

Planted Walk Cycle simplified 24 frames

We are going to make a new set of keys every 3 frames.
Do not key in between these points. Let max do the tweening.
For the basic part, you will ONLY be keyframing the pelvis and the feet.

We are using these classic poses:

Contact

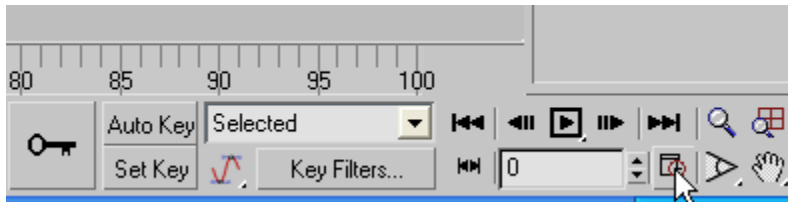
Planted

Intermediate

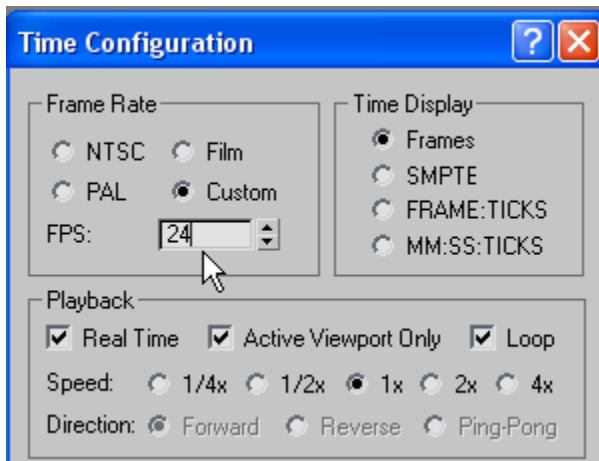
Passing

See the screen shots farther down to understand the poses.
Note the positions of the pelvis as it raises and lowers.

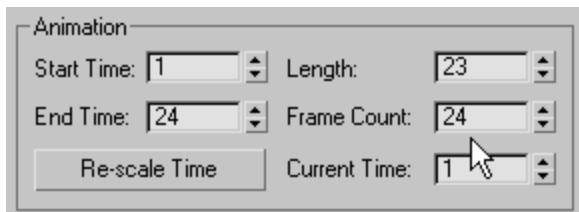
OK let's set up first. Make the configuration frames 1 to 24.



Set time to custom 24 fps.



Also set to only 24 frames. This will effectively let us loop the walk cycle:



Make a biped or use one you already have.
I suggest referring to both a perspective and a left viewport.

dFrame 0 should have the figure pose in it with the 5 essential keys
(the 3 keys for the center of mass, and planted key for each foot.).

Keyframe 1 = Right Foot Planted Pose

Leading (Right) foot FLAT on ground

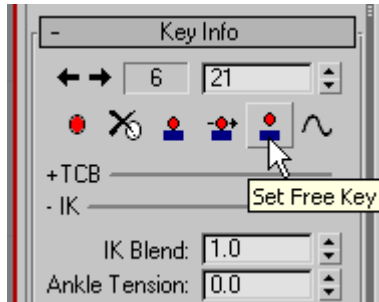
Left foot, heel is raised.

Pelvis **low** point

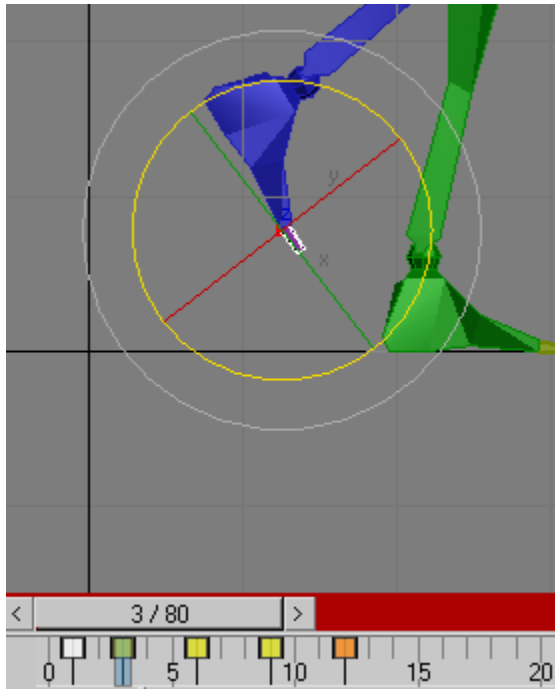
Keyframe 3 = intermediate pose

On the way to the Passing pose!

This can be a free key



Push off the left toe with a little rotation from the heel and rotate the heel
Also, rotate the toe a bit as the foot takes off.



Keyframe 6 = Left Foot Passing Pose

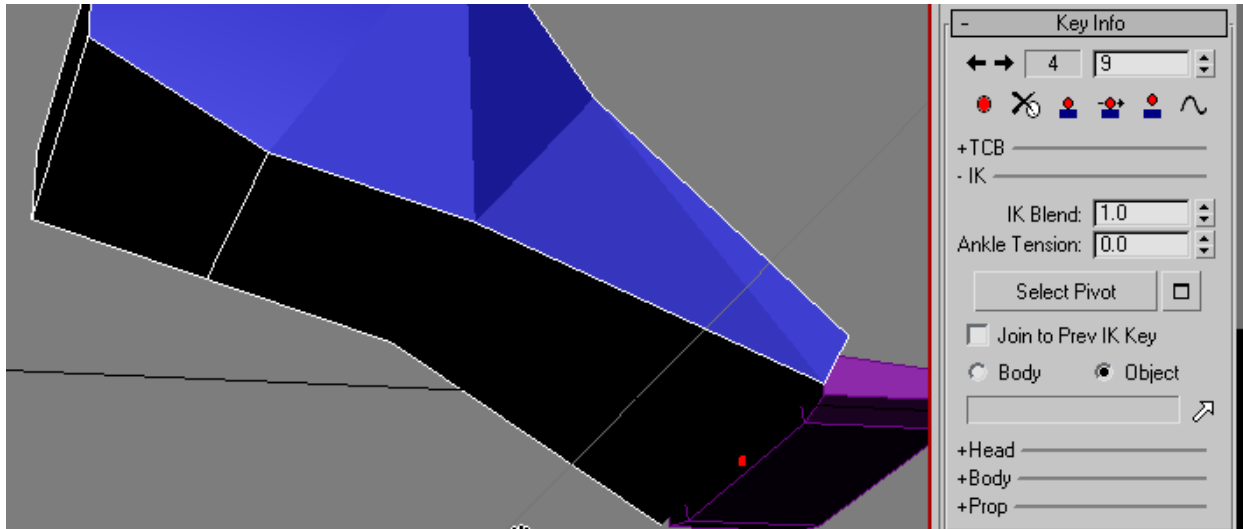
Left foot is passing by the straight up right leg

Pelvis **high** point

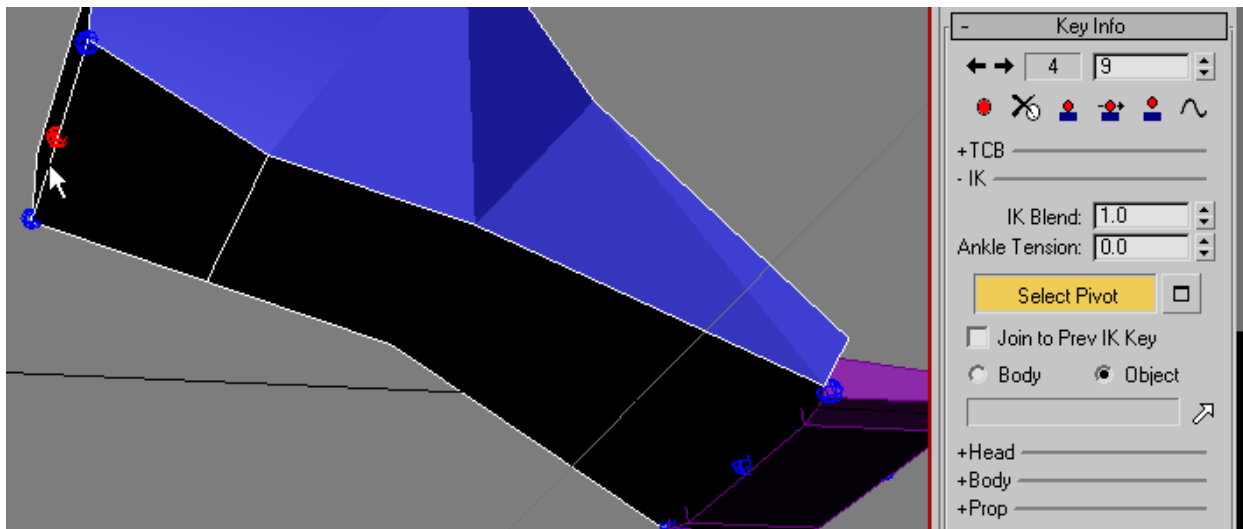
Keyframe 9 = contact pose

Leading foot (Left) heel touches ground

You will have to change the pivot point of the foot from here ...

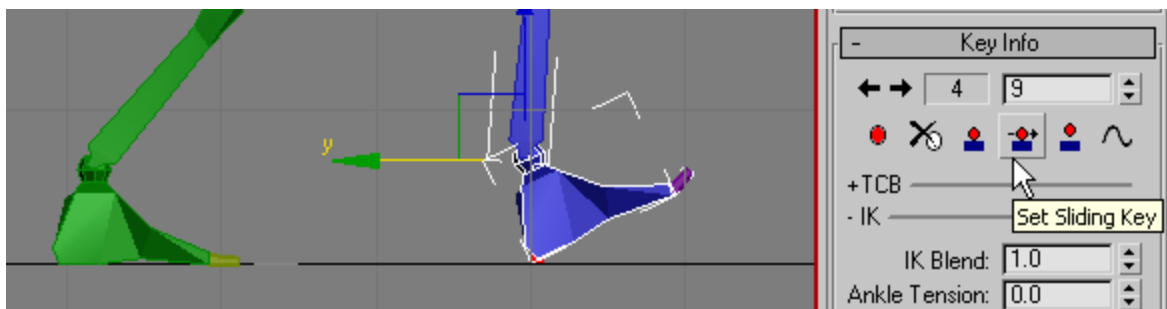


To here:



Make this a sliding key.

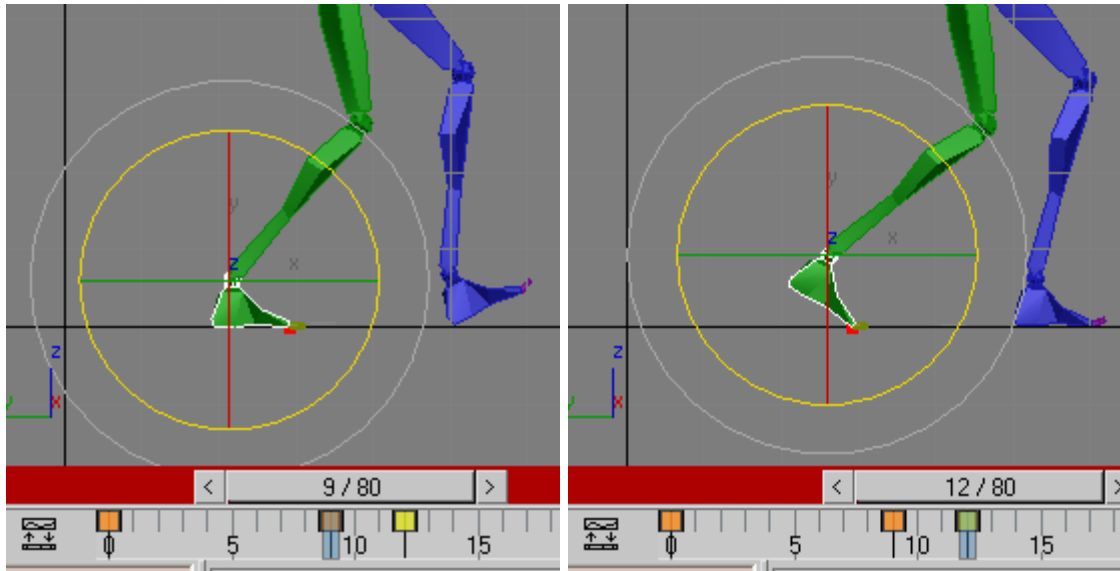
Note: if you make a planted key here, the foot will jump back to the last planted position.



Keyframe 12 = Left Foot Planted Pose

Leading (right) foot FLAT on ground

You will need to put a planted key on the left foot at frame 9 as well, then rotate the heel up on 12.



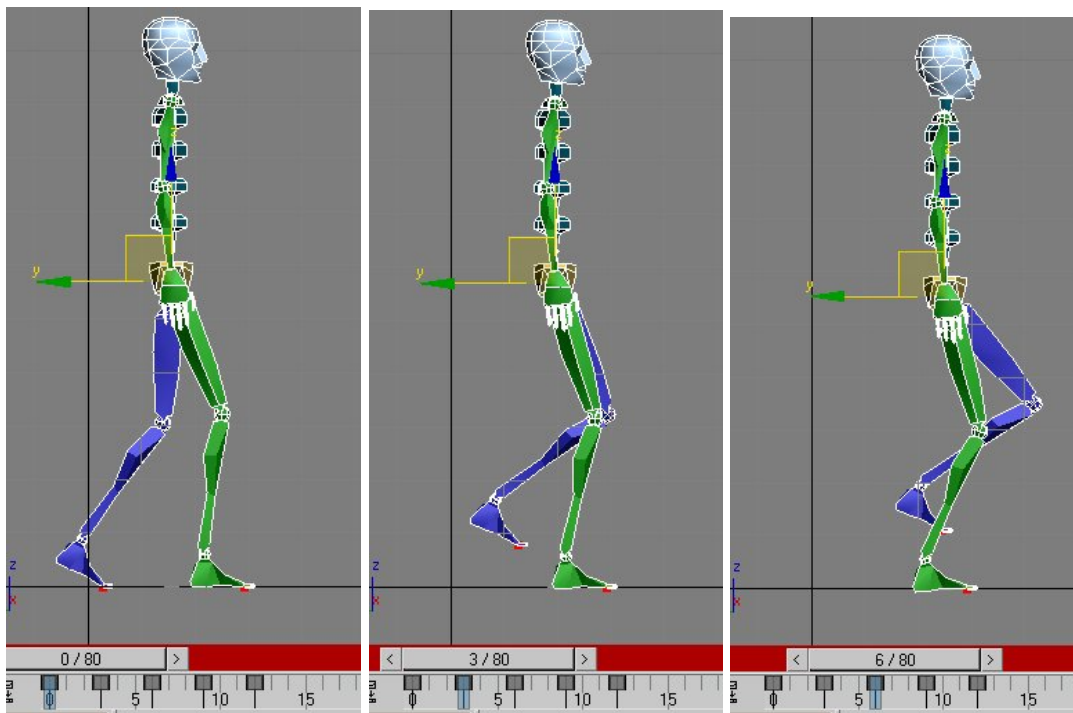
This is the pelvis **low** point

You now have the poses all in sequence ...

Planted:

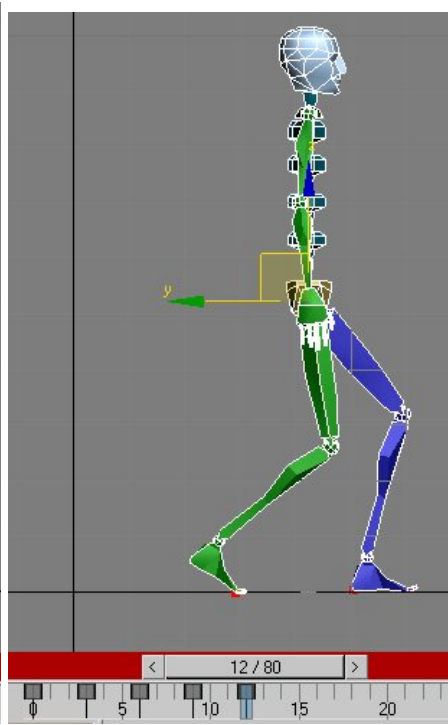
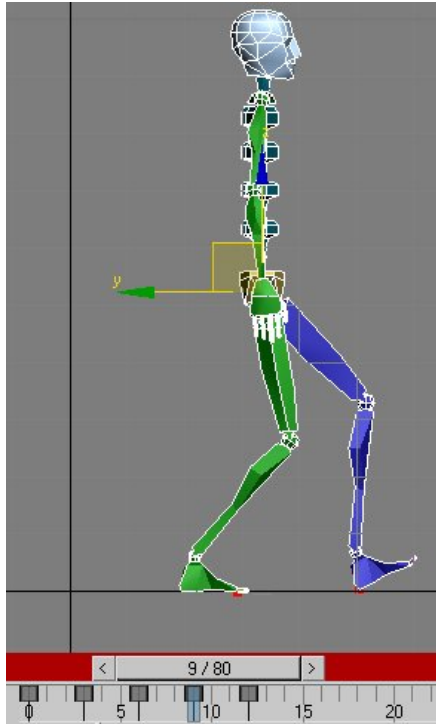
Intermediate:

Passing:



Contact:

Planted:



The remainder of the keys

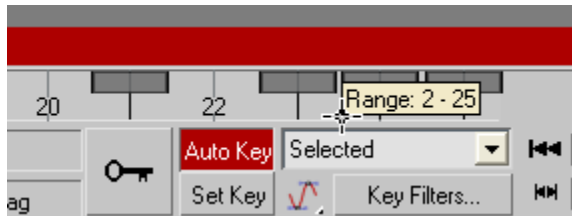
keyframe 15 = **intermediate** pose

Keyframe 18 = Right Foot **Passing** Pose
(Right foot is passing by the straight up left leg)

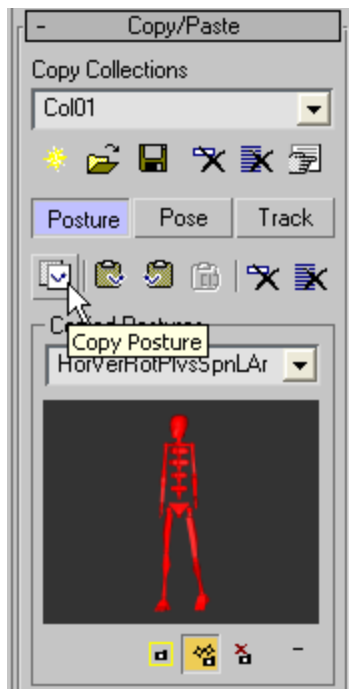
keyframe 21 = **contact** pose
(Leading foot (Right) heel touches ground)

Keyframe 24 = Right Foot **Planted** Pose
Leading (Right) foot **FLAT** on ground
Pelvis **high** point

Keyframe 24
[OUTSIDE OF THE TIMELINE]
Exactly the same as frame 1
Tip – Ctrl Alt MMB drag on the timeline to access frame 25



Make a new copy collection
Select all the biped in Frame 1 and copy posture
Go to frame 25
Make sure auto-key is on
Paste posture

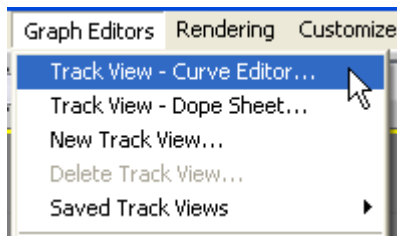


Note – you can also paste opposite, which can be used in other parts of the cycle, although I find it more natural to do it all by hand.

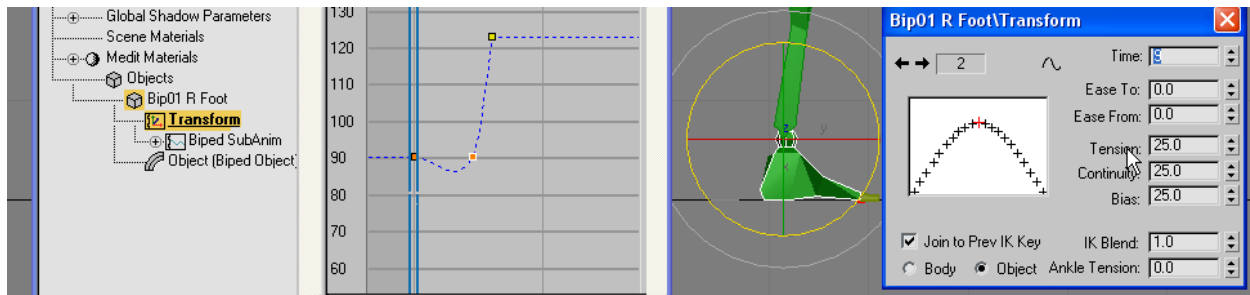
This completes the basic walk cycle.

Fine tuning

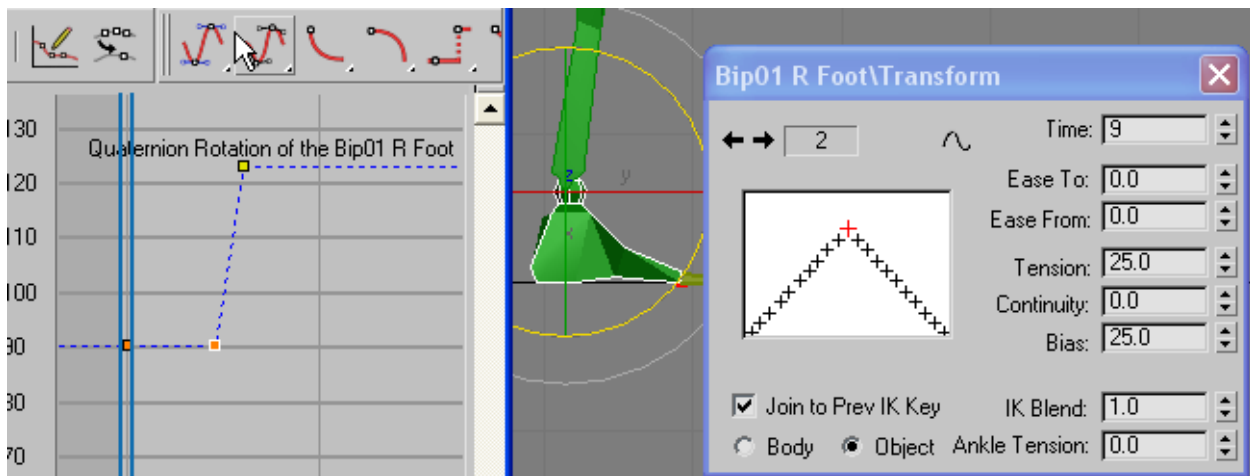
If the heel appears to waver in place, or sink into the floor between keyframes, do this:
Go into the curve editor ...



Find the problem key and right click ...



Turn continuity to 0



Set up the arms

Make a key every 6 frames swinging

For example if the green leg is back, the green arm is forward.

Note – these are NOT planted keys, just regular keys.

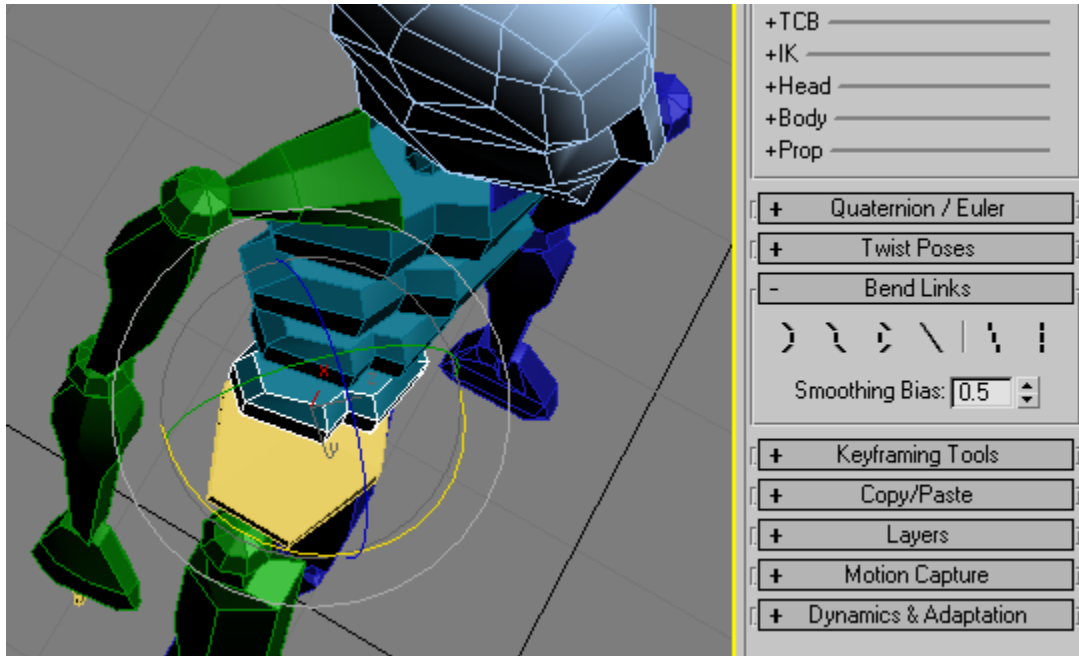


For this first walk, we are skipping pelvic rotation, shoulder movements, etc. Practice observing your friends walking and note the many rotations of the body as it moves forward in a walk cycle, and add them to your biped animation.

Tip – many movements oppose each other, like the upper torso and the pelvis. The pelvis has to adapt. While working with these rotations, refer to the ortho FRONT and TOP viewports to best evaluate your work.

Bend links

Twisting the lower spine without bend links on:



You can get a more realistic twist of the spine if you turn on bend links mode:

