ALIGNING BONES
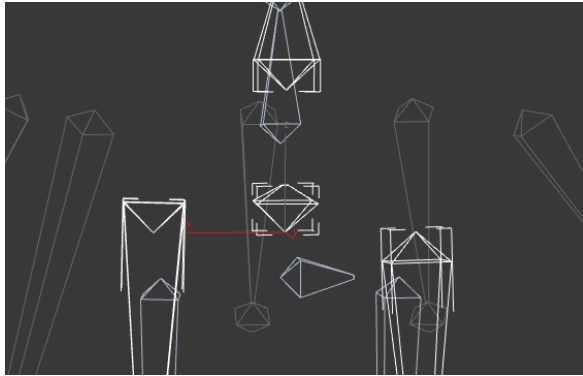
1. Now it's time to align the default bone to model original bones! This is important step to allow Serious Sam game to use our custom model proportion.

   a. Hide your model meshes by right click at the merged model and hide selection

   b. Select all default bone skeletons (don't select your model bones)
   *tips: Double click at default skeleton hips to select all their bones.*

   c. Delete Animation keys at timelines below for easy editing. Select it by clicking on the keys and press Del


   d. Then disable bone editing by going to Animation > Bone Tools. Under Object Properties tab, Un-tick "Bone On":
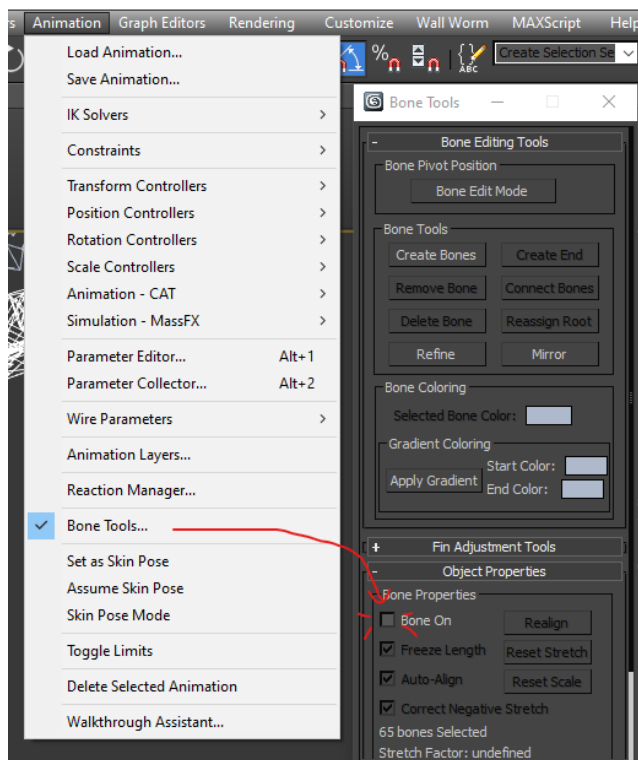
2. Ok now we need to align our default bones to your custom model bones. First, select "hips" bone first, then click at align button. Then select at your custom model bones hips
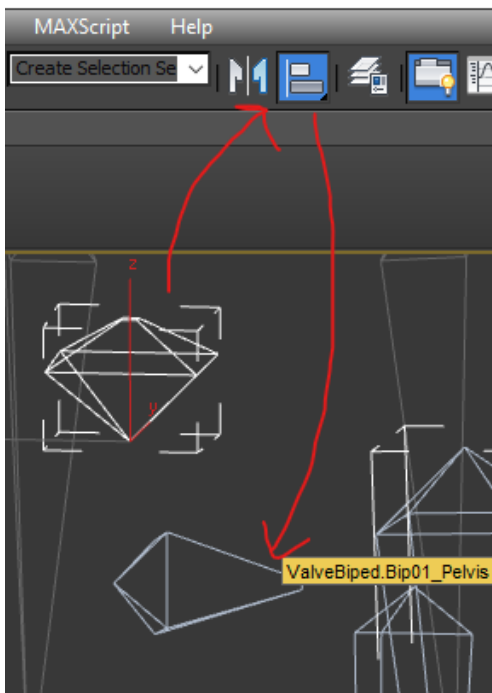

3. Default bones hips will moved to your custom model bones hips after use this settings:
    i.   Align Position (World): Tick X, Y, Z Position.
    ii. Both Radio buttons is on "Pivot Point"
    iii. Orientation and Scale below are un-ticks on all boxes. Then click OK Button
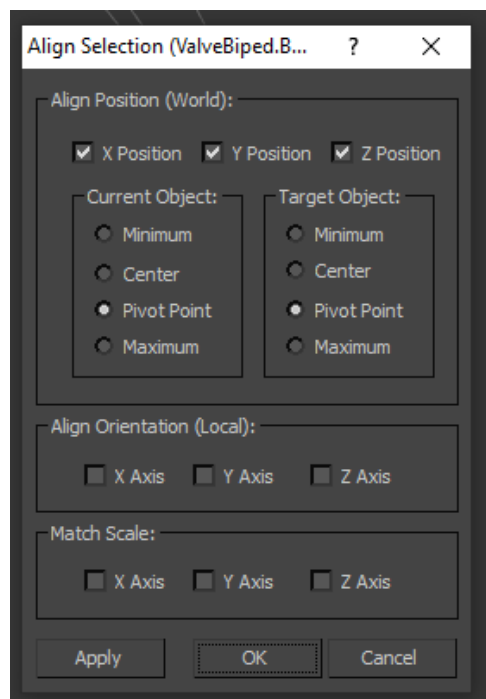
4. Now at left or right leg bones, do the same like on step 2 -3
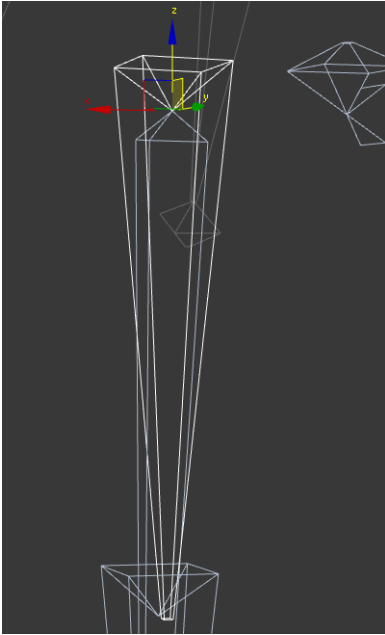
5. The additional difference now is we need to rotate the bone so the default leg bones almost properly align with the original bone legs. Reminder! Only Rotate Upper Legs
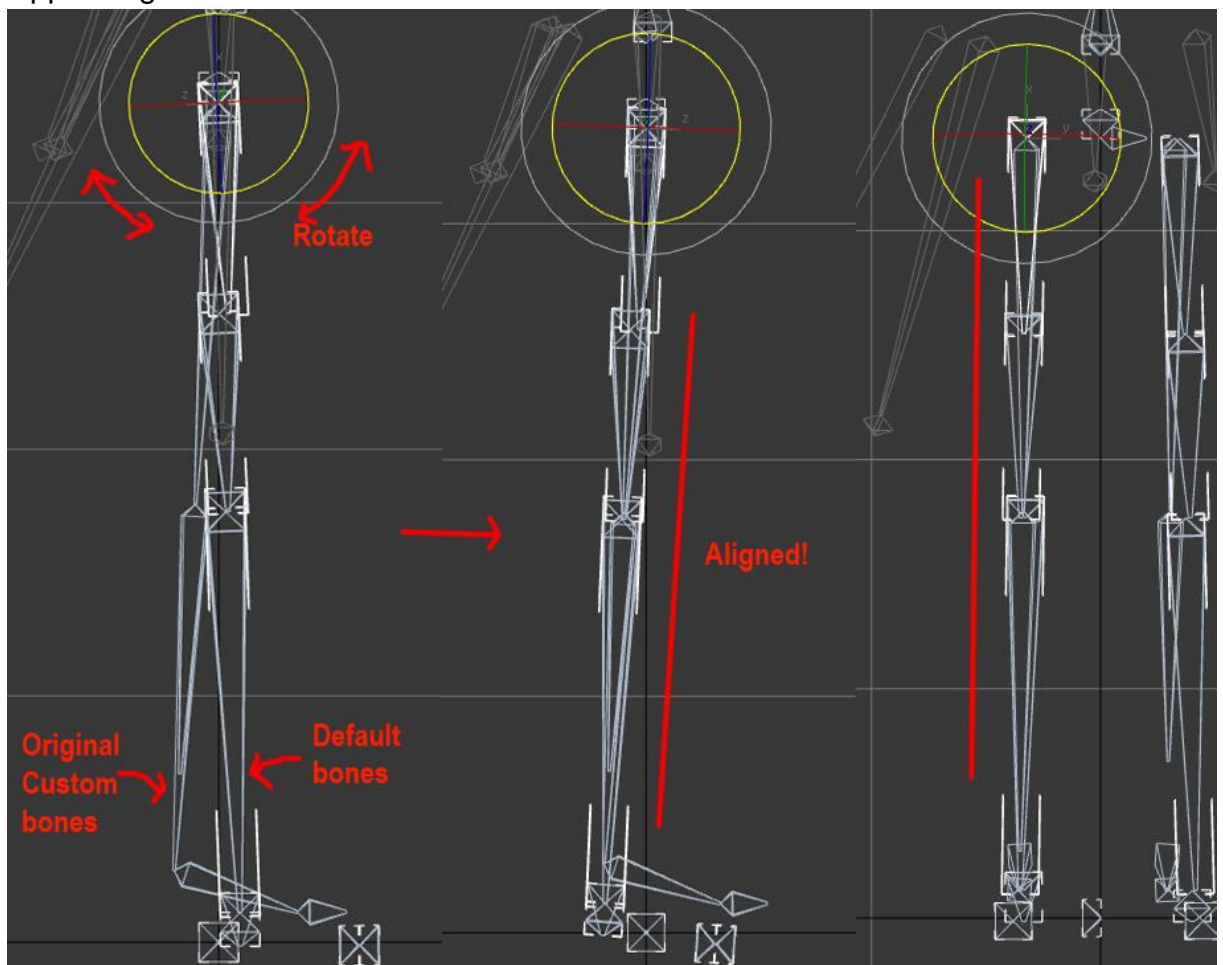

Do for both leg bones!

6. Continue to do "Align" Button (on step 2 and 3) for leg and foots. Do its sequential from top to down. **(Do Not Rotate for any of them!)**
Hint: If your bones don't have "twist bones" or any other extra bones from default skeleton, just leave it be.
Result:
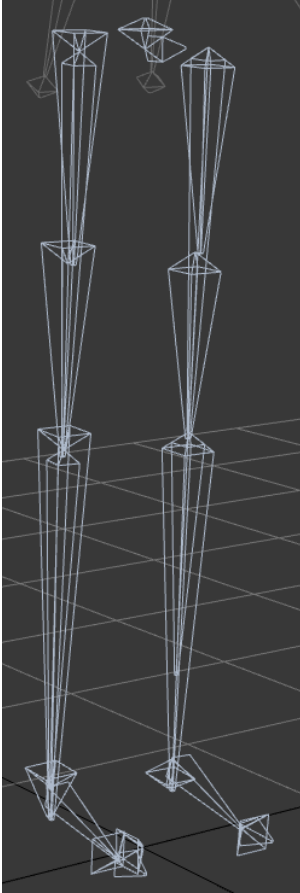
7. Continue for Aligning (Use step 2 – 3) for Spine, Spine1, Spine2, Spine3, RightShoulder, LeftShoulder, Neck and Head. Follow skeleton sequential. If your custom skeleton is lacking bones, ignore it. **(Aligning only! Do Not Rotate for any of them!)**

8. Now for arms its almost same techniques on step 2 – 5. Do these steps:
    a. Align RightArm / LeftArm (using step 2 - 3) **Not Shoulders**
    b. Rotate Only RightArm / LeftArm to get symmetrical aligned with custom arm bones (follow step 4 - 5)
    c. Continue align button for ForeArms and Hands (you can ignore twist if you don't have it) (follow step 6)
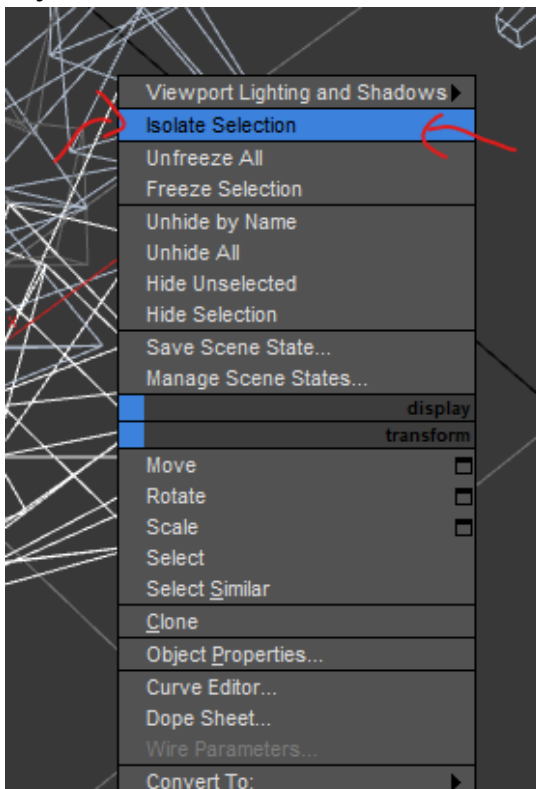   d. Do for both left and right arms.

e. Result:
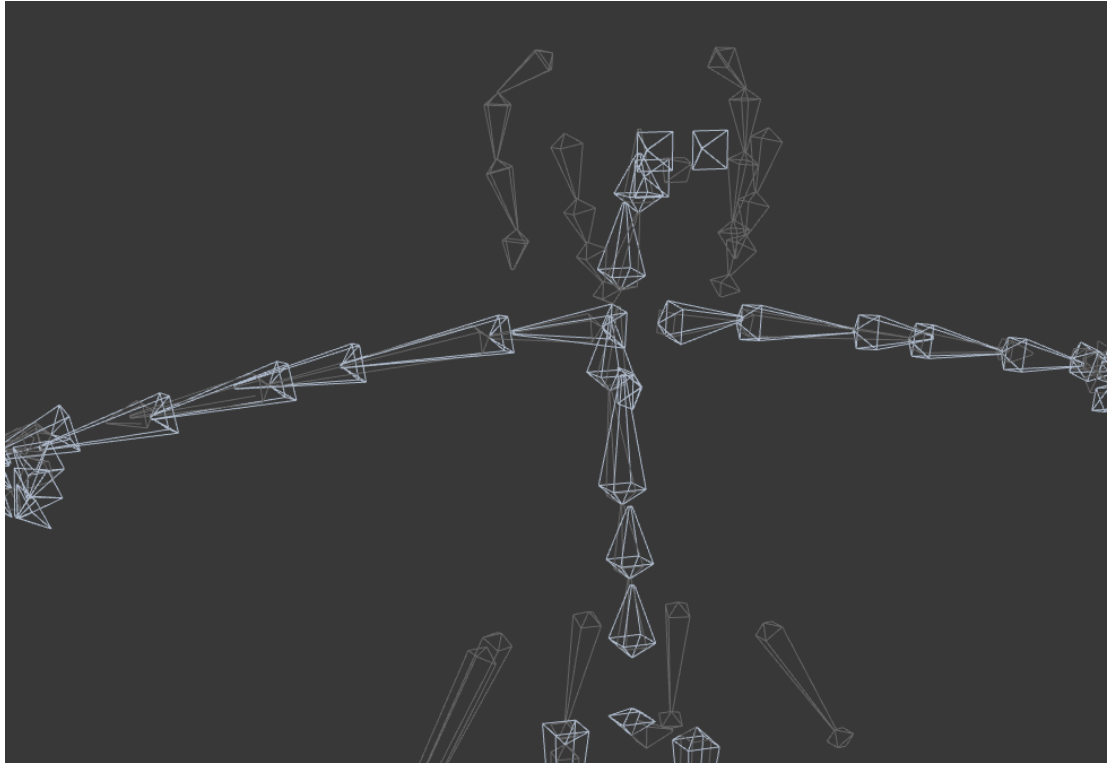
Tips: If you hardly see your custom bones color (because its overlaps with default bones) You can select all your custom bones and press Alt+X to turn it into X-ray.

9. For Hands and its fingers, you can do exactly like steps 2 – 5.
Tips: Only isolated selected parts for easy editing. Right click on selected objects and select "Isolate Selection"

Result