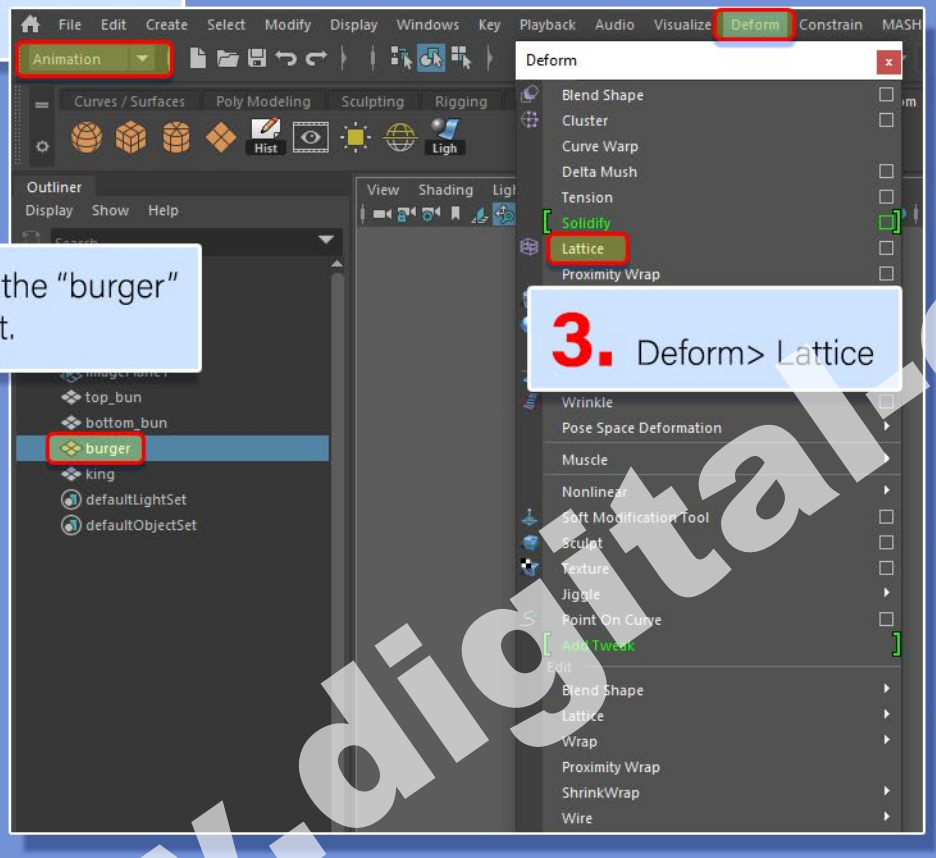
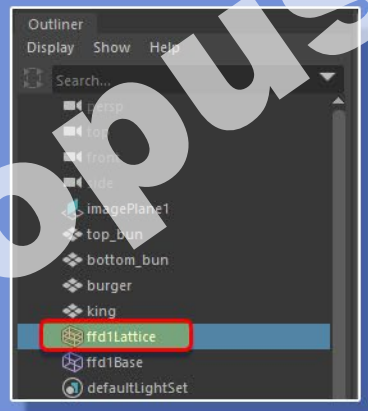
Burger King Project Guide: Rigging~ Part 01

1. Make sure you're on the Animation menu.

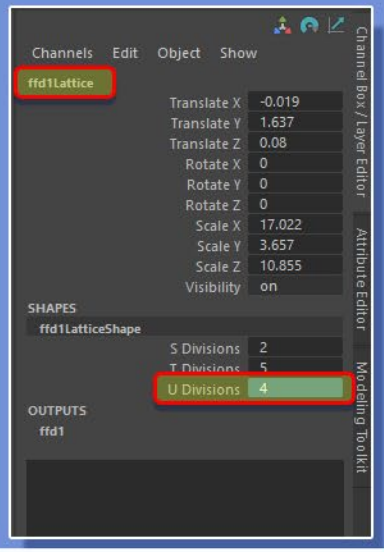
2. Select the "burger" 3D text.



3. Deform> Lattice

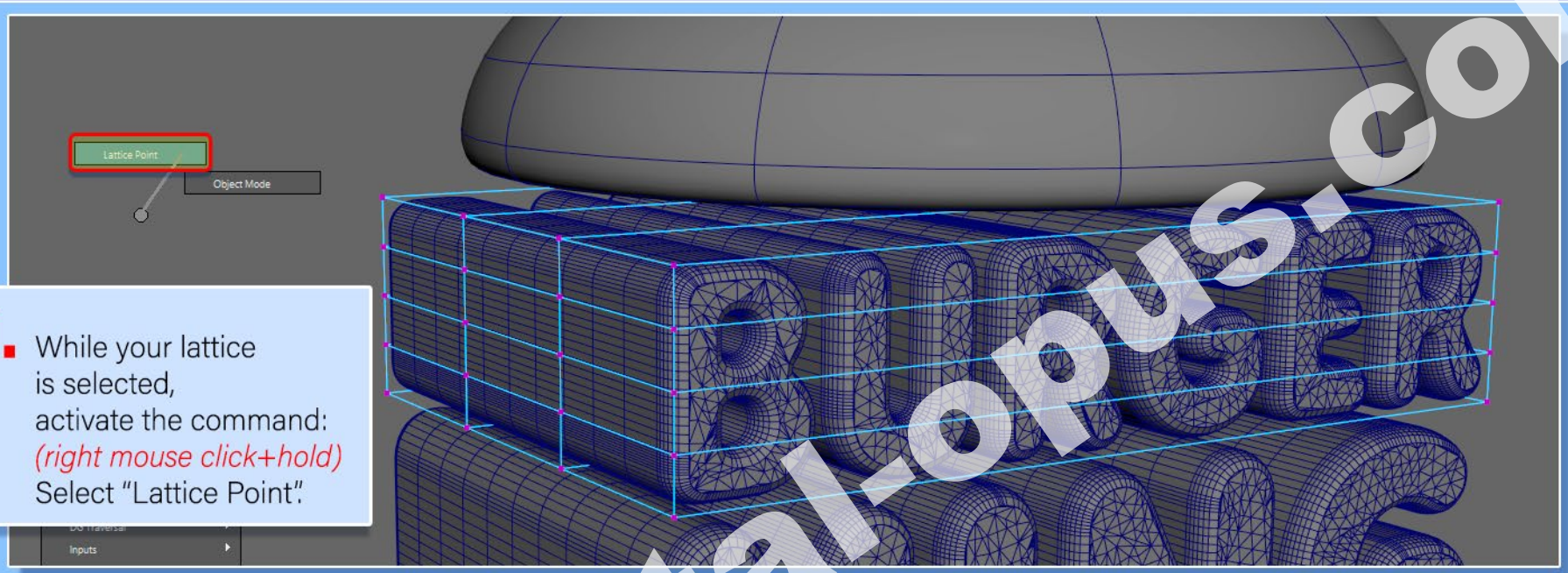


4. Make sure you have *"ffd1Lattice"* created & selected.



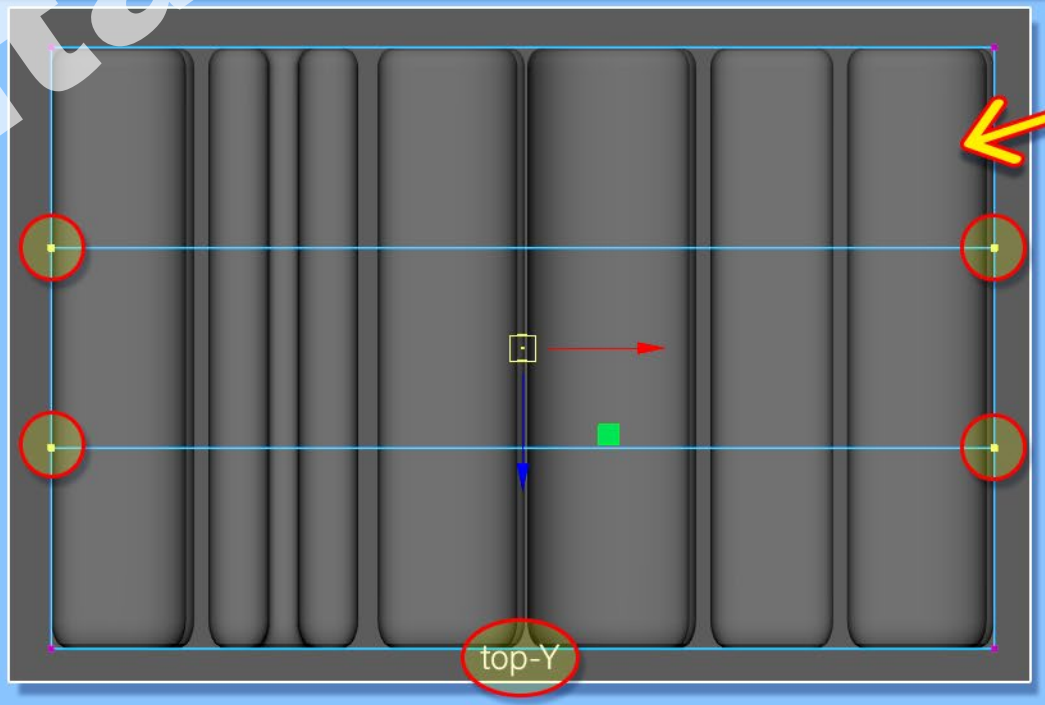
5. Set the U Divisions to **"4"**.

Burger King Project Guide: Rigging~ Part 02



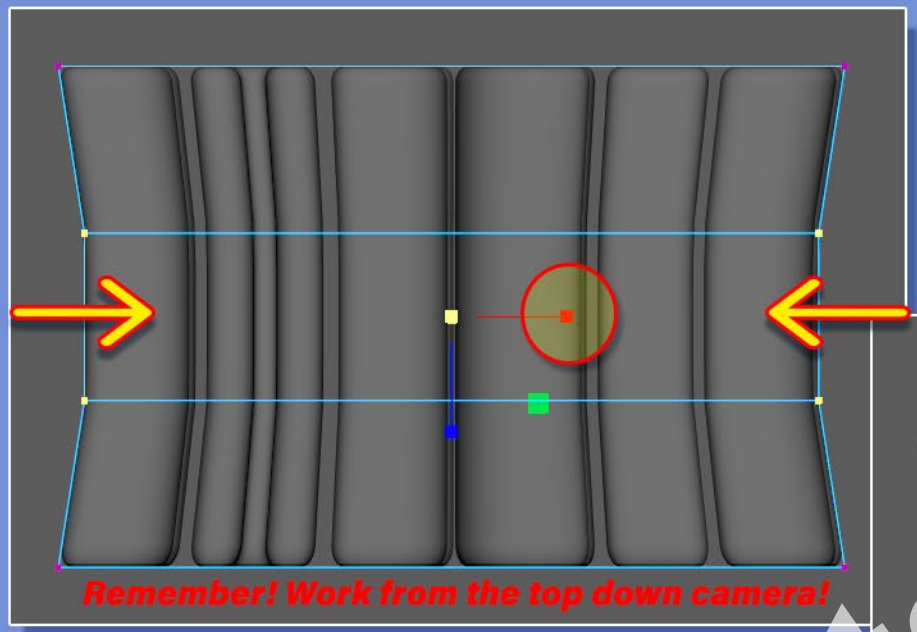
1. While your lattice is selected, activate the command: *(right mouse click+hold)* Select "Lattice Point".

2. Now work from the "top-y" camera view. Don't use perspective or you will get REKT. lols...



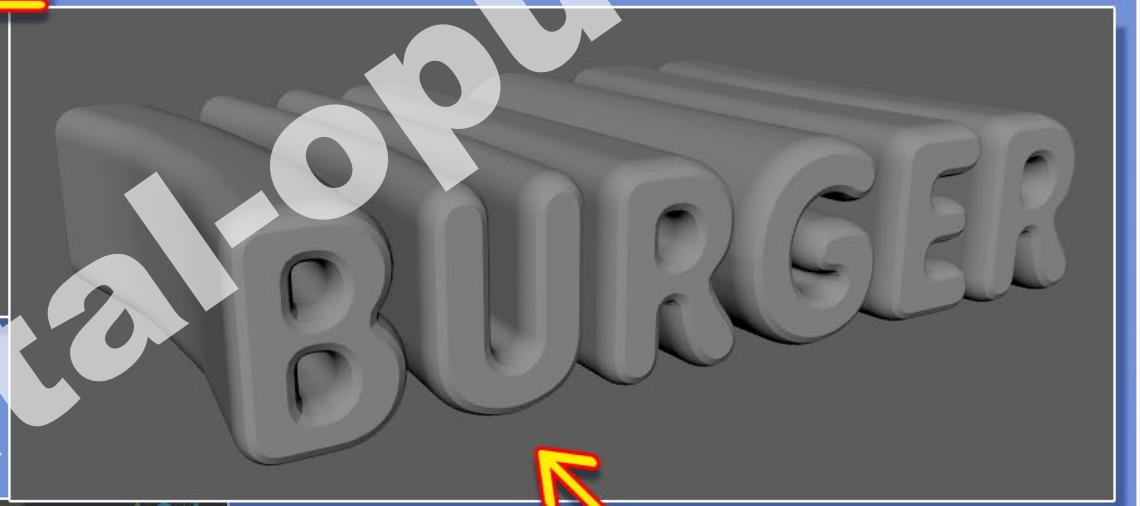
3. Carefully select these yellow points. They will be used to manipulate the overall shape of the "burger" text.

Burger King Project Guide: Rigging~ Part 03

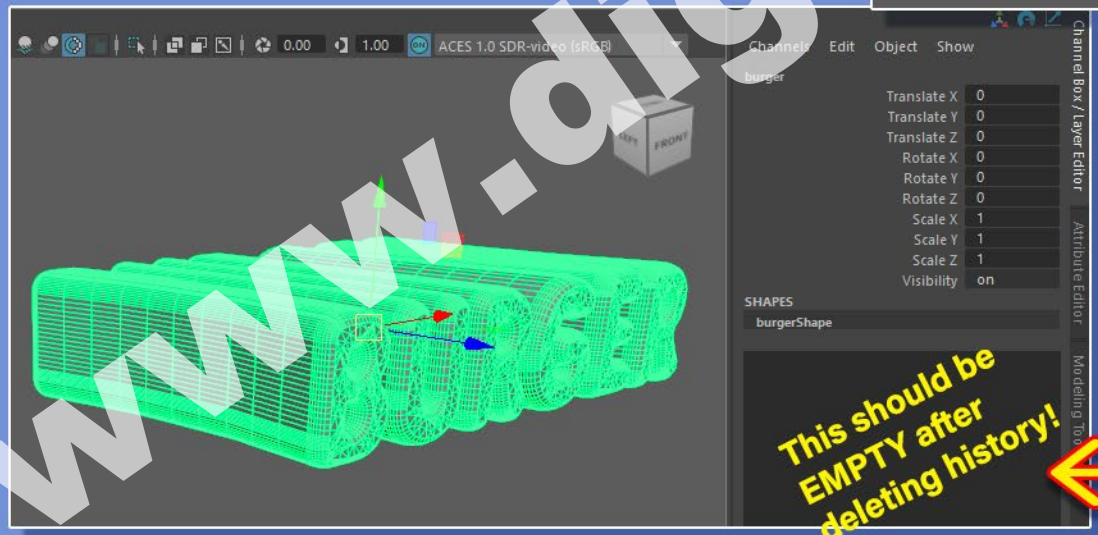


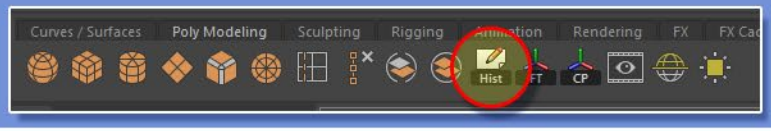
1. With the yellow lattice vertexs selected, press **"r"** shortcut to activate the scale tool.

2. Scale the sides inwards by pulling on the "red" scale handle as shown. Scale it the sides, like in the example.



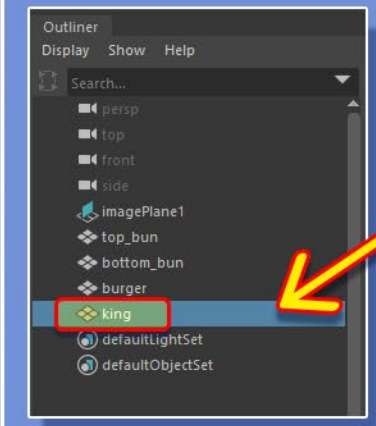
3. Your model now should look like this example.



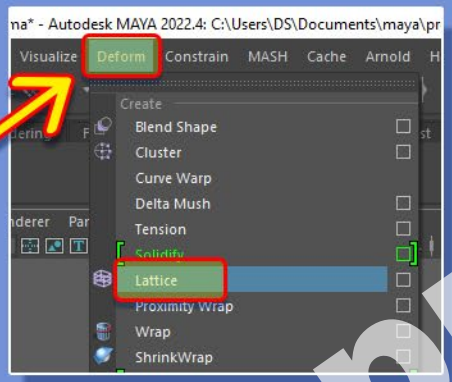


4. Now select your "burger" polygon mesh & delete it's history. If you don't remember how... Google it!

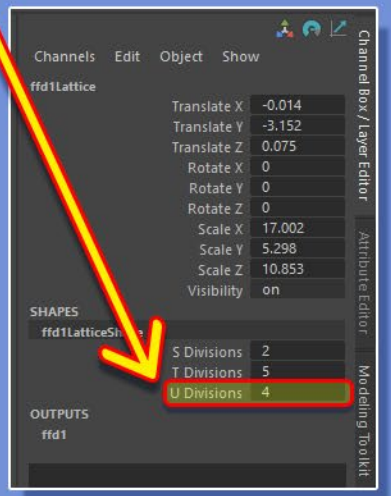
Burger King Project Guide: Rigging~ Part 04



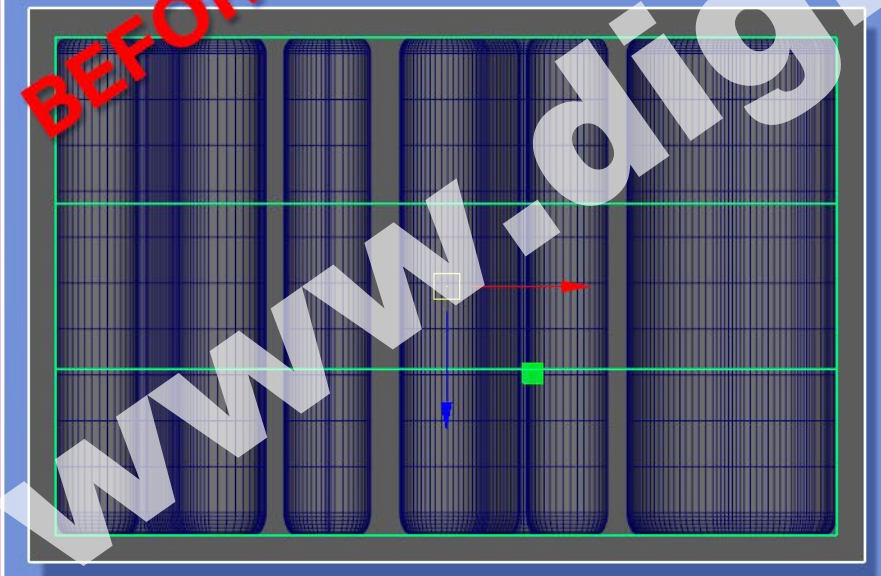
1. Now select the **"king"** 3D polygon mesh. You will perform the lattice procedure for this asset too.

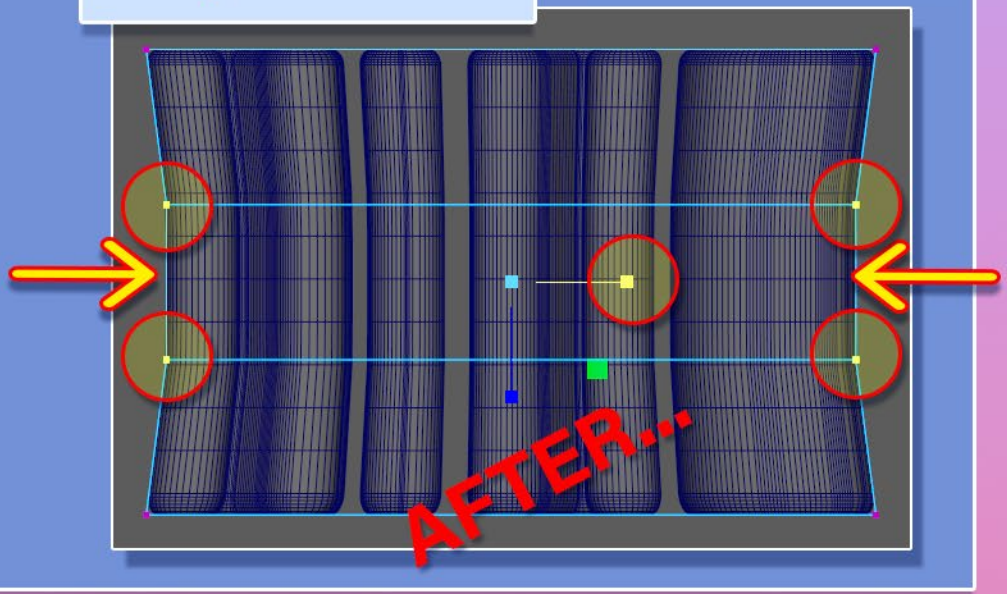


2. Select your ffd1Lattice. Set the "U Divisions" to **"4"**.

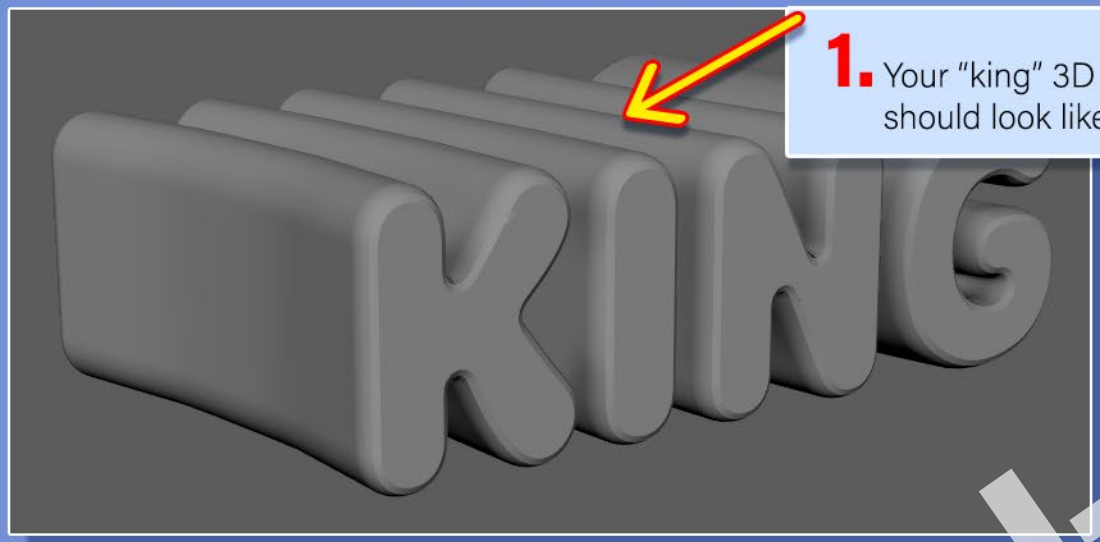


3. Select the yellow dots, then scale them in, **"r"**.



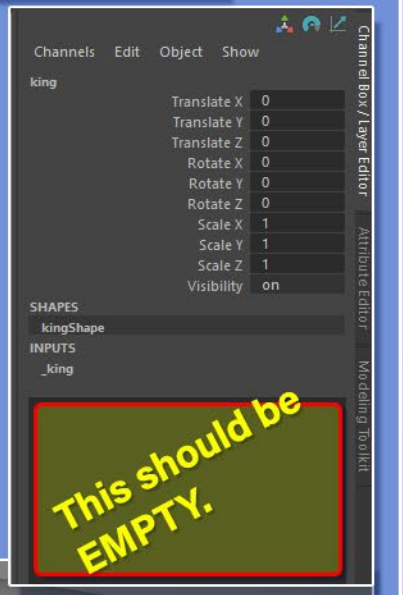


Burger King Project Guide: Rigging~ Part 05



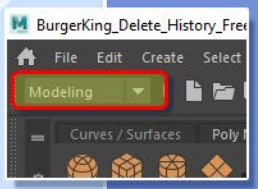
1. Your "king" 3D polygon should look like this.

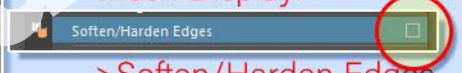
2. Delete the "history" for your "king" 3D model.



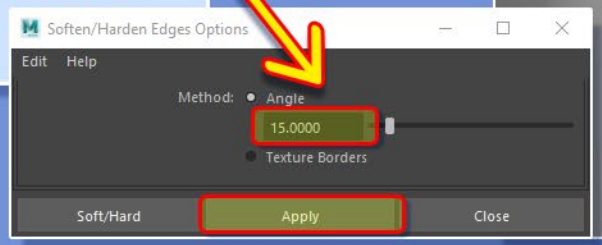
3. You may notice this strange visual artifact on the surface of your "k" 3D polygon.

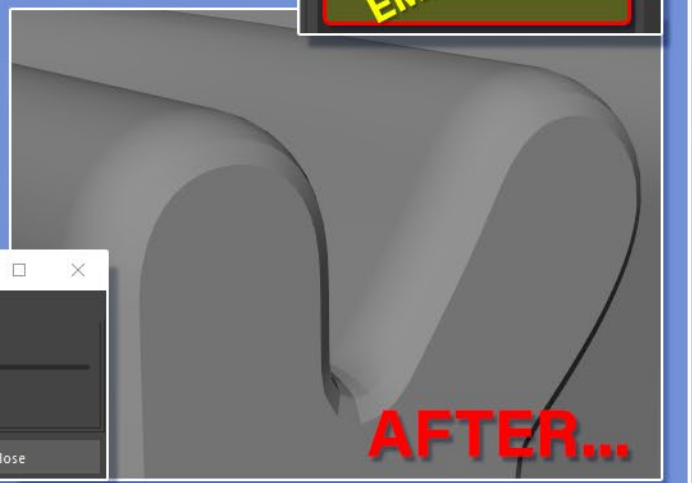
3a. Set the Menu to "Modeling".
Mesh Display>



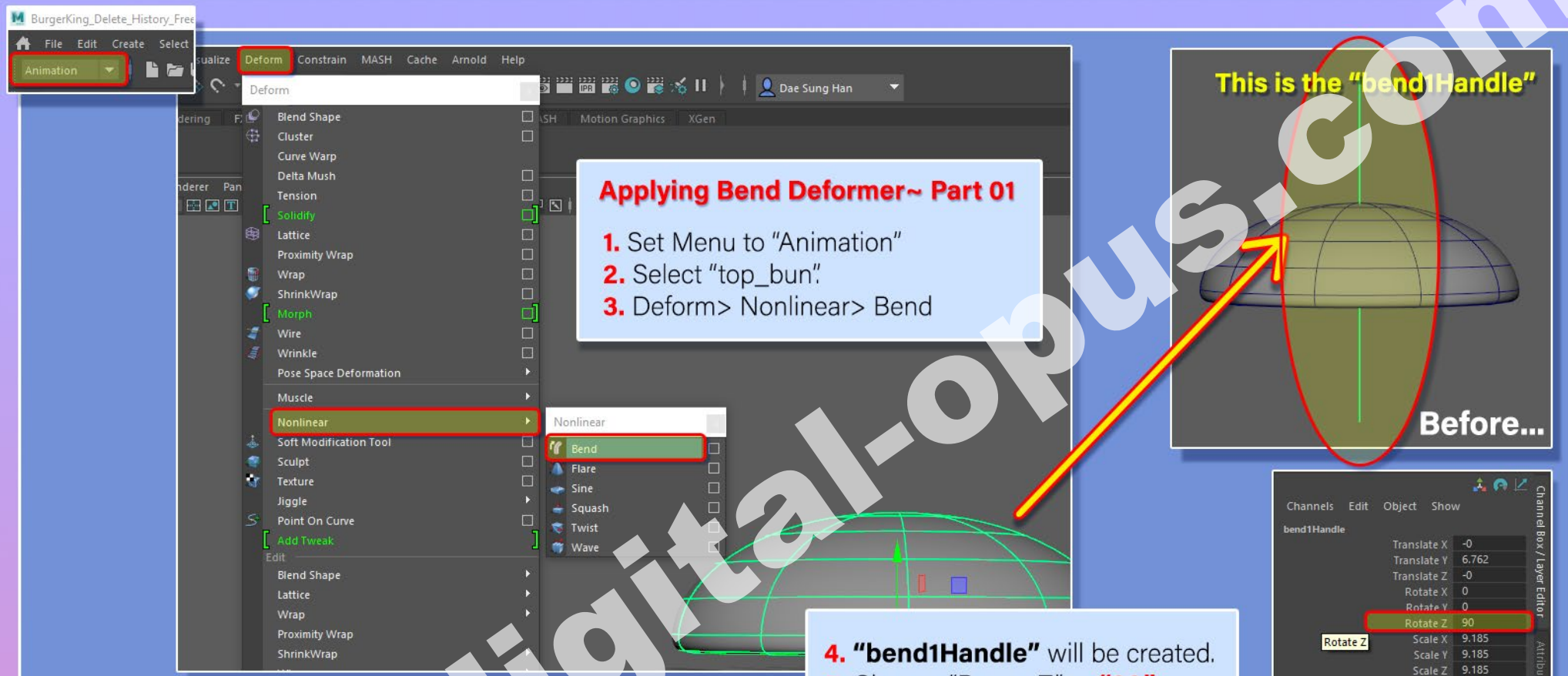


>Soften/Harden Edges Options Box>
set value to "15", then Apply.





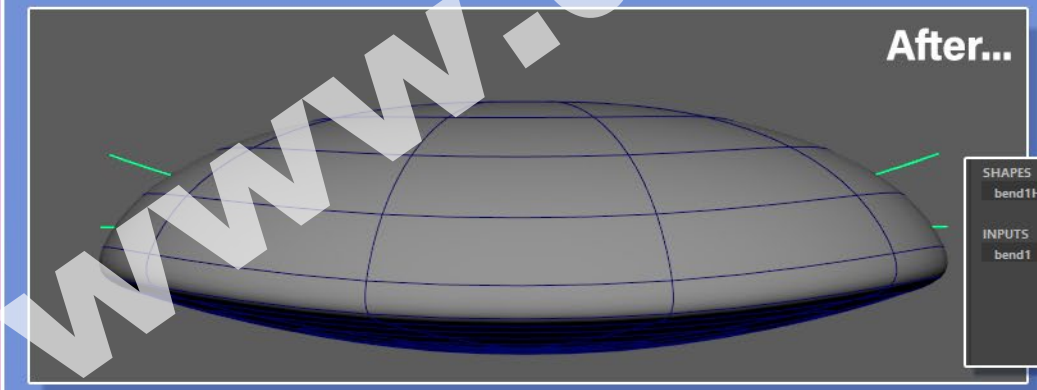
Burger King Project Guide: Rigging~ Part 06

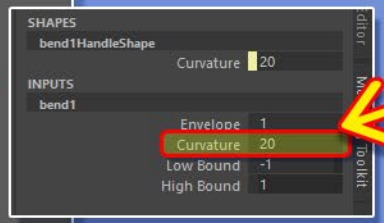


Applying Bend Deformer~ Part 01

1. Set Menu to "Animation"
2. Select "top_bun".
3. Deform> Nonlinear> Bend

4. **"bend1Handle"** will be created.
5. Change "Rotate Z" to **"90"**

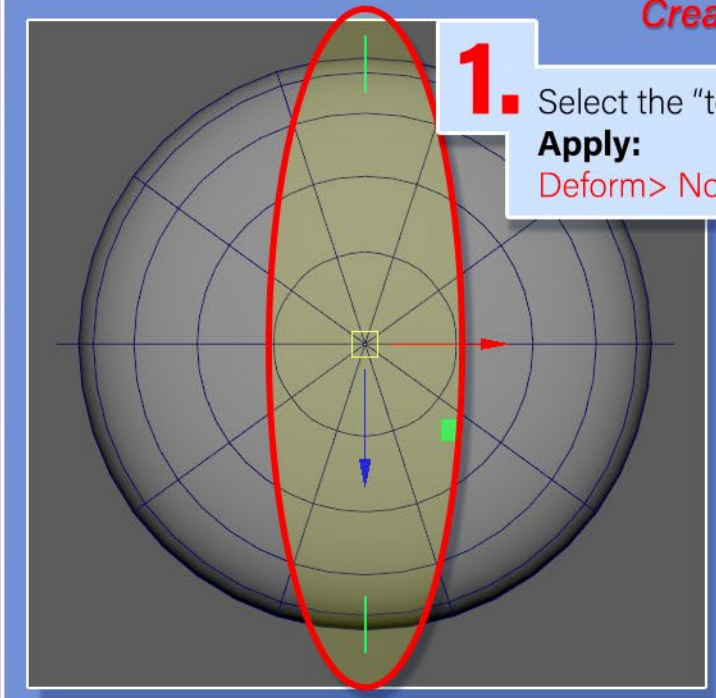




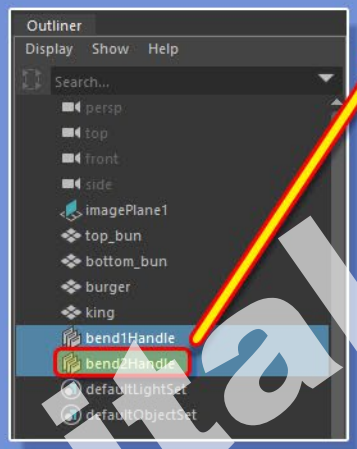
Now test it out to see if it works. Punch in the value of **"20"** for the Curvature, and it should bend. If it works as shown, set the "Curvature" back to **"0"**.

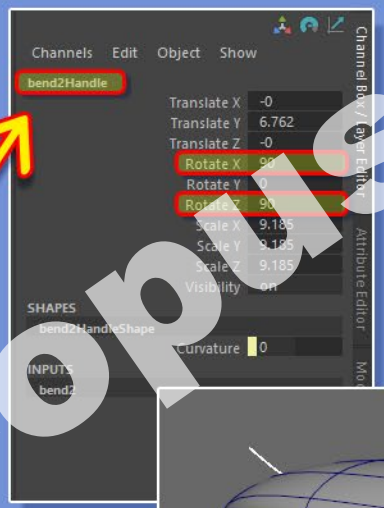
Burger King Project Guide: Rigging~ Part 07

Creating 2nd "bend2Handle" for "top_bun"

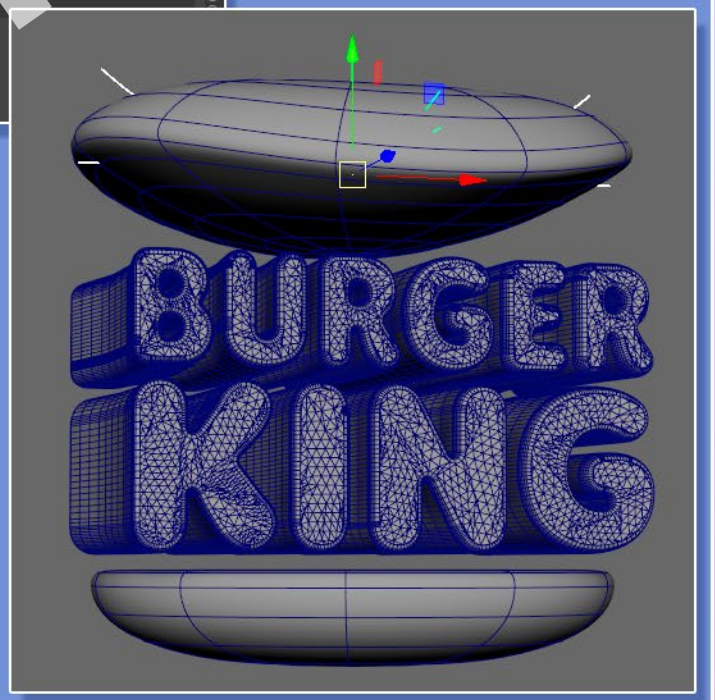


1. Select the "top_bun".
Apply:
Deform> Nonlinear> Bend

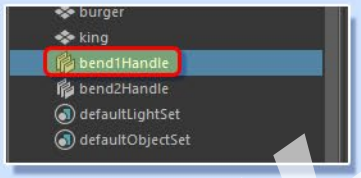




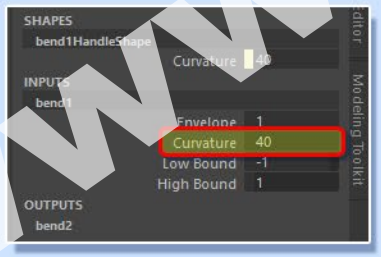
2. Go to Channel Box
Change Rotate X & Y



3. *Now let's test them both out!*

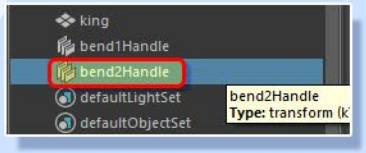


Outliner: Select ***"bend1Handle"***

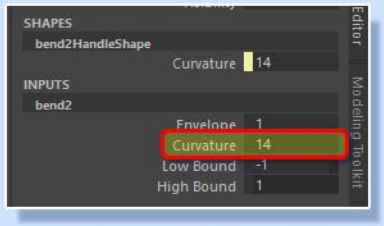


Channel Box: Set ***Curvature*** to ***"40"***

4.



Outliner: Select ***"bend2Handle"***

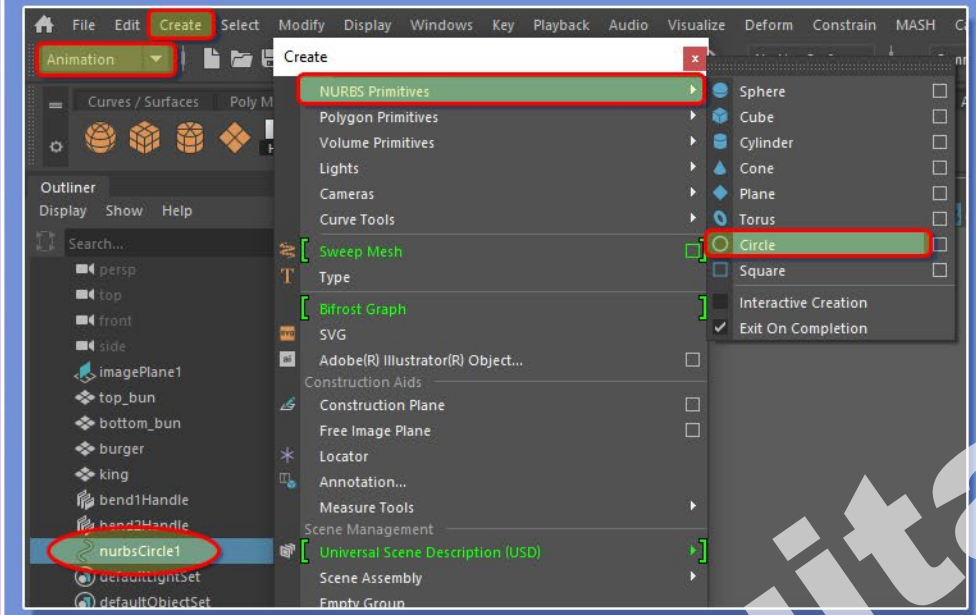


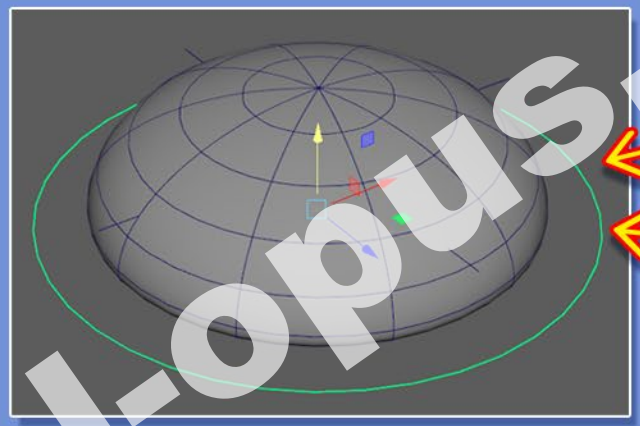
Channel Box: Set ***Curvature*** to ***"14"***

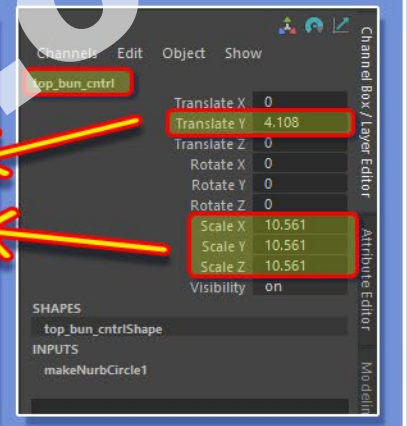
5. With both "bendHandles" in effect, you should achieve this floppy bun look. Once verified, reset the curvature to "0".

Burger King Project Guide: Rigging~ Part 08

Creating Animation Controllers for the Burger King Model

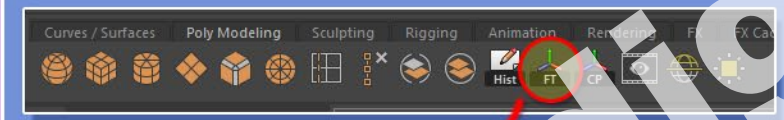


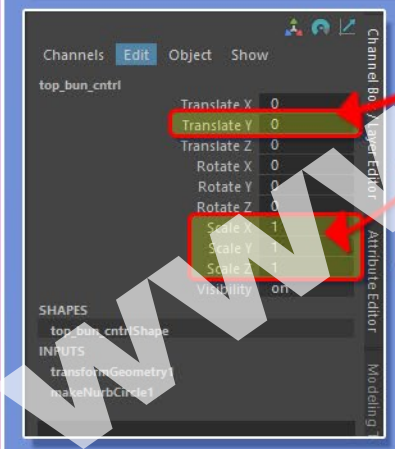




1. Create a "Nurbs" circle.
Create> NURBS Primitives> Circle
Double click & rename: ***"top_bun_cntrl"***

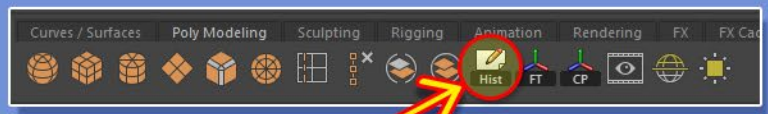
2. Change values:
Translate Y: 4.108
Scale X,Y,Z: 10.561



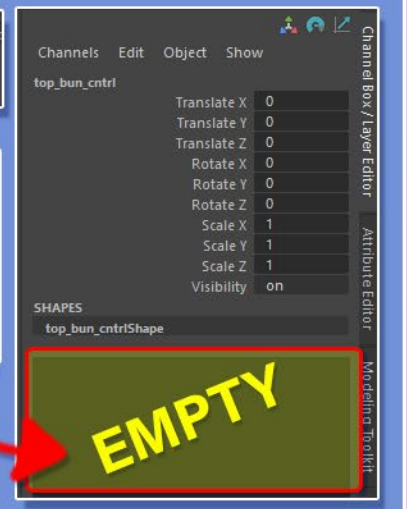


3. Freeze Transformations

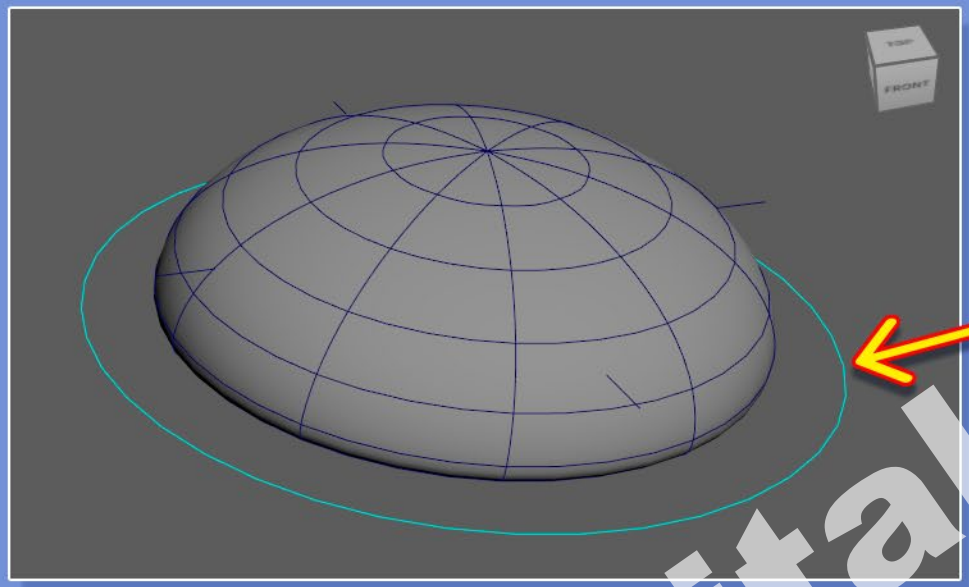
1. Have your "top_bun_cntrl" selected.
2. Click on "FT" Freeze Transformation icon
3. or...
4. Modify> Freeze Transformations

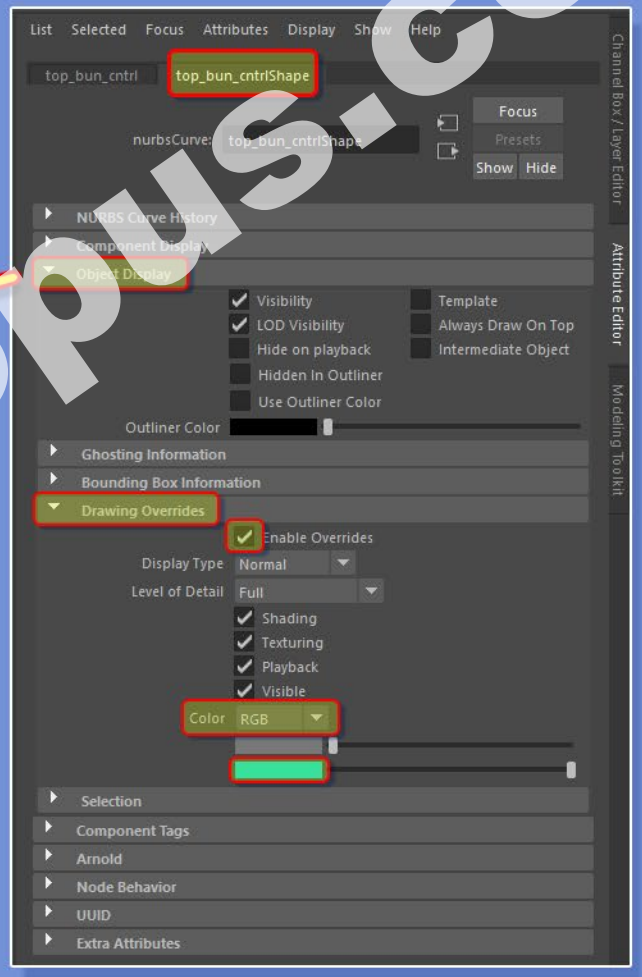


4.
1. Have "top_bun_cntrl" selected.
2. Click "Hist" Delete History icon
3. or...
4. Edit> Delete by Type> History



Burger King Project Guide: Rigging~ Part 09



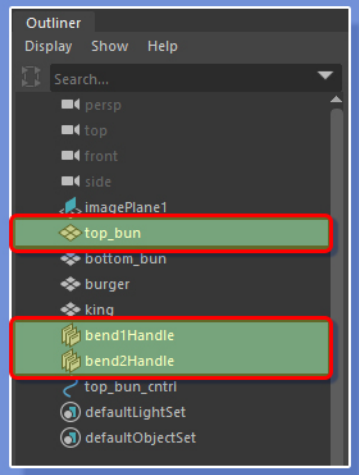


1. Assigning Custom Colors for Controllers

A. Select the "top_bun_cntrl"
B. Select the **Attribute Editor**
C. Click on **"top_bun_cntrlShape" tab**
D. Click on **"Object Display"**, then
E. Click on **"Drawing Overrides"**
F. Check "ON" for **(Enable Overrides)**.
G. Set **"Color"** to RGB
H. Pick a color that you desire.

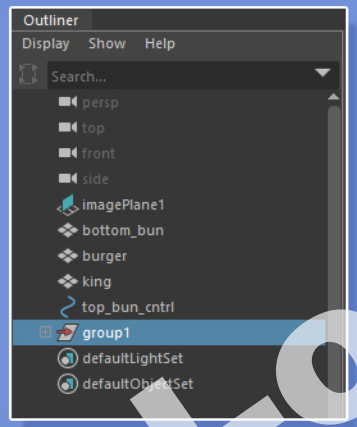
Burger King Project Guide: Rigging~ Part 010

Grouping, Renaming, Edit Pivot, and Parent Contraints



1. Select these together. (CTRL+left click select)
"top_bun"
"bend1Handle"
"bend2Handle"

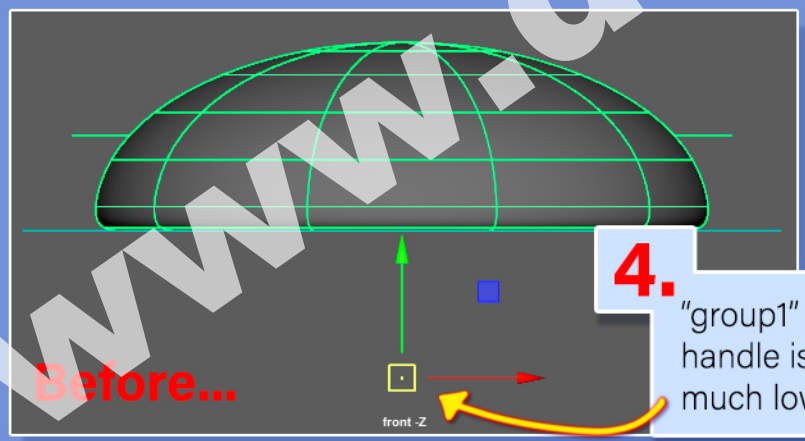
2. Group them.
Edit> Group
or shortcut:
CTRL+"g"



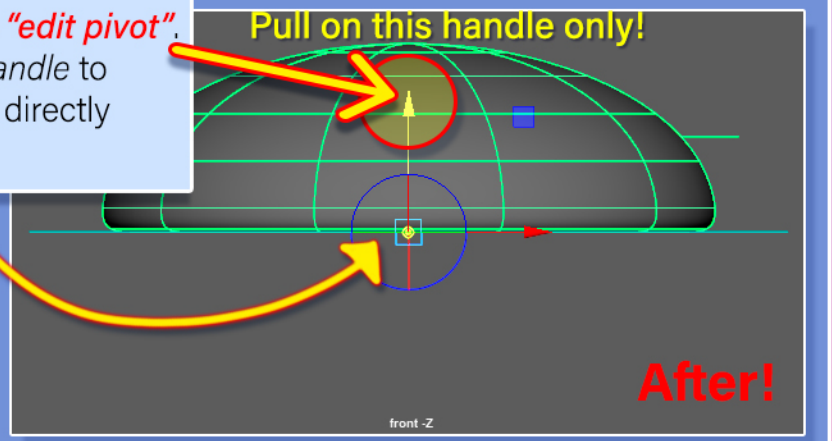
3. Click where the red circle is, to open up "group1", and see the contents.

3a. Double click on "group1". Rename *"group1"* to *"top_bun_group"*

5. Select "group1" **ONLY** from the **Outliner**!
Now work **ONLY** work from **"front-Z"** camera.
Press **"d"** to activate *"edit pivot"*.
Pull on *(top arrow) handle* to move the pivot point directly as show here.

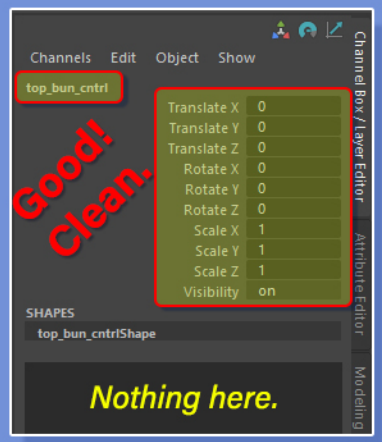


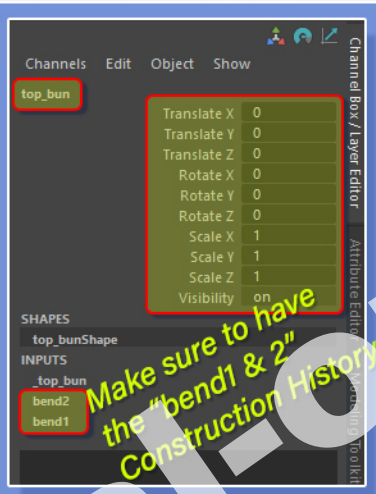
4. "group1" and it's new handle is now placed much lower.



Burger King Project Guide: Rigging~ Part 011

Understanding & Applying Parent Constraints





Reason Review:

Rigging relies heavily on *zero'd* out coordinates & keeping construction history related to deformations (bend deformers), before applying constraints.
The Channel Box should be free of (left-over) garbage data created during your progression.

1. Check for Mistakes

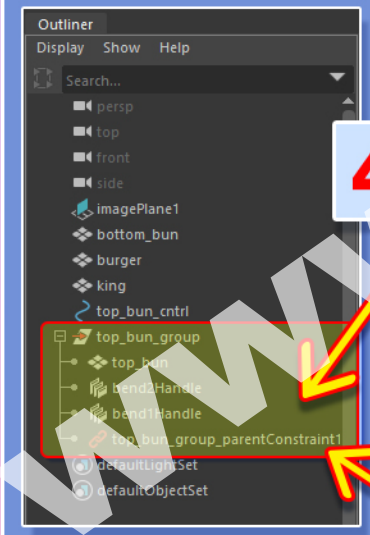
Double check your progress by comparing it to my 3 examples.
Pay attention to what I highlighted.

2. Reason Review:

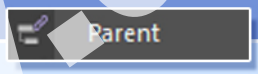
The *"top_bun"*, & *"bend1Handle"* & *"bend2Handle"*, all have to be grouped together as *(top_bun_group)*, because the deformers **will not work** if they are not **inside** the bun at all times.

3. Reason Review:

The nurbs circle *(top_bun_cntrl)* will be used as a ***selectable controller***, to be able to pick+select, and then animate the *(top_bun_group)*.
You can't physically select the ***(top_bun_group)*** in the 3D world.
It's only possible from the Outliner.
Hence the need for a controller.



4.

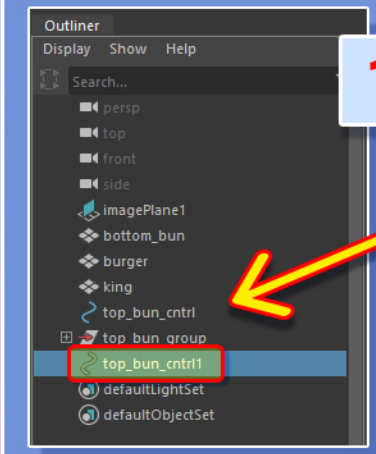


"Parent Constraint" is the special tool to link the (top_bun_group) ***to the*** (top_bun_cntrl)

1. ***First,*** select the ***(top_bun_cntrl)*** because this controller will be the **PARENT** that controls & constrains the **child, *(top_bun_group)***.
2. ***Next,*** you hold down the (CTRL) key, and **(from the Outliner),** also pick+select the *(top_bun_group)*.
3. ***Now do this: Constrain> Parent***
4. If you followed directions correctly, your Outliner should look like this example shown here.

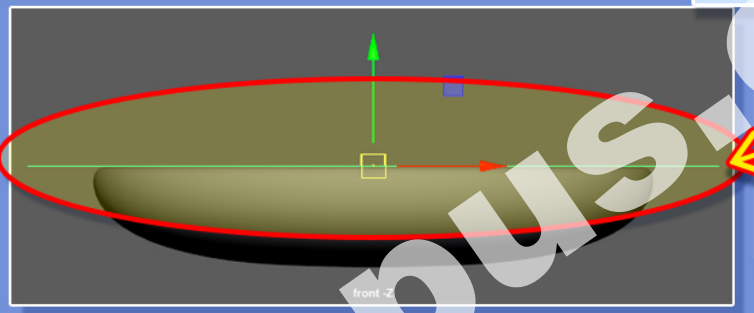
Burger King Project Guide: Rigging~ Part 012

Rigging "bottom_bun": Bend Deformers & Controller



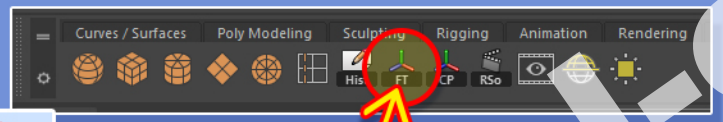
1.

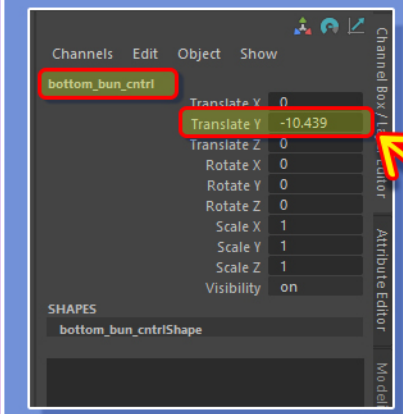
a. Select the "top_bun_cntrl".
b. Make a duplicate copy of it.
c. Press: CTRL+d
d. Rename the copy to:
"bottom_bun_cntrl"



2.

1. Work from the front-Z camera.
2. Lower the new controller down so it rests on the flat surface.

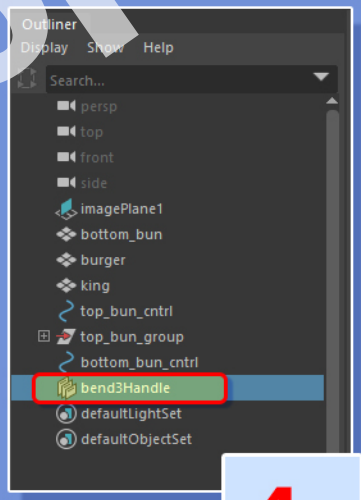


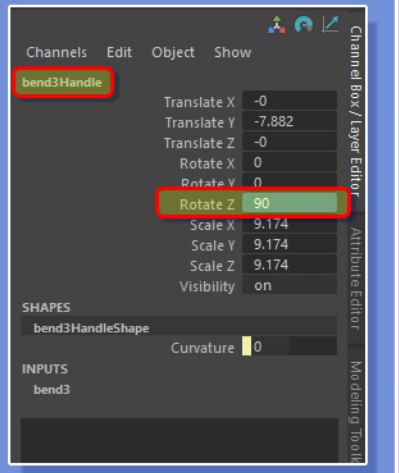


3.

This information needs to be wiped out & reset back to "0".

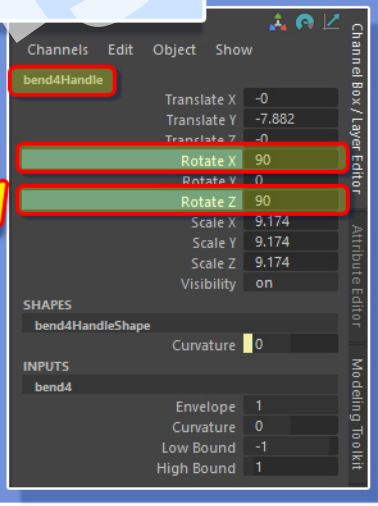
Modify>
Freeze Transformations





4. **Creating 1st Deformer**

a Select "bottom_bun"
b. Create a bend deformer.
Deform> Nonlinear>
Bend
c. Now you should have
"bend3Handle".
D. Set ***Rotate Z: 90***

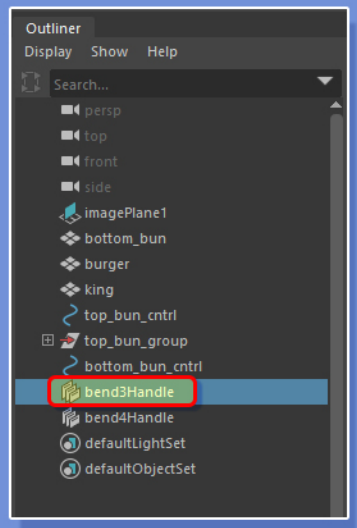


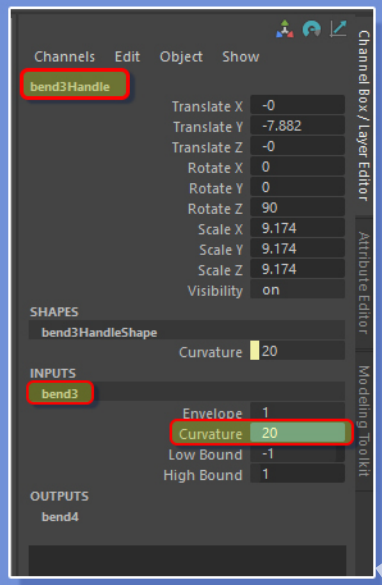
5. **Creating 2nd Deformer**

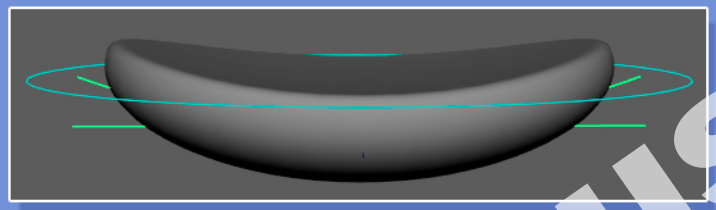
a Select "bottom_bun"
b. Create 2nd bend deformer.
Deform> Nonlinear>
Bend
c. Now you should have
"bend4Handle".
D. Set ***Rotate X, Z: 90***

Burger King Project Guide: Rigging~ Part 013

"bottom_bun": Testing Bend Deformers & Grouping

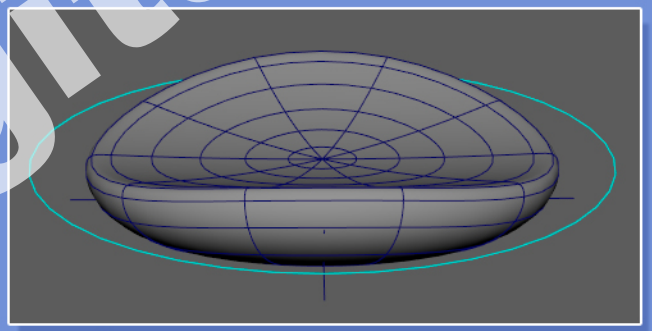






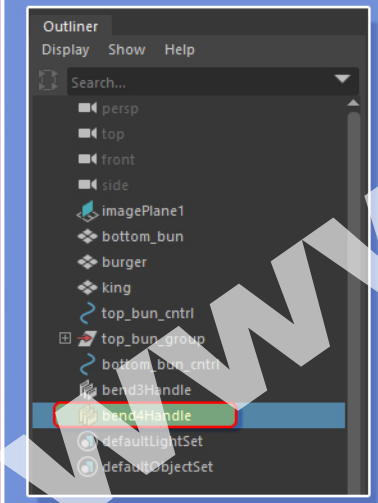
1. Testing bend3 Deformer

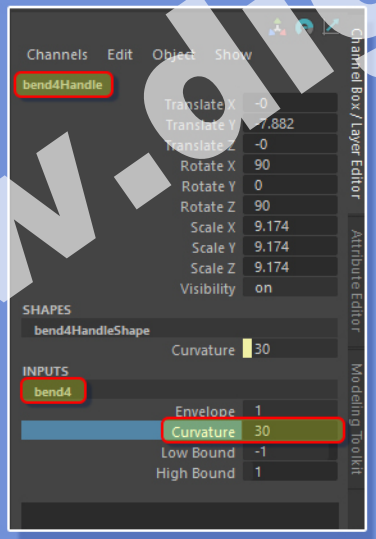
a. Select **"bend3Handle"** from **Outliner**.
b. In **Channel Box**, select *"bend3"*.
c. Input **"20"** for **Curvature**.
d. Your model should bend & look like this.
e. Now reset the *"Curvature"* back to **"0"**.



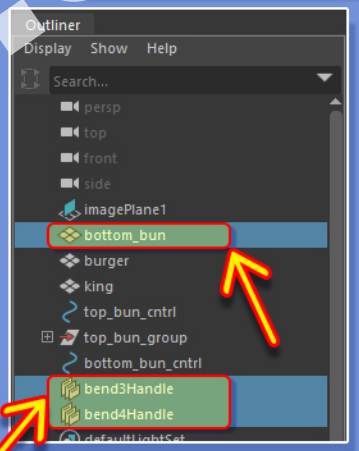
2. Testing bend4 Deformer

a. Select **"bend4Handle"** from **Outliner**.
b. In **Channel Box**, select *"bend4"*.
c. Input **"30"** for **Curvature**.
d. Your model should bend & look like this.
e. Now reset the *"Curvature"* back to **"0"**.

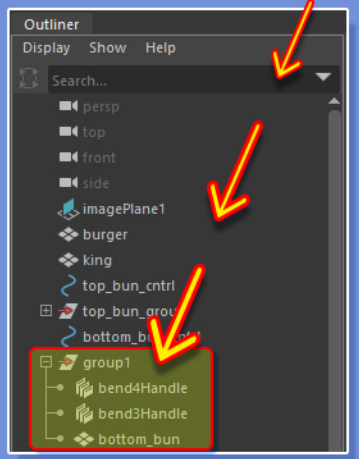




3. Grouping "bottom_bun"

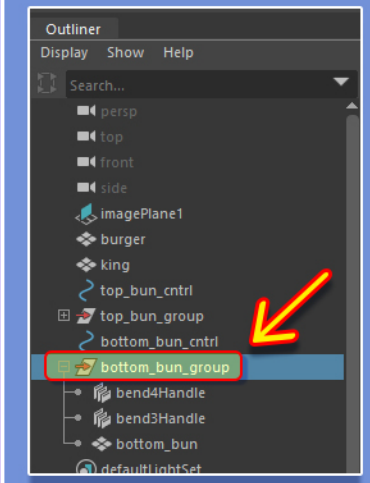


(CTRL+Select)
These items from Outline.
Then (group them).
CTRL+"g"
They should look like this.



Burger King Project Guide: Rigging~ Part 014

"bottom_bun": Renaming, Modify Pivot & Constraints



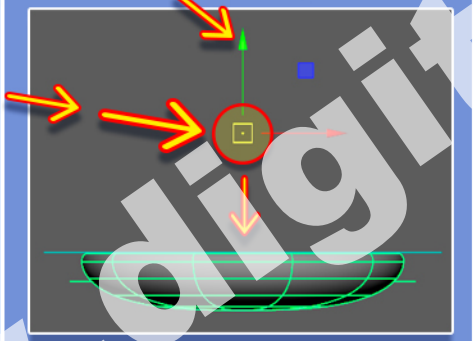
1. Renaming the group

a. Double Click & Rename "group1", as:
b. "bottom_bun_group"
c. Make sure it has:
"bend4Handle"
"bend3Handle"
"bottom_bun"

2. Activate Pivot

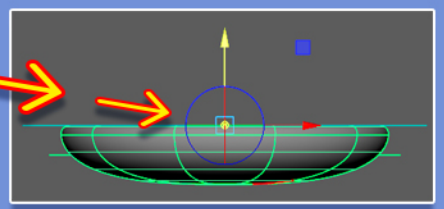
a. *"bottom_bun_group"* the move handle is far.
b. Work from front camera.
c. From the Outliner, select: ***"bottom_bun_group"***
d. Activate "Edit Pivot", **(press "d" key)**.
e. Pull down the handle by grabbing the green arrow handle.

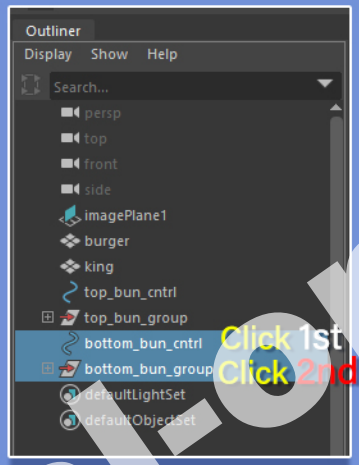
Grab this handle & pull down.

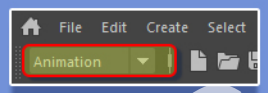


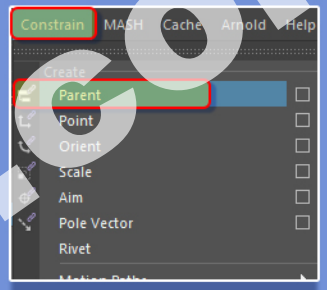
3. Example:

a. Lower it down, until it touches the surface.



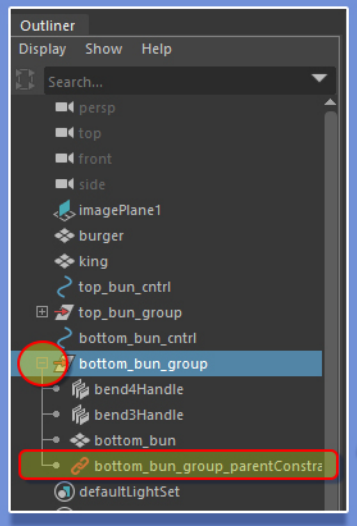






4. Parent Constraint

a. Select "bottom_bun_cntrl"
b. (CTRL+ select) the "bottom_bun_group
c. Make sure you're on "Animation" Menu
d. Constrain> Parent



5.

Open "bottom_bun_group"
Now you should see this extra item:
"bottom_bun_group_parentConstraint"