



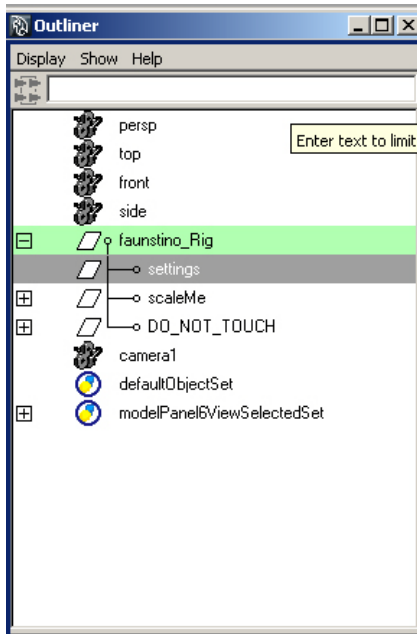
# Faustino Rig

Documentation  
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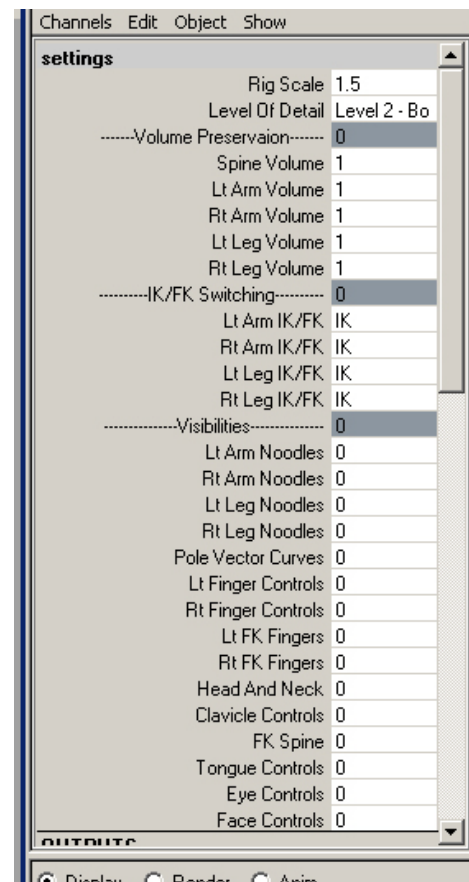
# Options and Settings



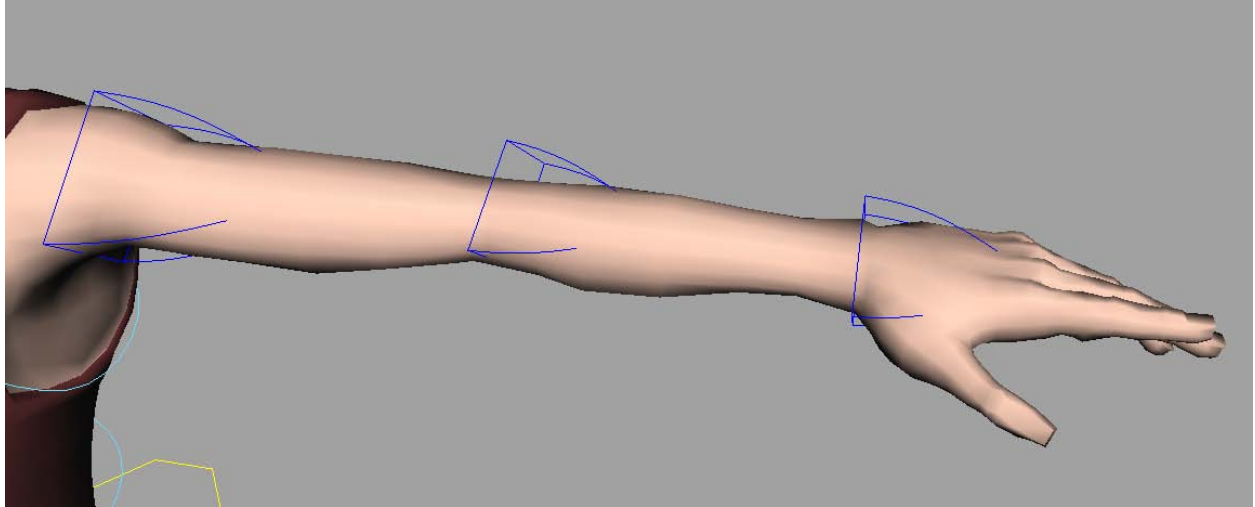
You can locate the settings for the Faustino Rig by going into the outliner and selecting the settings node under the main group node.

Once selected, you will find a various selection of settings that effect control visibility, IK FK options, volume preservation, level of detail, and so on.

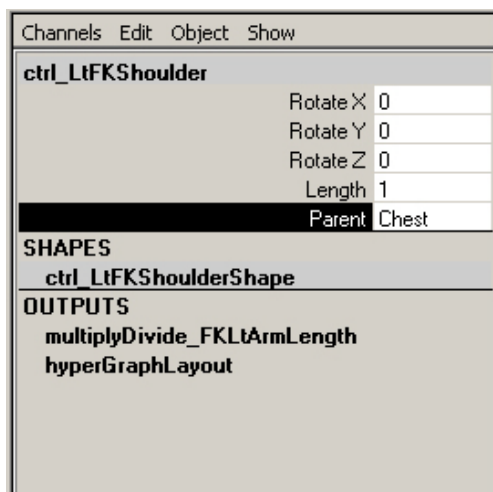
When set to 1, volume preservation will make the corresponding parts thin out as they become stretched.



# FK Controls

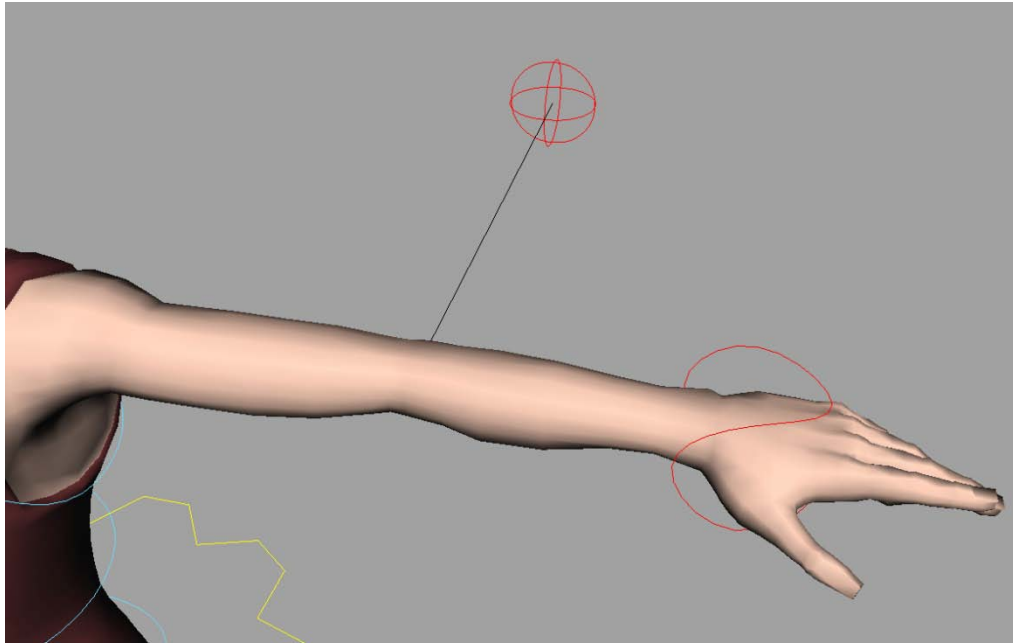


The FK controls on the arms and legs are represented by blue triangular shapes. They work as any normal FK chain would, with one addition. The Shoulder, Elbow, Thigh, and Knee FK controls have a “length” attribute, which will increase the scale of that particular limb.



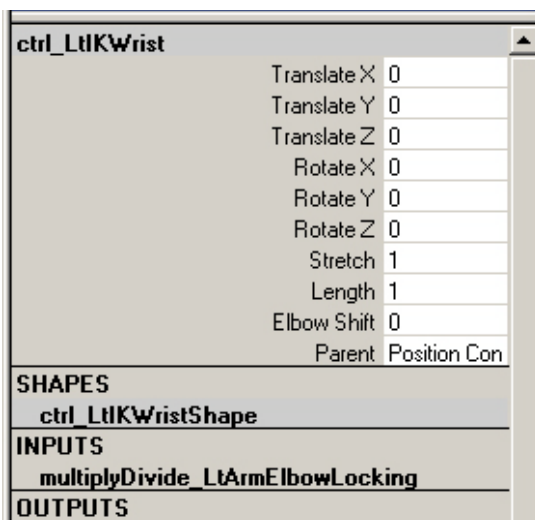
The main joint for each FK chain also has a “parent” attribute, which allows the chain to follow the specified parent. This is useful for when you acquire a desired arm pose, but want to shift it around a little bit with the clavicle.

# IK Controls



The IK controls are represented by a red curves and spheres. The spheres act as pole vectors. These controls also have the “parent” attribute. The foot contains standard reverse foot controls such as heel lift, toe pivot, etc.

The IK wrist and foot controls have three attributes which deal with the way the chain stretches:

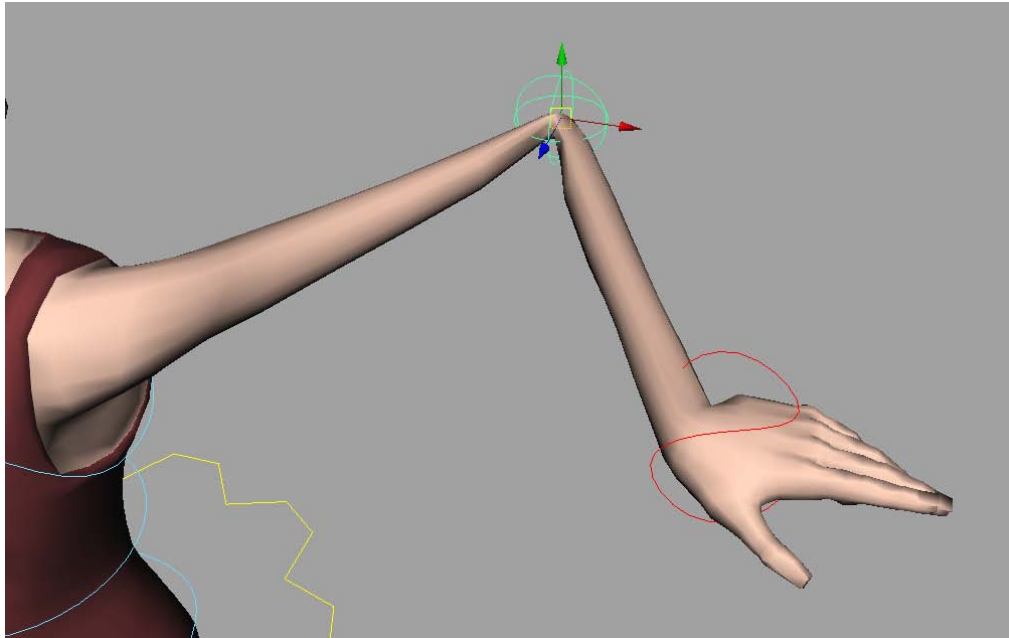


Length - The maximum length of the chain before it will stretch in a straight line.

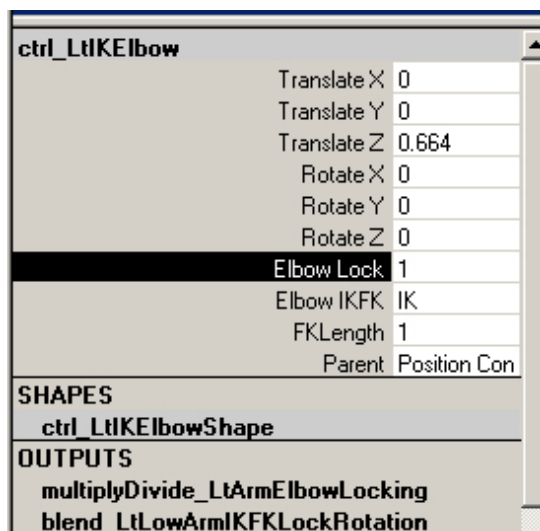
Stretch - Whether or not the chain will grow longer than the length.

Shift - This shifts the position of where the elbow/knee lies on the chain.

# Elbow/Knee Locking



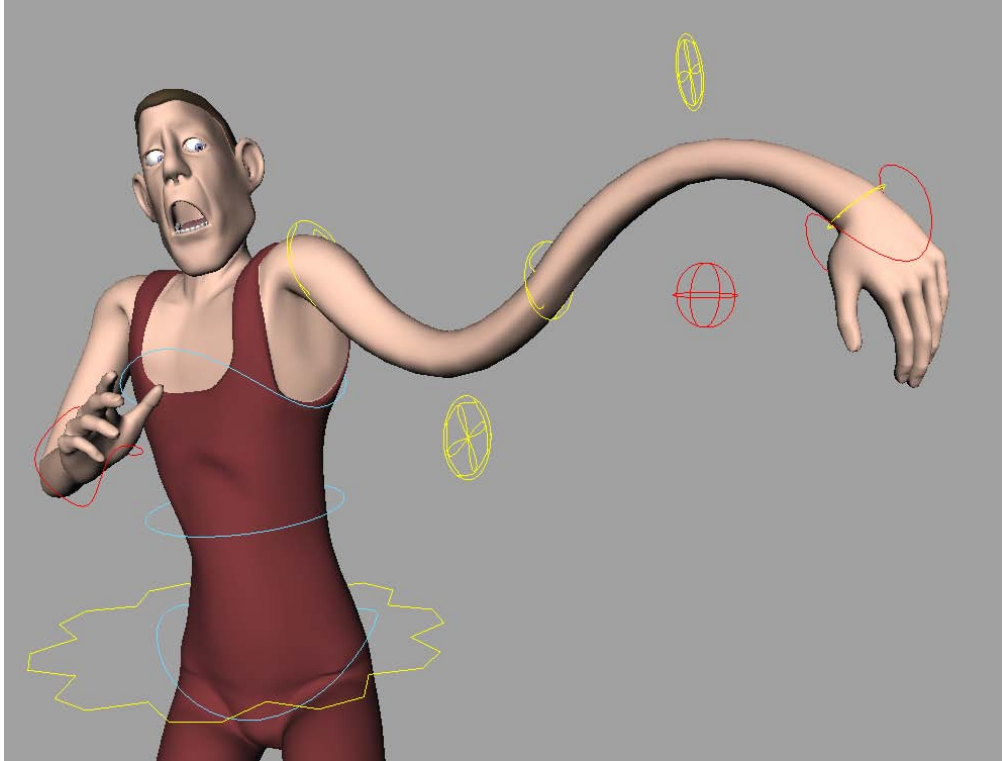
The IK Elbow and Knee controls contain an “Elbow/Knee Lock” attribute, that when set to one, locks the elbow/knee at the control’s location. Very useful for when the character has to rest his elbows on a table and so on.



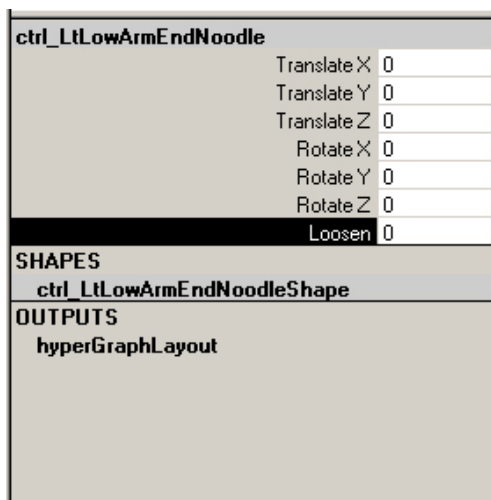
There is an additional IK/FK switch on the elbow/knee controls that will switch the forearm/shin between the IK wrist/foot, and a separate FK control. This FK control is represented as a red triangular shape. “FKLength” effects the length of these joints while in elbow/knee FK mode.

The “Elbow/Knee Lock” attribute must be above zero for the IK/FK switch to have any effect.

# Use Your Noodle



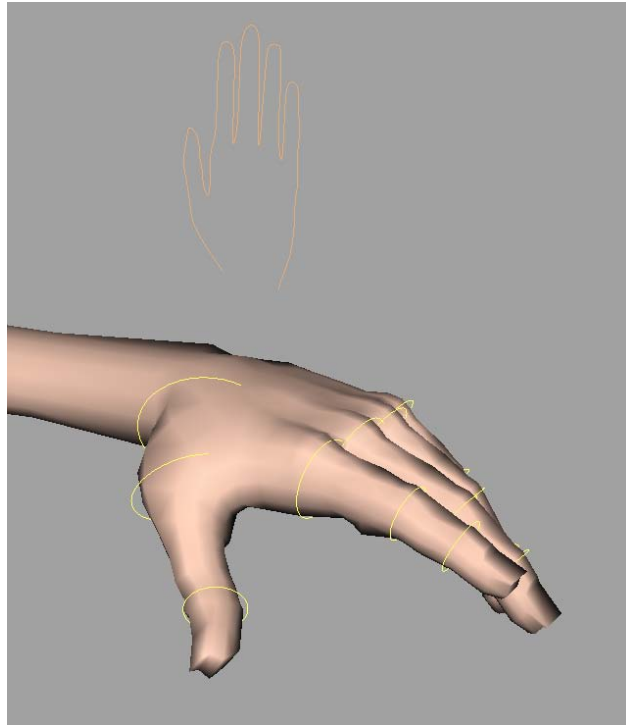
The noodle controls allow you to tweak the line of action along the arm and legs. The noodle controls located between joints translate, while the noodle controls located at joints can be rotated and translated.



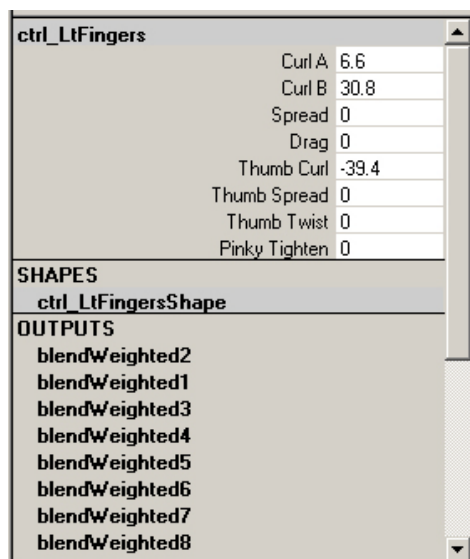
There is an additional attribute on the noodles located at joints called "loosen." Dialing this up causes the line of action to follow the tangency of the control.

You'll notice that rotating these noodles will have no effect unless loosen is above zero.

# Give Me A Hand



The hand has a general control, which allows for quick manipulation of all the fingers, and individual FK controls for each finger. The general control is represented as a hand shape, while the FK controls are circles going along each finger.



"Curl A" and "Curl B" will curl in the fingers from different sides of the hand. "Curl A" curls the index finger most, while "Curl B" will curl the pinky most.

"Drag" will bend the fingers sideways to allow for line of action.

"Pinky Tighten" simulates how the pinky knuckle can shift up and down.



# Spine-Tastic



The spine uses a combination of FK and IK controls to allow for a robust and flexible control scheme.

The FK controls are represented as cross-like shapes, and the IK are represented as teal, circular shapes.

The FK drives the spine as any FK chain would. However, additional tweaks can be made using the IK controls, to allow for **independent motion** between the hips and chest. This is great for animating a mambo!

Animators can choose to use a combination of the two, or use each set exclusively.

The middle IK spine control also has a parenting option, which allows it to follow the middle FK control directly, or to follow between the IK hips and chest. The second option allows for a smoother interpolation between the chest and hips, and I personally find this option more intuitive when using the IK spine controls exclusively.

# Head, Neck, and Face

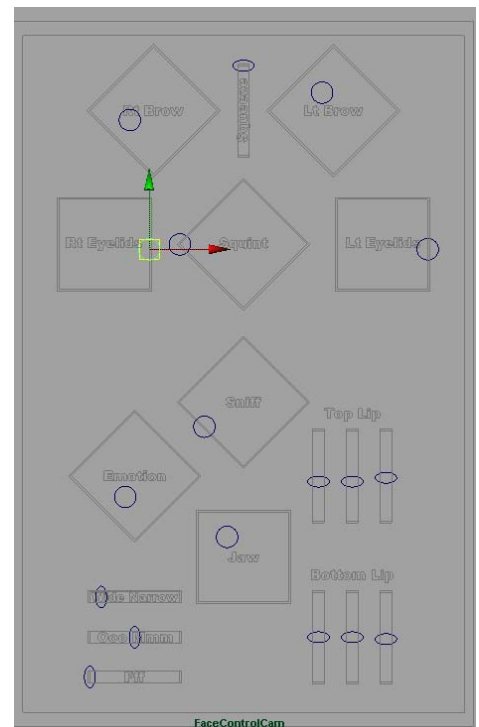


The head and neck controls allow for FK rotations while freeing the head to translate and stretch the neck. Both controls have a "Parent" attribute, to allow the neck and head to rotate independently from the rest of the body.

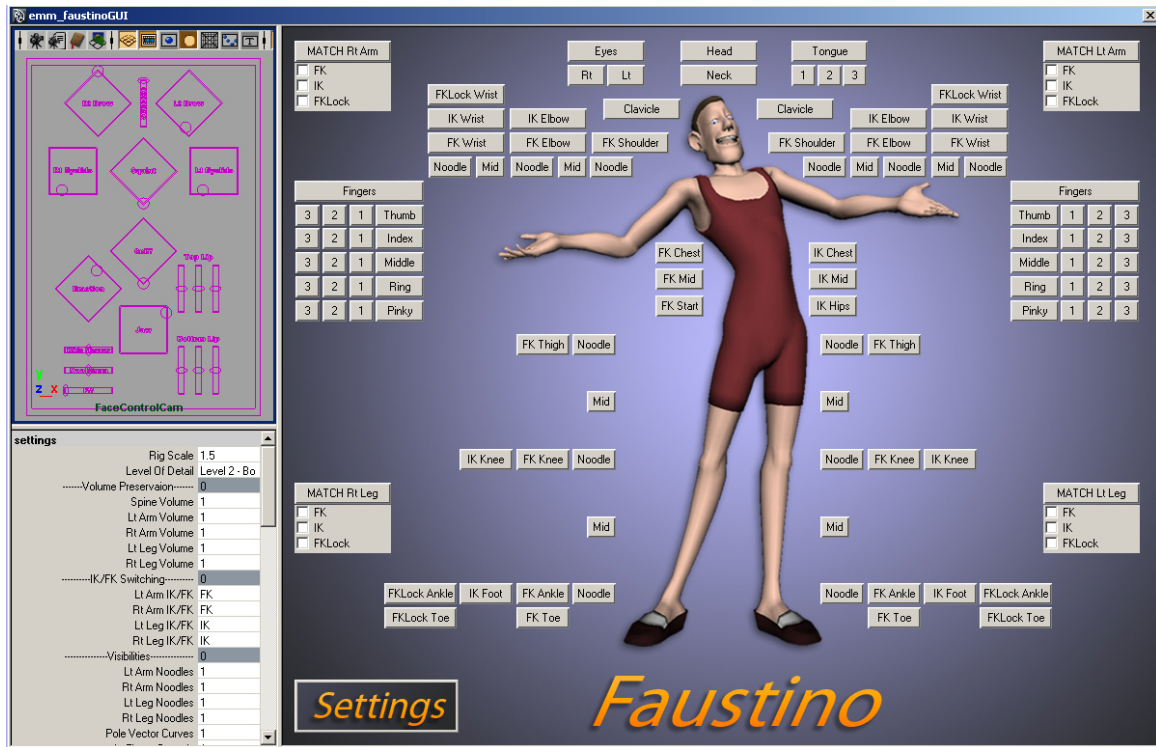
The face controls are a series of sliders that effect various blendshapes and their correctives.

The two Eyelid controls will allow both lids to move along the entire surface of the eye. In order to keep the two lids from crossing each other, setting the value of the top and bottom lid to the same value will match them.

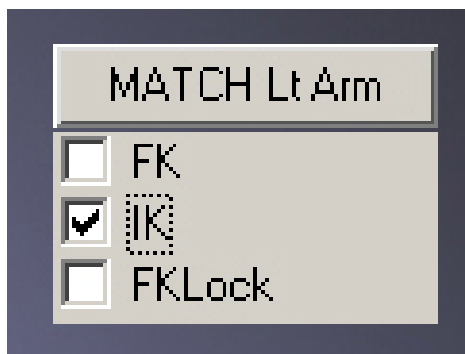
These controls have two additional attributes labeled "Scale Pupil" and "Scale Iris". These allow for the dilation of the each part of the eye.



# GUI



The GUI window contains a facial control window, channel box, and selection buttons for all of the controls for the rig.



Additionally, there are four Match buttons, each corresponding to a different limb. These will match any of the controls schemes checked off to the current position of the joint chain. This is very useful for when you need to switch between IK and FK in the middle of an animation and don't want any "popping."

As a warning, in order to accurately match the IK foot, attributes such as "Lift Heel" and "Side To Side" are set to zero. Keep this in mind when matching with the check box "IK" marked.