

Lieutenant Dan

Ball and Legs Rig

by *Matt Ornstein*

www.mattornstein.com

Version 3.0

The Lieutenant Dan rig is designed to allow animation students to practice 3D animation foundations quickly and efficiently. Full biped rigs can be overwhelming for new animators, and often find themselves falling into one of two pit falls: over animated or frozen and stiff animation. By using just a simple torso, hips, legs, and optional tail students can much more easily learn to create more fluid animation with full squash and stretch and overlapping action.

Features:

Lieutenant Dan has full squash and stretch on both the torso and the legs. The current version does not support squash and stretch on the optional tail, although future versions may. The feet contain several types of roll controls, and the ball can be squashed and stretched as well as the center translated in all three axes along its midline.

Remember to always use file referencing when adding the ball to a scene so you can update with newer version.

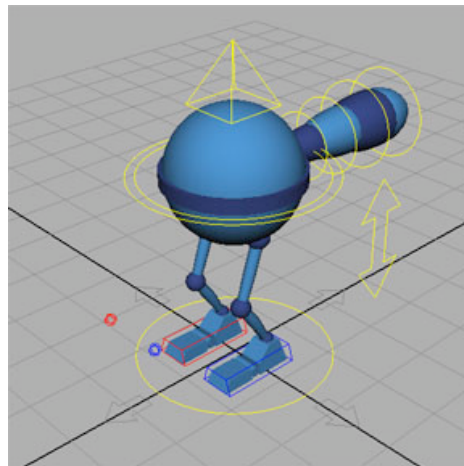


fig. 1

Controls:

Master_CTRL: This control is the yellow circle located at the bottom of the feet. It is used to initially position Lt. Dan in your scene, and to turn the tail on. The tail can be turned on and off in the channel box located on the right side of the screen in fig 2. By entering a value of 1 in the "Tail" channel the tail will be visible. A value of 0 in the "Tail" channel the tail will be

hidden. This is also a key-able attribute. Do not use this control to move the character in the animation.

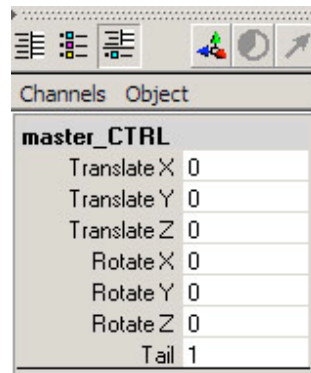


fig. 2

ball_CTRL: This is the outer yellow circle at the mid line of the ball. It can be rotated and translated on all axes. It is used to move the ball around the scene.

SQST_middle_CTRL: This is the inner yellow circle at mid line of the ball, as well as the arrow off to the side. It can be translated on all axes. It is used to adjust the weight of the squash and stretch towards the top or bottom, and also create a kidney bean shape with the ball.

SQST_top_CTRL: This is the pyramid on top of the ball. It is used to create the squash and stretch, it only moves on the Y-axes.

L_IKFootControl: This is the box around each foot. It can be translated and rotated on all the axes. It has several attributes that can be keyed in the channel box as seen in fig. 3.

Roll: This attribute is used to create foot rolls of the entire foot in a walk.

Toe Bend: This attribute is used to bend the toe up or down.

Ball Twist: This attribute is used to twist the foot on the ball of the foot.

Toe Bend: This attribute is used to twist the foot on the toe of the foot.

Auto Stretch: This attribute is turned on or off with a value of 1 or 0.

When on the leg will automatically stretch once it has been pulled to its max length.

Stretch: This attribute is to manually stretch out the length of the legs.

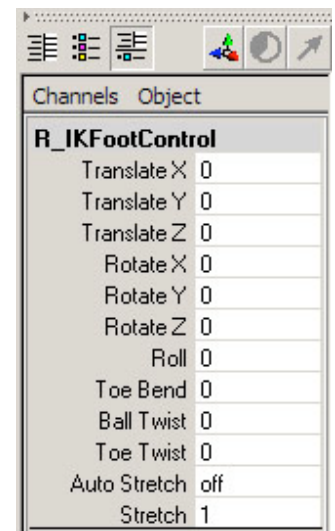


fig. 3

L_Knee: This is the small red or blue ball in front of the knee used to control where the knee is aimed. It can be translated on all axes.

TailCTRL: (Optional) When turned on the four tail controls can be rotated on all axes.

Credits:

Lt. Dan was made by Matt Ornstein. You can find the latest versions at

www.MattOrnstein.com. Questions and feedback welcome at matt@mattornstein.com.

Special thanks to Ian Jones for help and <http://lichiman.aniguild.com/> for inspiring with some squash and stretch concepts.