Moon spacesuit

Manual

Content

Version

Current version is **1.2**

Change Log

1.0
Initial release

1.1
Minor changes:
- fix texture normal for terrain in demo scene
- small improvements in the Manual
- added details to Walk01 clip
- jerks fixed in Jump01 clip
- left hand lowering fixed in JumpToStanding clip
- added button hints on demo scene

1.2
Unity 2018 ready

Credits

- Based on Astronauta model by Juan Ignacio https://www.blendswap.com/blends/view/73994
- Skybox «Mimas nignt» from http://spaceengine.org

Technical information

Prefab has 2 LOD (Level of detail):

56792 triangles on LOD 0,
5007 triangles on LOD 1.

Requires Unity 5.6 or higher.

Contents:

1. A character rigged model (based on an "Astronauta" by Juan Ignacio) with customizing substance material.
2. Set of 23 animation clips, such a
   ◦ standing,
   ◦ repairing,
   ◦ selecting,
   ◦ urging,
   ◦ walking,
   ◦ bunnyhop,
   ◦ jumping,
   ◦ falling,
   ◦ rising.
   Some of animations referenced to the real lunar motions: falling down, tripping etc.
3. Rigidbody character controller, with configured and ready-to-play animator.
4. Footsteps effects and footprint-ready components (supports both *Easy Decal* and *Dynamic Decal* assets; you can extend it for your own decals).

Installation

1. Drop prefab **Moon spacesuit\Prefabs\Moon spacesuit.prefab** onto your scene.
2. Create layer "*Ground*" and set your ground object to it to view dust effects.
3. Start scene and press **W** to force a moon walking. Use left\right arrows or **A**, **D** keys to turn left or right accordingly, during move or standing.

Unity 2018 issues: you should install asset "Substance In Unity"

Tuning

Dirt

1. Select game object from hierarchy Moon spacesuit/Astronauta_LOD/Traje (Suit).LOD0
2. In inspector, unroll material list and tune parameters of dirt:
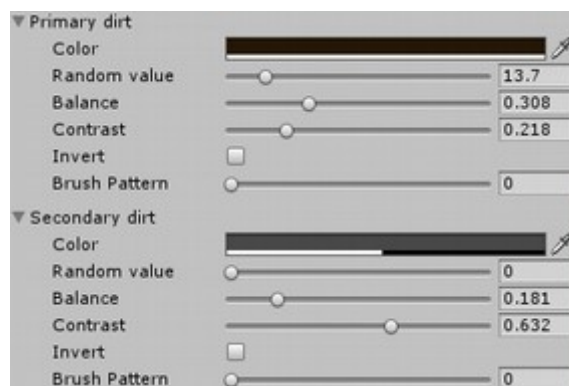
Primary dirt has a prepositioned mask on elbows, knees and foots. Secondary dirt falls over all surface of the suit.

Footprints

3. Create your own footprint decal prefab.

4. Create your own footprint script like *Moon spacesuit\Scripts\DynamicDecalPrint.cs* or *Moon spacesuit\Scripts\EasyDecalPrint.cs (*for example, name it as *MyDecalPrint.cs)*. You can just use an existing scripts, if your decal system is EasyDecal or DynamicDecal.
5. Add your *MyDecalPrint.cs* script to the *Moon spacesuit* gameobject, to both nodes *metarig/Bone/foot.IK.L* and *metarig/Bone/foot.IK.R*
6. Add your decal prefabs to the *Footprints* list of *MyDecalPrint* components.

Animations

Walking

Press «W» for start moving. Note that walking animation is preceded with short starting sequence like a real astronaut's motion. Release «W» to stop moving.

Bunnyhop

Hit «B» while walking. Astronaut will start moving faster with lunar bunnyhop style of motion.

Jumping

During the move press «Space» to jump. Rigidbody of a character will change its vertical velocity.

Falling

When astronaut falls down, it's rigidbody takes an impulse of ground hit (look into console log to refine impulse values). You may set values to Max Hit Impulse fields to define a three fall situation:
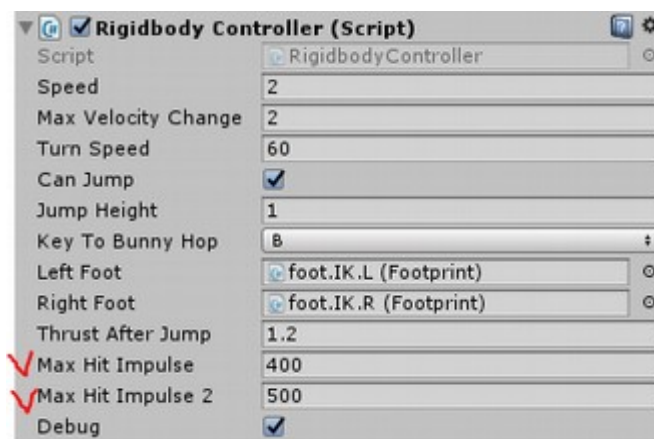
1. If a hit impulse less than **Max Hit Impulse** value - astronaut holds its vertical position:

2. Hit impulse is between *Max Hit Impulse* and *Max Hit Impulse 2* values - falls to all fours:

3. Hit impulse exceeds a *Max Hit Impulse 2* value - falls to its side: