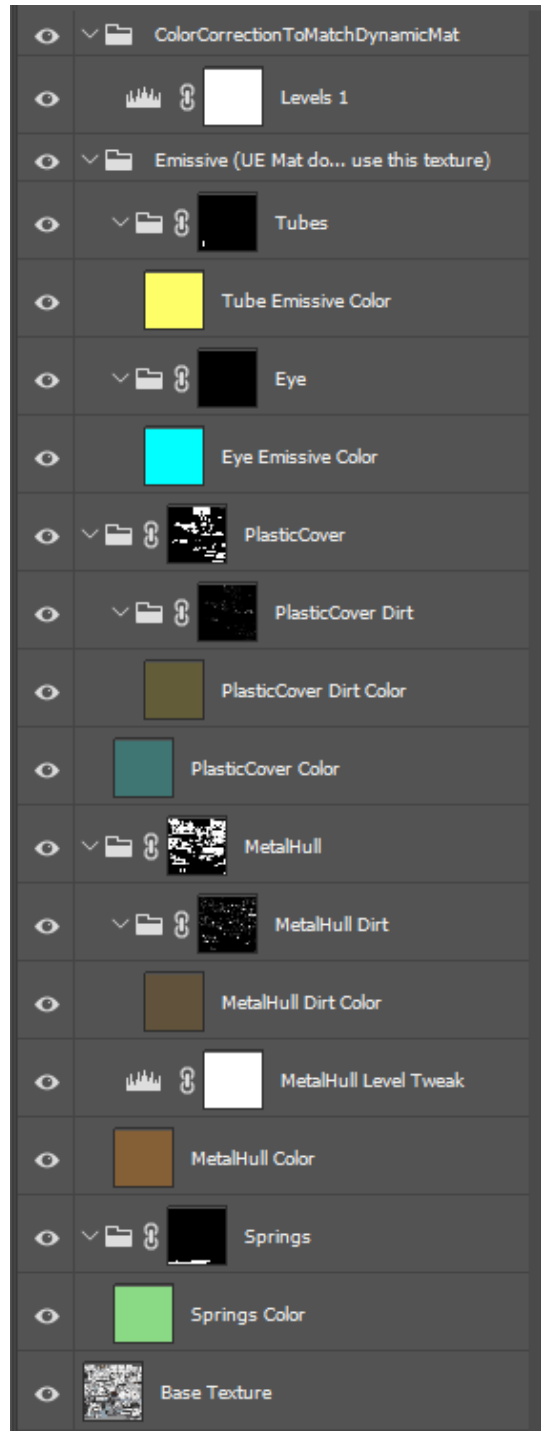


Image: Example structure from Photoshop.

Note: Character materials use vector parameters and masks to set emissive colors. Current materials do not use this texture for its emissive channels.

Tip: It's possible to copy 'hex sRGB' values from Unreal, need to skip the FF though.

Note: The texture may need a bit of color correction to come closer to the desired result.

# Robot Rifleman

## Animations

The character is rigged to Epic Skeleton and have:

23 character animations  
20 character poses

### Animation assets in project

65 animation sequences  
2 aim offsets  
5 blend spaces  
1 animation blueprint



Image: Broken Walk

### Skeleton

The skeleton for this character includes three additional sockets, seven notifies, and one curve.

*Note: Robot Rifleman Skeleton won't show up as compatible in the re-target menu with the Epic Skeleton. 'Show Only Compatible Skeletons' has to be unchecked.*

### Animation List

Idle	Idle with rifle
Crouching	Crouching with rifle
Crouch walk	Crouch walk with rifle
Jump	Jump with rifle
Walk 01	Walk 01 with rifle
Walk 02	Walk 02 with rifle
Broken Walk	Reload
Run	Run with rifle
Boot Up	Shooting semi
Push	Shooting auto
Drag	
Death 01	
Death 02	

*Note: Not all animation assets are used in the third person template, a few of them are only included as animation sequences (Colored gray in list).*

# Robot Rifleman

## Additional Information

### Level of Details

Vertex count of:

	LOD 0	LOD 1	LOD 2	LOD 3
Robot	21784	12601	7033	4906
Rifle	4055	3696	2507	1593
Iron sight	687	485	414	302
Magazine	546	390	236	148
Follower	26	26	20	4
Cartridge	599	279	98	54
Shell	641	265	102	54
Bullet	167	78	53	24
Backplate	168	95	55	33
Face	478	266	141	80
Fan blades	274	165	76	42
Jaw01	415	244	136	78
Jaw02	494	303	196	122
Skullcap	646	417	243	135
Tube connector	302	158	93	51
Tube c. with rod	381	200	110	65
Tube solid	344	193	108	65
Tube transparent	555	304	178	94
Broken tube	352	194	115	67

### Texel Density

#### Character and Parts

4096 x 4096 Texel Density: 19.44  
 2048 x 2048 Texel Density: 9.72  
 1024 x 1024 Texel Density: 4.86

#### Rifle

4096 x 2048 Texel Density: 38.88  
 2048 x 1024 Texel Density: 19.44  
 1024 x 512 Texel Density: 9.72  
 512 x 256 Texel Density: 4.86

#### Magazine

1024 x 1024 Texel Density: 38.88  
 512 x 512 Texel Density: 19.44  
 256 x 256 Texel Density: 9.72  
 128 x 128 Texel Density: 4.86

# Robot Rifleman

## Contact

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*Website:* <https://www.morselbyte.com>