

§ Hoop Earrings

In this project you will create a 180-degree swept earring including the post for effect. Normally, you will add the post later in the manufacturing process because cast posts are too soft.



2. **Tools Menu-Profile Placer**, put the circle in the curve box, click on the edge profile box and choose profile #20. Now you will see the VCH-Viewport Control Handles:

Objective:

You will sweep a profile to a second profile with specific parameters. This will create an open surface which you will cap and make a post for rendering purposes. This will be the first time you will be introduced to a new part of the program which lets the designer be more flexible using handles to pull, rotate or position along a curve for dimensional values or in a traditional fashion input parameters into a menu layout to, in effect, do the same task.

Cone pointers=width and height-defined also by icons in main menu
 Circle w/spheres=rotate, tilt, and twist-also in main menu
 Cubes=x, y, z offsets-x and y in main menu
 Ball on center=position on curve-in main menu
 Profile icon=choose a different profile-edge profile window
 E=Edit the profile-edge profile window

Parameters:

Earring: 2mm high; 3mm wide; inside diameter 12mm

Earring Post: 11mm long; .8mm in diameter

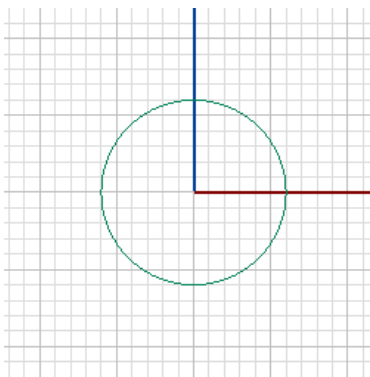
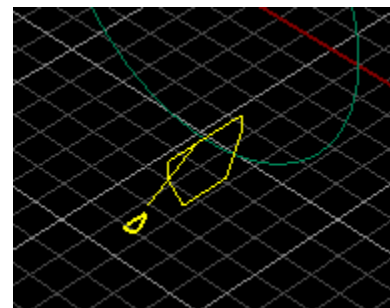
3. Change the width=3 mm and the height=2 mm, click on ADD in this menu to place a profile at the bottom position.



Notes:



1. **Curve Menu-Circle**, center of circle is F4 in the Through Finger VP, select the diameter option in the command line, type 12 and enter.

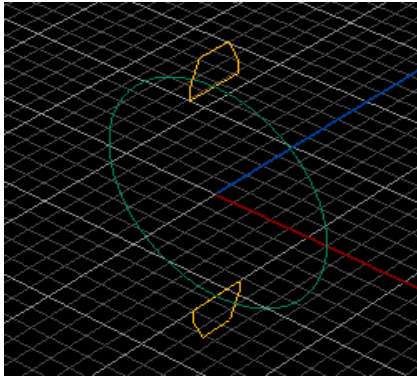


There are two different ways to move the profile to the top:

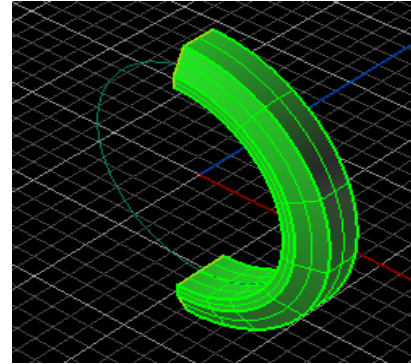
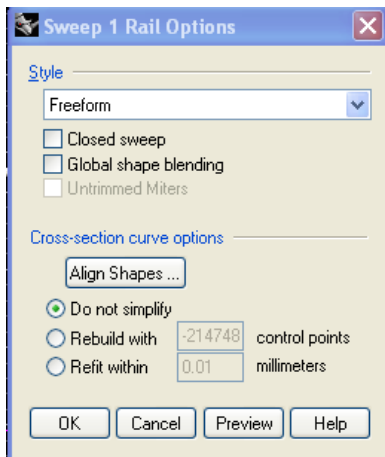
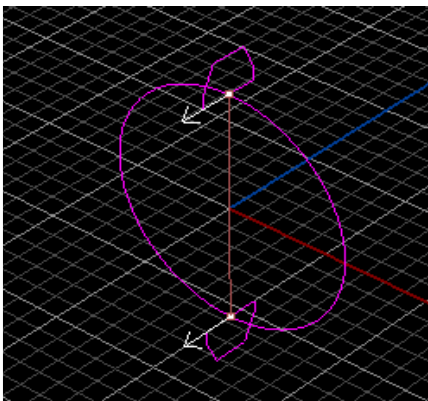
A-Use the main menu icon and slider (position on curve)

B-Left click and drag the position along curve VCH to the top

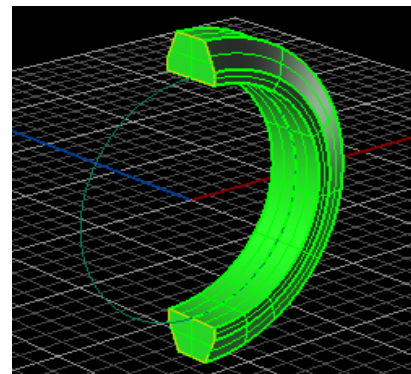
Choose either way and make sure the profile is at center top, it could be at 25% or 75%. Once it is in position right click in any viewport to pin the last profile in that position.



4. **Surface Menu-Sweep 1**, select the rail first between the two profiles on the right at 3 o'clock, select the two profiles, enter and make sure your directional arrows are pointing the same direction and are attached in the same positions. Hit enter again and if it looks right just click OK. Make sure the closed sweep box is unchecked. Now you have only swept a surface not a solid.



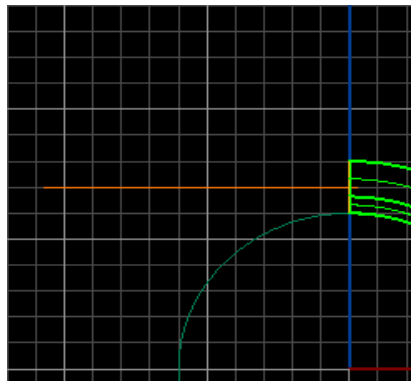
5. **Solid Menu-Cap Planar**, select the surface and hit enter. The earring is now solid.



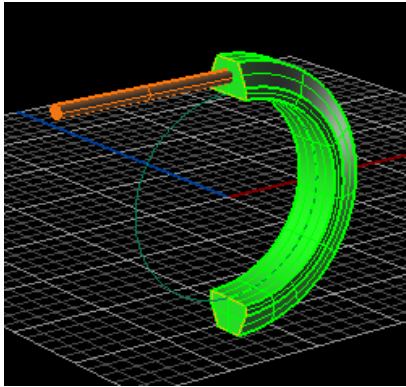
Through Finger Viewport



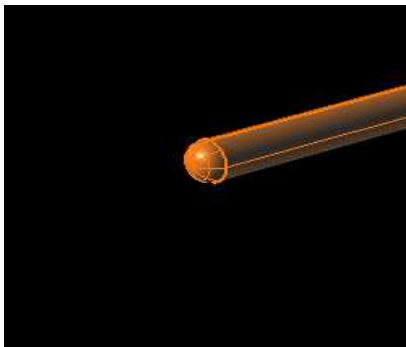
6. **Curve Menu-Single Line**, start of line just inside the center of the top of the earring and click, type 11 for the length and hit enter, shift ortho on horizontal and left click.



7. **Solid Menu-Pipe**, select the line just made, starting radius is .4 mm, enter, enter, and enter. This will create a pin .8 mm in diameter.



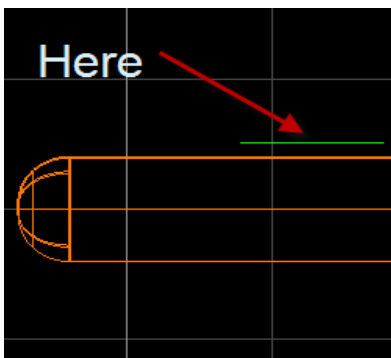
8. **Solid Menu-Fillet Edge**, type in .35 and enter, click on the edge of the pin at the end, enter and enter.



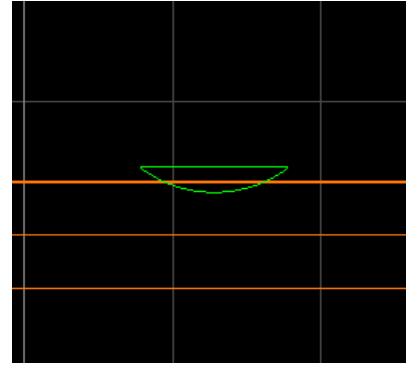
Through Finger Viewport



9. **Curve Menu-Single Line**, start of line is approximately 1.5 mm from the end of the post just above it in the TF VP. Type in 1 and enter for the length, shift ortho on horizontally to the right and left click.



10. **Curve Menu-Arc Direction**, start of arc is the end snap of the 1 mm line and the end of the arc is the other end of the 1 mm line. Pull the arc down until it slightly intersects the post to cut the safety notch.



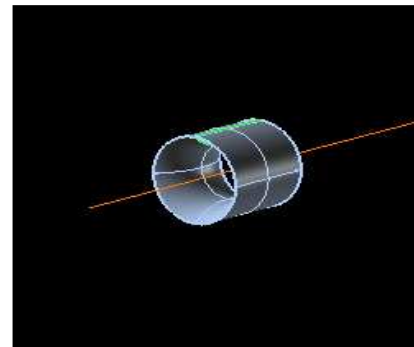
11. **Top 11 Menu-Join**, window the arc and line and join them together.

Hide the post only. Do not hide the line that made the post. Just select the surface of the post and click on hide. See in the layers box Hide and Show

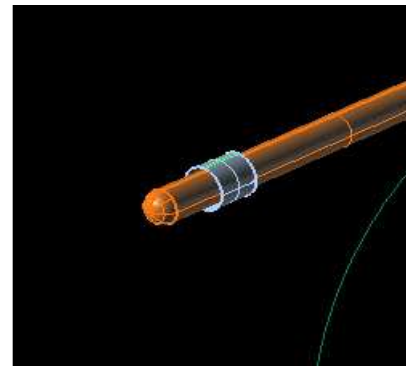
Perspective Viewport



12. **Surface Menu-Revolve**, perspective viewport, select the arc and line just joined, enter, the start of the revolve axis is the end of the post line at the end of the revolve axis is the other end of the line, start angle is 0 and end angle is 360.

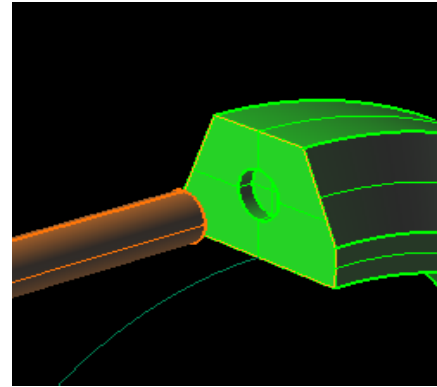
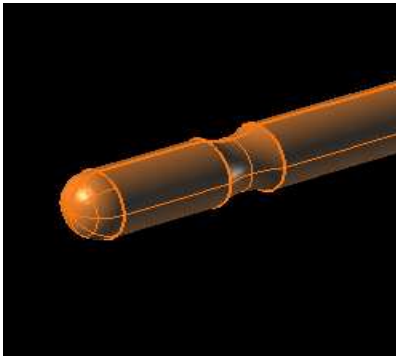
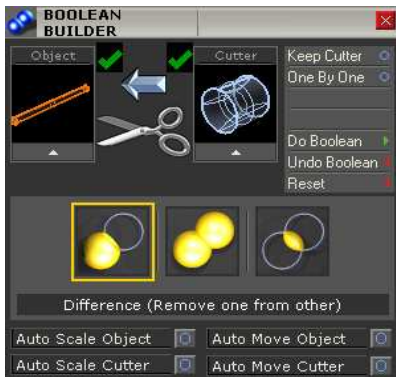


Show the post

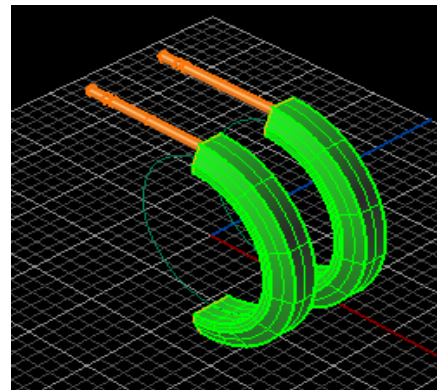




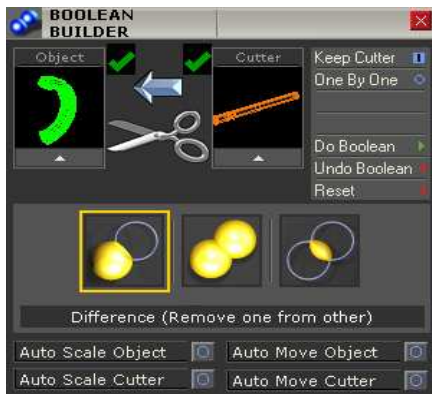
13. **Tools Menu-Boolean Builder**, difference option, select the arc just revolved, and put it in the cutter box and the post in the object box, do Boolean.



15. **Top 11 Menu-Duplicate**, window the earring and enter, point to copy from is F4 and point to copy to is left clicking anywhere you want to place it. Hit enter after you have dropped one copy.



14. **Tools Menu-Boolean Builder**, select the post and put it in the cutter box and the earring in the object box and toggle Keep Cutter On. Do Boolean.



Save As: Hoop Earrings

You would not make the posts as these are to be added after the hoop earrings are made. That is why we put the notch in the end of the hoop. The jeweler can now solder them on exactly the same every time! Cast posts are too soft!