



V2 Rocket Asset

1. Asset Content

The V2 Rocket Asset includes the following items :

- 1 V2 rocket 3D model (32000 polygons), the model includes fuselage, rocket engine, jet deflectors and fins,
- 1 launch stand 3D model (2800 polygons),
- 3 2K textures for the V2 rocket :
 - o Black and white paint used for testing in 1942,
 - o Official rag camouflage paint used in operation in 1943,
 - o Olive green paint used for last rockets in late 1945,
- 1 2K texture with olive paint for the Launch Stand,
- 1 particle system for the rocket engine exhaust,
- 1 script for 10s countdown and rocket launch with applied physics, this script is attached to the V2 gameobject,
- 1 script for camera tracking during launch, this script is attached to the camera gameobject,
- 2 free sounds from freesound.org :
 - o Countdown sound (<https://freesound.org/s/126001/> License : Creative Commons 0 License, original sound from nickifit),
 - o Rocket launch sound (<https://freesound.org/s/264185> License : Creative Commons BY 3.0 (<https://creativecommons.org/licenses/by/3.0/>), original sound from Cell31_Sound_Productions (no modification)),
- 3 prefabs, each for a V2 rocket with a distinct texture on its launch stand and the script for countdown and launch,
- 1 demonstration scene with the launch of all three V2 rockets.

V2 ROCKET'S

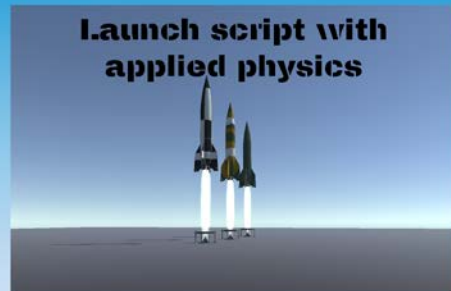


3D model with 3 textures

**particle system for
rocket engine exhaust**



**Launch script with
applied physics**



**3D details :
rocket engine,
deflector,
probes,
fins**



**V2 rocket with
its launch stand**

V2 ROCKET'S

**1942 paint texture
for V2(A4) test rocket**

2. Asset Utilisation

When playing the demonstration scene, the camera script attached to the camera gameobject makes a camera rotation around the middle V2 rocket. You can parameterize the rotation speed in the Unity Editor with a public variable of the script (default value is 0.2).



Demonstration scene

Press Space Bar to launch 10s countdown and launch V2 rockets. Camera position at the instant of spacebar pressing will be kept for launch. However you can uncomment a code line in the camera script to get the original camera position (this is the warning in code editor that indicates that a variable is unused).

After a 10s countdown, all three V2 rockets are launched. You can parameterize physical parameters (mass, dry mass, fuel consumption, thrust and drag coefficient) of the rocket with public variables of the launch script attached to each V2 gameobject. Some default values are real figures of the V2 rocket : 13000kg mass, 4390kg dry mass, 125kg/s fuel consumption and 23000kg of thrust (Note that this figure is multiplied by 9.8m/s^2 to get thrust in Newtons in the script).

You can activate Virtual Reality : it is recommended to move the camera to $Z = -10$ to see under the rocket (rocket engine, fins...) and lower the rotation speed of the camera. As there is an automatic camera tracking, it is better to deactivate the camera script attached to the camera.

3. Contact

For all questions on this asset, please use this contact : sebastien.alvarez@yahoo.fr.