

# Low Poly FPS Starter Kit Documentation v1.1

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# FPSController.cs

The FPSController script is responsible to controls the player's movement.

**public float walkSpeed = 6.0f;** - The default player's speed in game.

**public float runSpeed = 10.0f;** - The player's speed while running.

**float jumpSpeed = 8.0f;** - The player's jump force.

**float mouseVelocityX = 3.0f;** - The mouse velocity in horizontal movement.

**float mouseVelocityY = 3.0f;** - The mouse velocity in vertical movement.

**float gravity = 20.0f;** - The gravity force in the game.

**bool headBobbing;** - Check if you want to apply headbobbing effect on player when he walk or run.

**float bobbingSpeed = 0.2f;** - The speed that camera shakes when player walk or run.

**float bobbingAmount = 0.2f;** - The amount that camera shakes when player walk or run.

**bool lockCursor;** - Check if you want to lock and hide mouse cursor when game is running.

**AudioClip JumpAudio;** - AudioClip that play on player jump.

**AudioClip landingAudio;** - AudioClip that play on player collide with the "ground" tag.

This script should be on FPSController prefab. The FPSController should contains a Rigidbody component, a Collider component, an AudioSource component and an Character Controller component.

# WeaponRanged.cs

The WeaponRanged script is responsible to controls ranged weapon behaviours.

**public float fireRate = 0.1f;** - The weapon fire rate.

**public float damage = 20f;** - The weapon damage.

**public float range = 100f;** - The weapon range.

**public float bulletForce = 10f;** - Force applied on objects that raycast hit.

**public float ADSZoomMainCamera = 50f;** - Zoom applied to main camera when aiming down sight.

**public float ADSZoomWeaponCamera = 25f;** - Zoom applied to weapon camera when aiming down sight.

**public float zoomSpeed = 5f;** - Speed to apply zoom on camera when aiming down sight.

**public float spreadFactor = 0.1f;** - The weapon bullet spread.

**public float reloadTime = 1f;** - Wait time to reload bullets in magazine.

**public bool autoReload;** - If weapon has auto reload when magazine is empty.

**public int bulletsPerMag = 30;** - Total magazine capacity.

**public int maxAmmo = 200;** - Maximun ammo amount that the player can carry in his pocket.

**public int currentBullets;** - The current bullets in magazine.

**public float timeToShowBullets;** - Wait time until show bullet mesh in magazine when reload animation is played.

**public bool cameraShakeWhenShoot;** - If camera shaking when shooting.

**public float cameraShakeDuration = .03f;** - Camera shake duration.

**public float cameraShakeMagnitude = .05f;** - Camera shake magnitude.

**public WeaponType weaponType;** - The weapon fire type.

**public Transform shootPoint;** - Start point of raycast when shooting.

**public GameObject hitParticles;** - Particles effect when raycast hit on other objects.

**public GameObject bulletImpact;** - Bullet impact decal.

**public GameObject magazineBullets;** - Bullets mesh to show in weapon magazine when reload animation is played.

**public ParticleSystem muzzleFlash;** - The weapon muzzle flash.

**public Camera mainCamera;** - The main camera.

**public Camera weaponCamera;** - The weapon camera on a separated layer to avoid weapon pass through other objects.

**public bool spitShells;** - If weapon eject shells when shoot.

**public GameObject shell;** - Shell prefab.

**public Transform shellSpitPosition;** - Start point that shell will be ejected.  
**public AudioClip[] shellSounds;** - The sounds played when shell is ejected.  
**public float shellSpitForce = 1.0f;** - The force with which shells will be spit out of the weapon.  
**public float shellForceRandom = 0.5f;** - The variant by which the spit force can change + or - for each shot.  
**public float shellSpitTorqueX = 0.0f;** - The torque with which the shells will rotate on the x axis.  
**public float shellSpitTorqueY = 0.0f;** - The torque with which the shells will rotate on the y axis.  
**public float shellTorqueRandom = 1.0f;** - The variant by which the spit torque can change + or - for each shot.  
**AudioClip shootSound;** - Shoot audioclip.  
**AudioClip emptyShotSound;** - Empty shoot audioclip.  
**AudioClip drawGunSound;** - Draw weapon audioclip.  
**AudioClip holsterGunSound;** - Holster weapon audioclip.  
**AudioClip dropMagazine;** - Drop magazine audioclip.  
**AudioClip inputMagazine;** - Input/Drop magazine audioclip.  
**AudioClip lockMagazine;** - Magazine lock button pressed audioclip.  
**AudioClip aiming;** - Aim Down Sight audioclip.  
**AudioClip[] footstepSounds;** - Footstep audioclips.  
**public Text ammoText;** - The ammo amount displayed on HUD.  
**public GameObject crossHair;** - The crosshair displayed on HUD.

This script should be on Arms prefab with ranged weapons. The Prefab should contains an Animator component.

# WeaponMelee.cs

The WeaponMelee script is responsible to controls melee weapon behaviours.

**public float attackRate = 0.5f;**

- The weapon attack rate.

**public float damage = 10f;**

- The weapon damage.

**public float range = 1f;**

- The weapon range.

**public float impactDelay = .5f;**

- Wait time to show damage effect on object collided after attack.

**public Transform attackPoint;**

- The start point of the attack raycast hit.

**public GameObject hitParticles;**

- The effects when attack raycast hit something.

**public GameObject impactHole;**

- The impact hit decal.

**AudioClip attackSound;**

- The attack audioclip.

**AudioClip drawGunSound;**

- The draw weapon audioclip.

**AudioClip holsterGunSound;**

- The holster weapon audioclip.

**AudioClip[] footstepSounds;**

- The footstep audioclips.

This script should be on Arms prefab with melee weapons. The Prefab should contains an Animator component.

# WeaponManager.cs

The WeaponManager script is responsible to controls the switching weapon behaviours and to manipulate the animations of throw grenade and melee attack.

**GameObject[] weapons;**

- All weapons on player's hand.

**float switchDelay = 1f;**

- Wait time to finish draw gun animation and switch weapon

**GameObject grenade;**

- The grenade mesh in arms that will show/hide when throw animation is played.

**GameObject handsWithGrenade;**

- The arms with grenade to show when throw grenade animation is played.

**GameObject handsWithMeleeWeapon;**

- The arms with melee weapon to show when melee attack animation is played.

**float timeToHideGrenade = 1f;**

- Wait time before hide grenade mesh in player's hand

**float timeToShowWeapon = 0.2f;**

- Wait time before show current weapon in player's hand again

This script should be on FPSController prefab.

# WeaponSway.cs

The WeaponSway script is responsible to controls the weapon sway behaviour.

**public float amount = 0.008f;**

- The amount that weapon sways.

**public float MaxAmount = 0.1f;**

- The maximum amount that weapon can sways.

**public float smoothAmount = 6f;**

- How much smooth the weapon sways.

This script should be on Arms prefab that contains a weapon.

# ThrowGrenadeManager.cs

The ThrowGrenadeManager script is responsible to controls the animations and sounds whe player throw a grenade.

**AudioClip grenadePullPin;**

- The grenade's sound when pin is pulled.

**AudioClip throwGrenade;**

- The grenade's sound when it is thrown.

**GameObject grenadePrefab;**

- The grenade prefab.

**float throwGrenadeForce = 11f;**

- The grenade's throw force.

**Transform grenadeSpawnPoint;**

- The start point where grenade prefab is instantiated when it is thrown.

This script should be on Arms\_Grenade prefab. The Prefab should cointains an Animator component.



# Grenade.cs

The Grenade script is responsible to controls the grenade behaviour.

**public float delay = 3f;**

- The time to wait until grenade explodes.

**public float radius = 5f;**

- The explosion radius.

**public float force = 700f;**

- The force applied on collided objects.

**public float cameraShakeDuration = .03f;**

- The duration of the shake camera when grenade explodes.

**public float cameraShakeMagnitude = 30f;**

- The magnitude of the shake camera when grenade explodes.

**public GameObject explosionEffect;**

- The explosion particle effect.

**public AudioClip[] explosionSounds;**

- An array with all explosion sounds played randomly.

This script should be on grenade prefab. The Prefab should contains a Rigidbody, Collider and AudioSource components.

# DestructibleObject.cs

The DestructibleObject script is responsible to instantiate a shattered object version when an intact object version is destroyed, like barrels and walls.

**public GameObject shatteredObject;**

- The prefab of a shattered object version.

This script should be on intact version prefab of destructible objects.

# Explosion.cs

The Explosion script is responsible to controls the behaviour of a shattered object when it explodes.

**public ParticleSystem explosion;** - The explosion particle effect contained on shattered object.

**public float minForce;** - The minimum force applied to a piece of the shattered object.

**public float maxForce;** - The maximum force applied to a piece of the shattered object.

**public float radius;** - The radius of the explosion.

**public float cameraShakeDuration = .03f;** - The duration of camera shake when object explodes.

**public float cameraShakeMagnitude = 50f;** - The amount of camera shake when object explodes.

**public bool destroyAfterTime;** - Check if you want that the shattered parts should be destroyed after some time when object explodes.

**public float timeToDestroy = 5f;** - Time to wait until destroy gameObject if "destroyAfterTime" boolean is checked.

**public objType objectType;** - The destructible object type.

**public AudioClip[] explosionSounds;** - An array with all explosion sound variations that will be played randomly.

This script should be on shattered version prefab of destructible objects. Each piece of the shattered object should contains a Rigidbody and a Collider components.

# CameraShake.cs

The CameraShake script controls the shake of main camera on explosions and player's headbobbing effect.

This script should be on main camera component.

# GameManager.cs

The GameManager script is responsible to controls restarting of the level and the controls displayed on the screen when game is running.

## **public GameObject controls;**

- The controls HUD contained inside Canvas prefab.

This script should be on gameManager prefab in anywhere on scene.

# Changelog

## **Version 1.0**

- FPS Arms.
- M416 Assault Rifle with animations.
- Grenade with animations.
- Destructible explosive barrel.
- Destructive wall.

## **Versiion 1.1**

- Glock G48 Pistol with animations.
- Combat Knife with animations.
- Improve M416 model and animations.
- Improve explosion effects.
- Ported to Unity 2019.3.0f1
- Some bug fixes.

# Contact / Suport / Social Media

**Twitter:** @rgs\_dev

**Instagram:** [http://instagram.com/rgs\\_dev](http://instagram.com/rgs_dev)

**Youtube:** <https://www.youtube.com/channel/UCe4CyYijbAzxdjgR4OS7A-w>

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