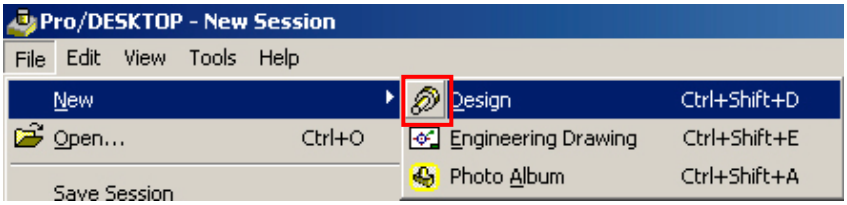
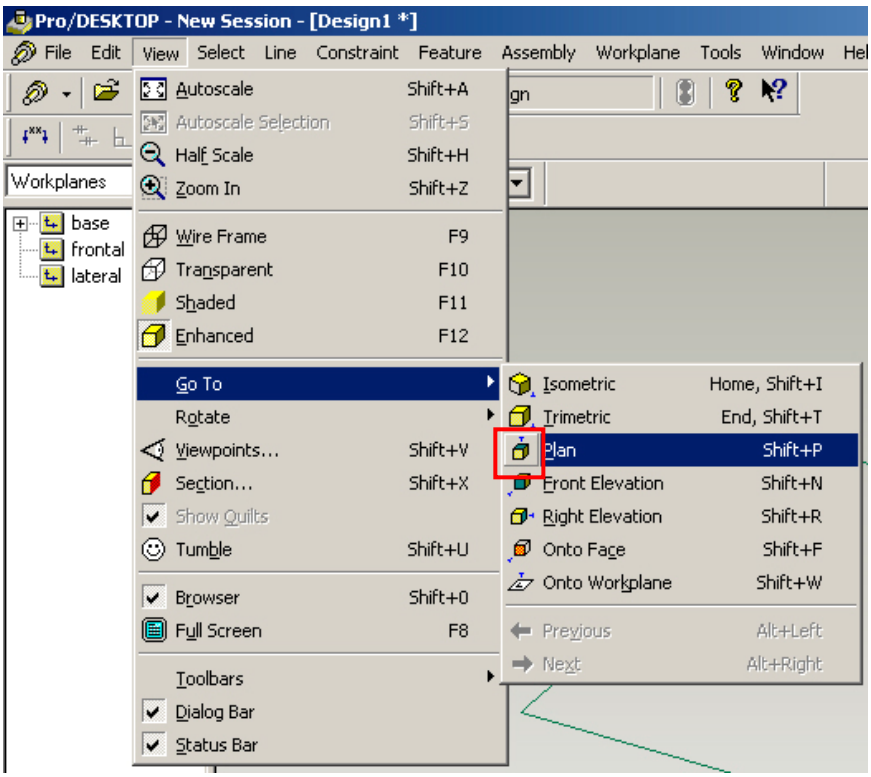
Radio Tutorial

Draw your spatula shape by:-

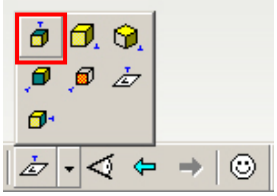
1. Open up **PRO-DESKTOP** from your programmes menu. Then click on the file menu > new> design.



2. The new design window will now open. Double click on '**design 1**' the bar and this will maximise the window. Now change the view, click on the '**view menu**', then select '**Go To**' and select '**Plan**'. Or alternatively use the '**plan view icon**' from the '**view onto work plane icon**' or simply press (Shift P).

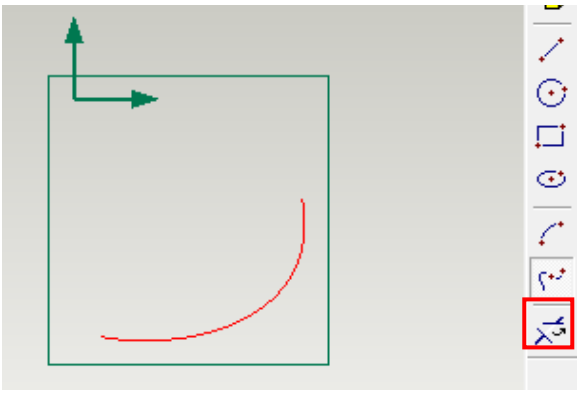


View menu

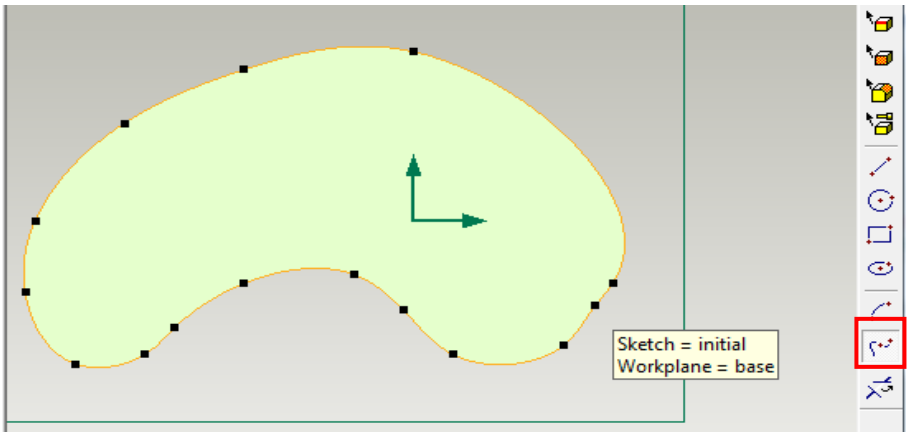


Work plane icon menu

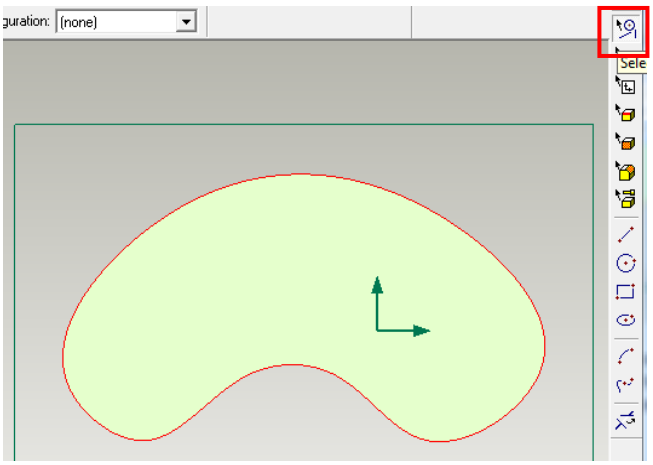
3. Now select the '**spline**' tool on the right hand side of the bar and create a small straight line by '**dragging the tool**' and then '**letting go**'. Now click on the '**end of the line**' you just created and you will notice that you can bend the line! **Note: you can only do this if the line is already selected (red).**



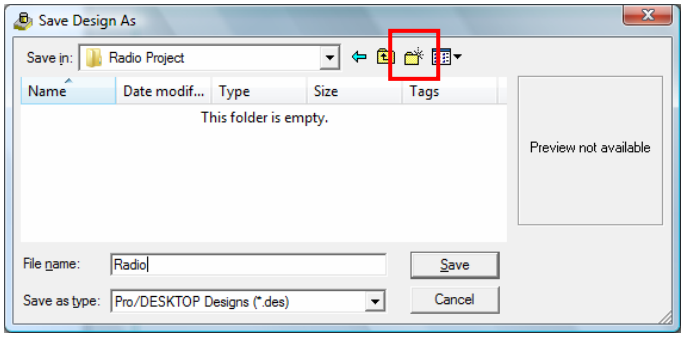
4. Now keep on adding to the '**spline**' line that is selected in red to create the shape of your radio! You must make sure you '**close the shape**'. When you close it will turn a solid colour. If you don't close it you will be unable to extrude it!



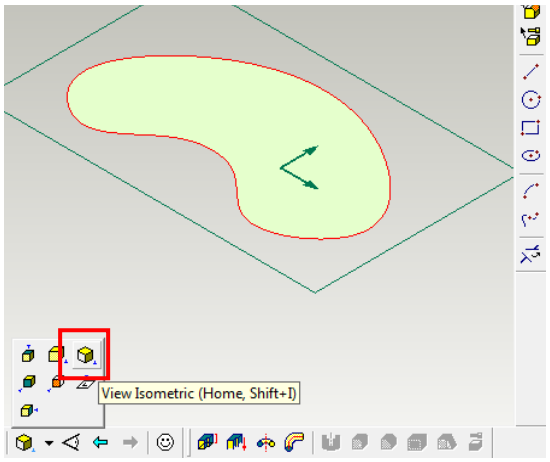
5. Now you can move the small squares using the '**select line tool**' shown below, until the shape is more curved. You can delete the squares by clicking on the '**spline**' tool, shown above and clicking on the square once. Now get your shape to how you want it before you continue.



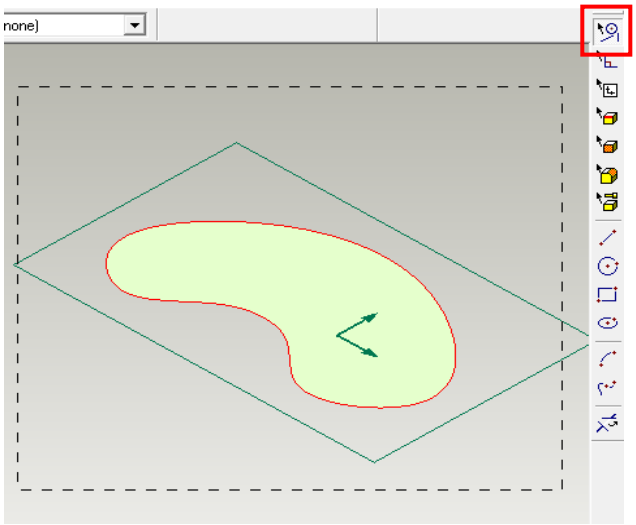
6. Now click on the file menu and select '**save**' now save your box click on the new folder icon and create a new folder called '**radio project**' within your '**DT**' folder. Now save your radio inside this folder name your file '**radio**'.



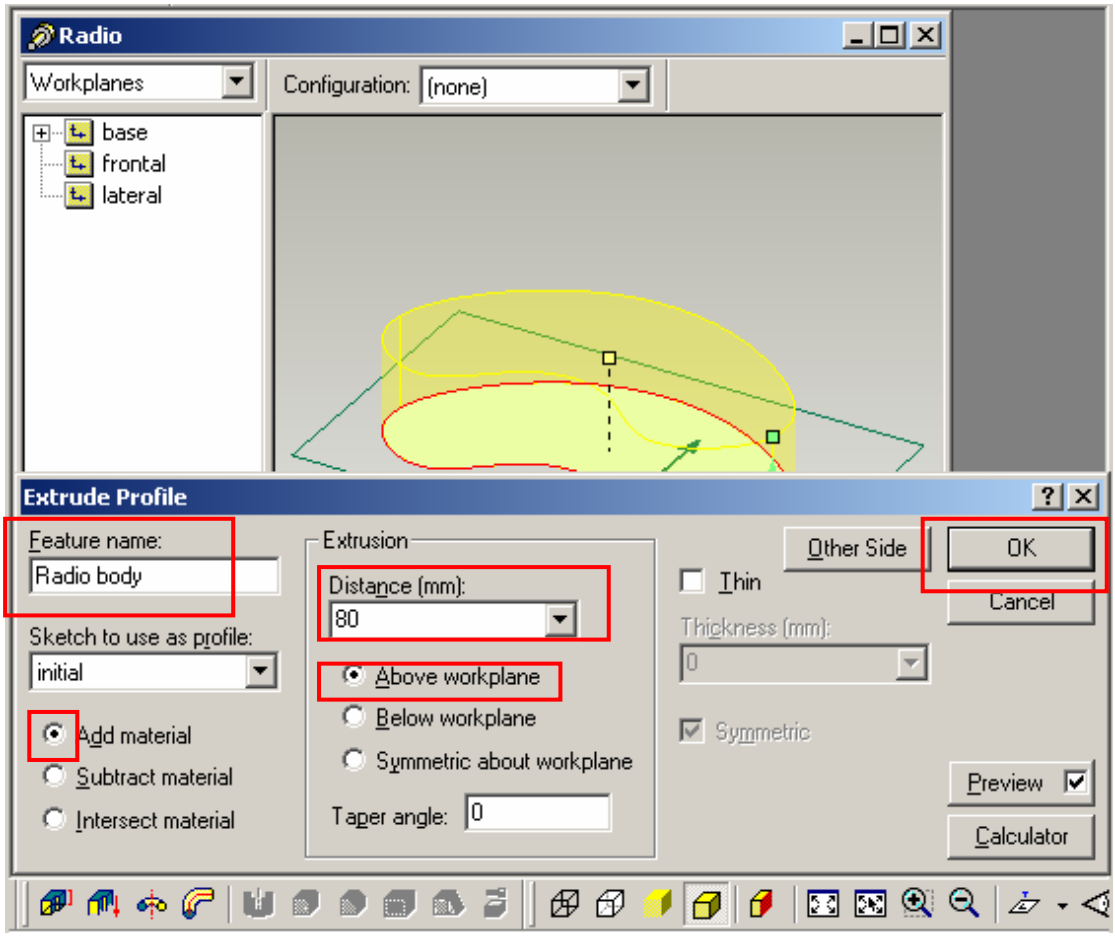
7. This will be your radios shape before we extrude it. Now click on '**view icon**' and select '**isometric view**' as shown in the screenshot below.



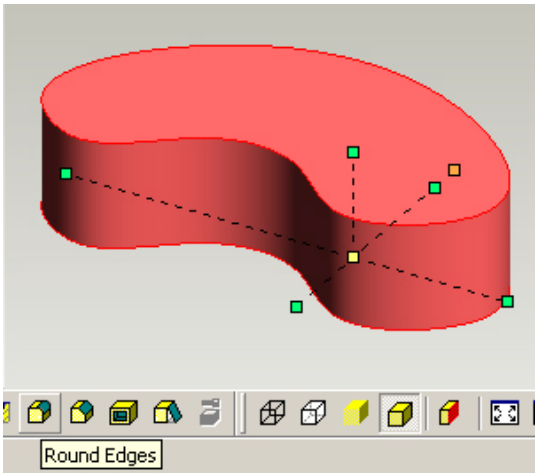
8. Now we will give the material depth this is called extruding. Now select the '**select lines**' icon and '**draw an outline around the square**' your square will now have red lines around the outside.



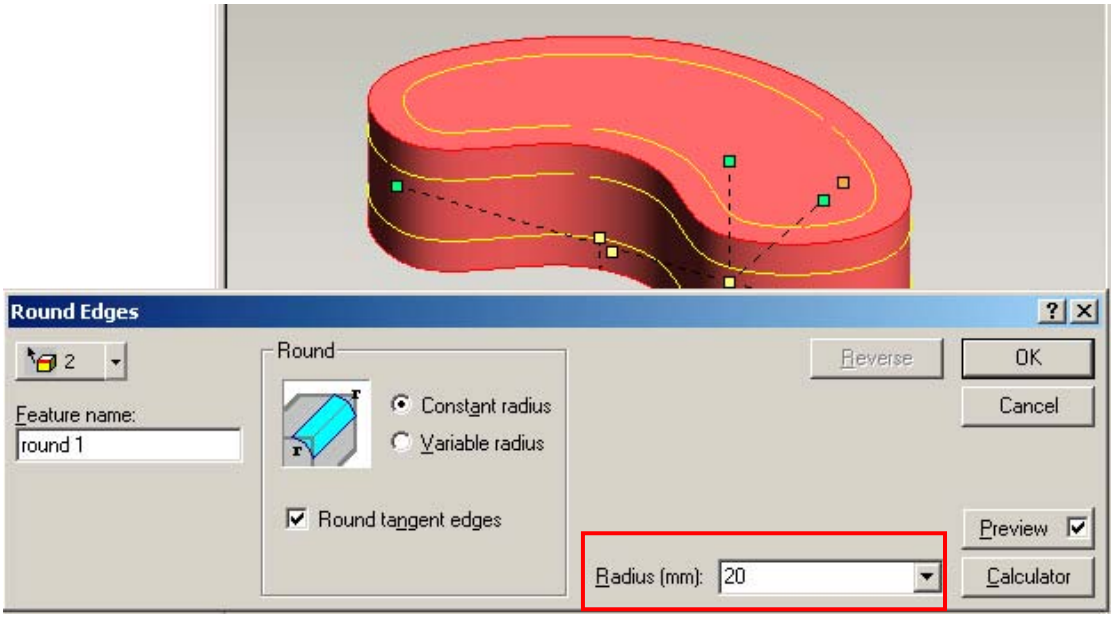
9. Now click on the '**extrude**' icon below, then enter a feature name of '**Radio Body**', a '**distance of 80mm**', ensure you select '**above work plane**' and make sure the '**add material box**' is select. Then click on '**ok**' and your box will be extruded, now click on the '**save**' button to save your work. This is shown in the image below.



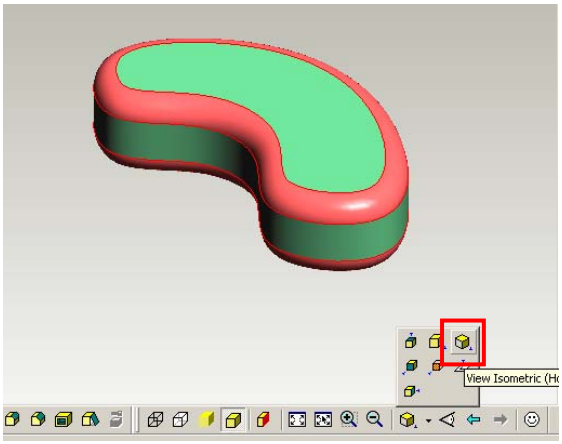
10. Now click on the '**round edges**' icon!



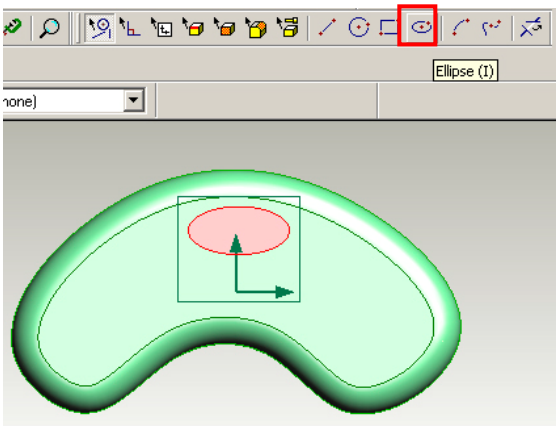
11. Now set your '**radius to 20mm**' and press '**ok**'.



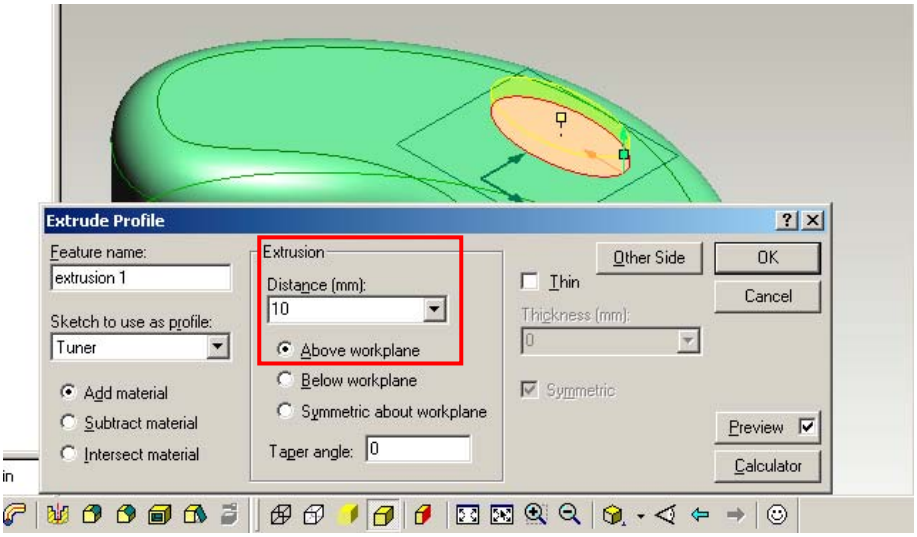
12. Now change the view to '**isometric**'.



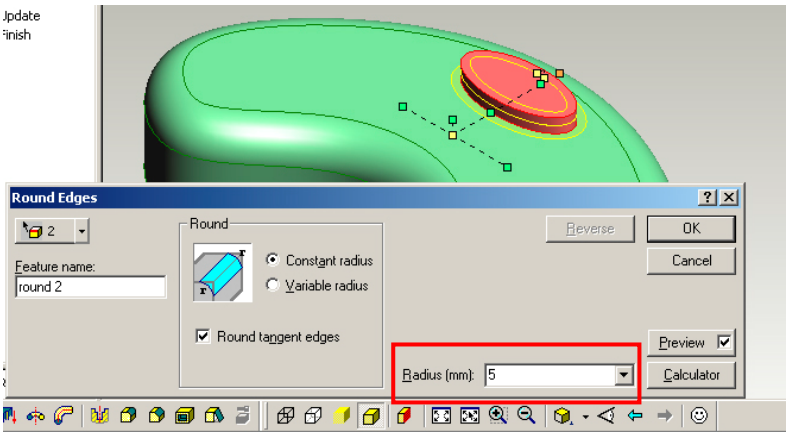
13. Now select the '**select faces**' icon and then select the top face of your radio body. Now add your 'tuner' you can use a 'spline' or a '**circle**' however in this design I am adding an '**oval**'. Then select the '**isometric view**' icon.



14. Now like before '**extrude**' the button '**10'mm**. Click on the '**extrude icon**' and enter '**10mm**' then press '**ok**'.



15. Now click on the '**round edges**' icon and set your '**radius to 5mm**' and press '**ok**'.

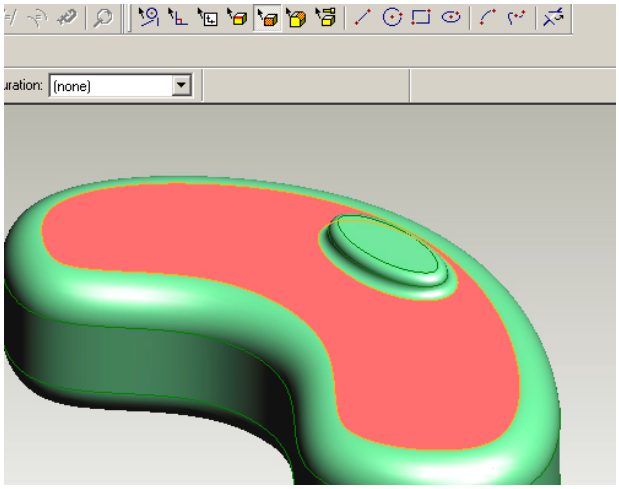


16. We will now repeat the steps below to complete your radio:

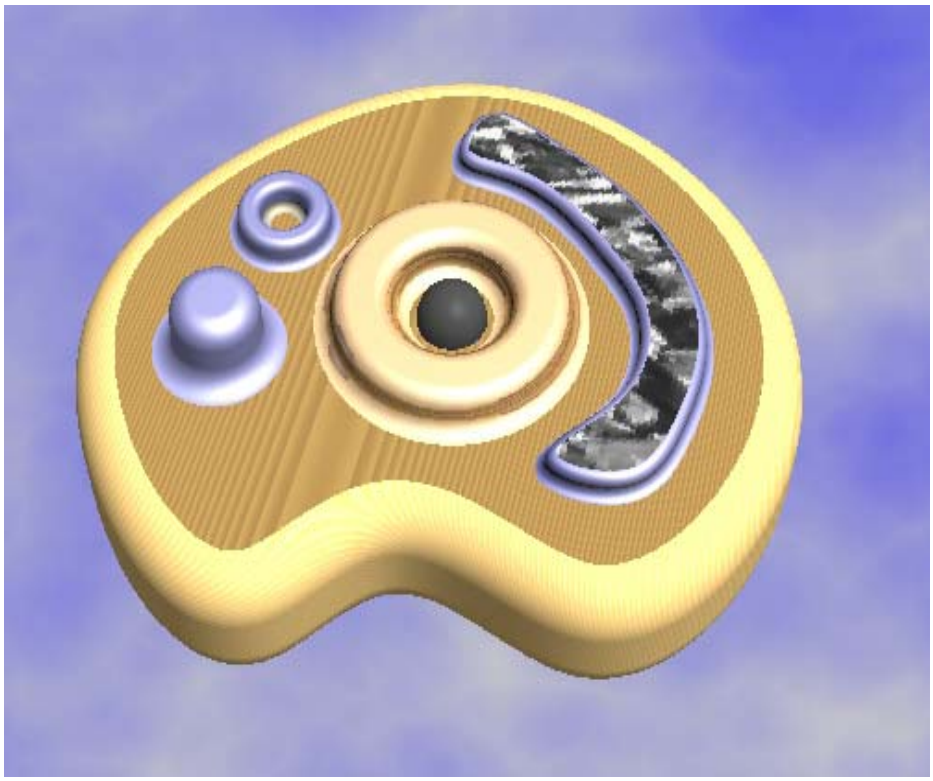
Remember:

1. Next select the '**select faces**' icon, then select the top face of your radio.
2. Then '**right click**' on the top and select '**new sketch**' from the pop up menu.
3. Name your sketch a useful name such as '**volume button**'.
4. Now draw your button, then extrude it, then round the edges like we have done before. Keep on adding '**new sketches**' for every button you create until your radio is complete!

Note: Always add your buttons in 'plan view' and extrude and round your buttons in 'isometric view'.

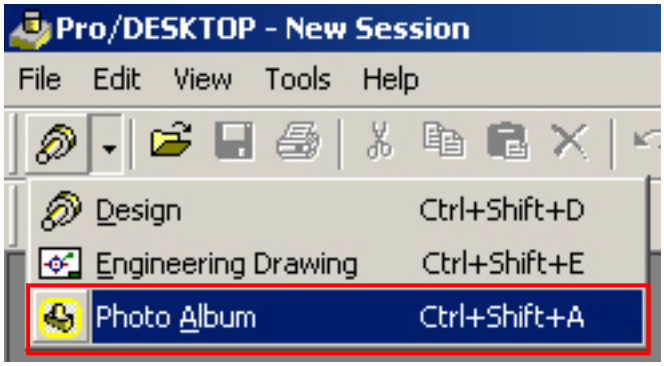


17. Once you have completed your radio you will need to save it. Now we will render the radio so it looks real like the image below.

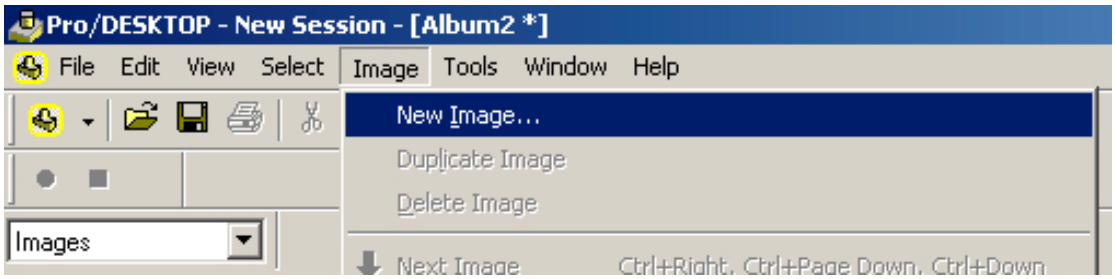


Radio Rendering Tutorial

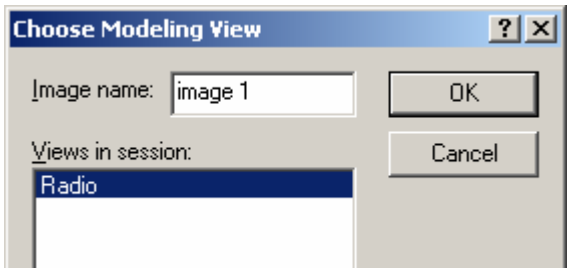
18. Open up **PRO-DESKTOP** from your programmes menu. Then open up your **Radio model** that you have previously made, if it is not open already. Then **click on the file menu > photo album**.



19. Now double click on the '**main blue bar album 1**' to maximise the window. Now **click on the 'image menu'** and **select 'new image'**.

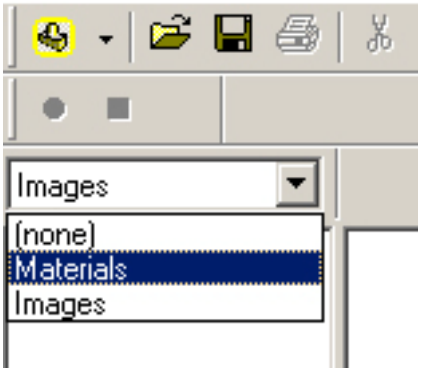


20. Now name your image name '**Radio render**' and your original radio that you have open will automatically be loaded in. Note: Make sure you open the correct model from your list!

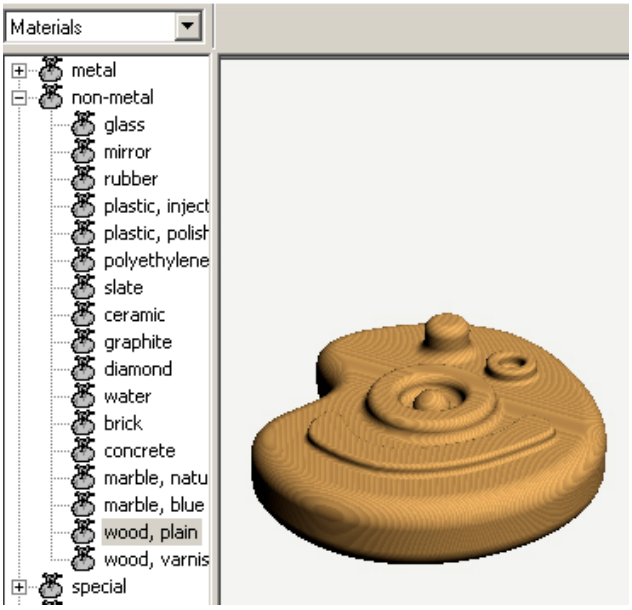


21. Now click on '**file menu**' then choose '**save**'. Now '**save**' the file. Name the file '**radio render**'.

22. Now click on **'images'** drop down menu and choose 'materials', your materials menu will now appear below.

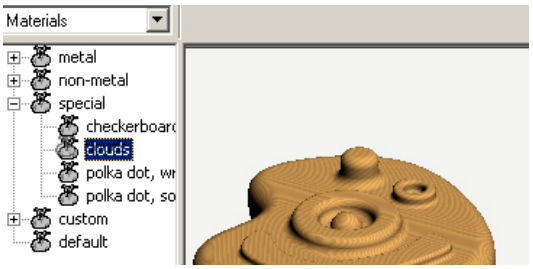


23. Now click on the **'non-metal' drop down material** and select **'wood,plain',** now click on your radio. You have now added a 'material' to your box.

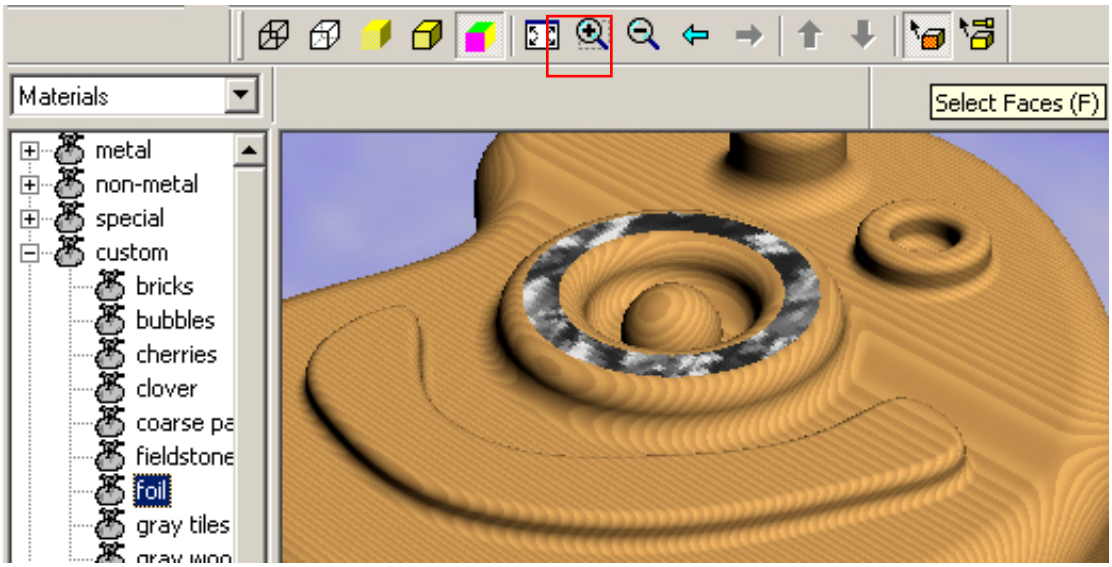


24. To view what you have just done you need to run the render. Now **click on the 'traffic lights' icon.** Your box will now be rendered; you can also see that the traffic lights have now turned grey.

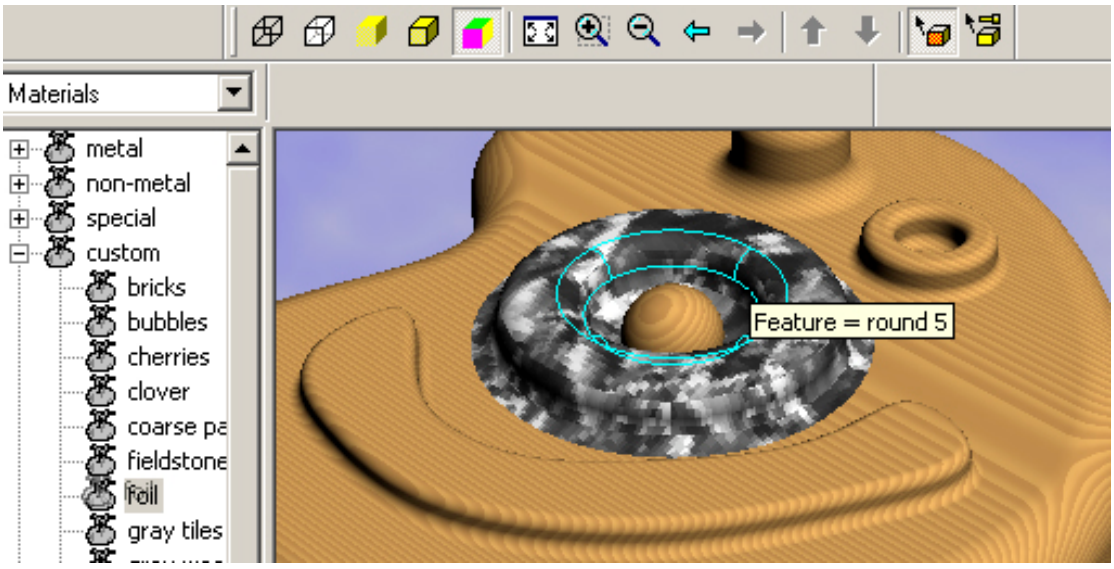
25. Now we will add a background. Please click on the **'special' drop down materials menu** and select the **'clouds' material**, now **drag it and 'click on your background'**. Now click on the **'traffic lights'** icon again. Your image will now look like this below. Be careful here and select the background you want as it is hard to change it later.



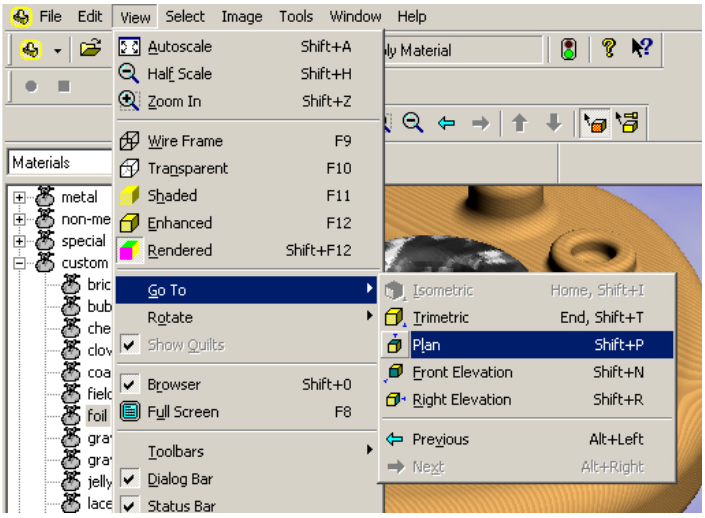
26. Now we will render particular faces to build up your image. Now select the '**select faces icon**'. With this icon pressed down you can **add materials** to **particular faces** and not just the whole box. **Now try it select a material and add it to a face** and then press your **traffic 'light icon'**. You can see here I have selected the speaker to apply a different material to.



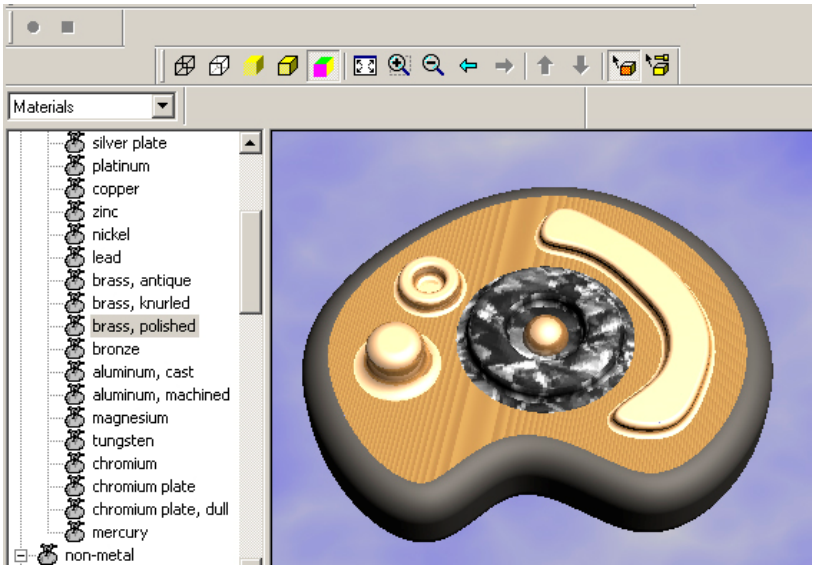
27. You will now need to use the '**select face**' icon to '**select**' and '**render**' each part of the speaker. Now press the '**traffic light icon**'.



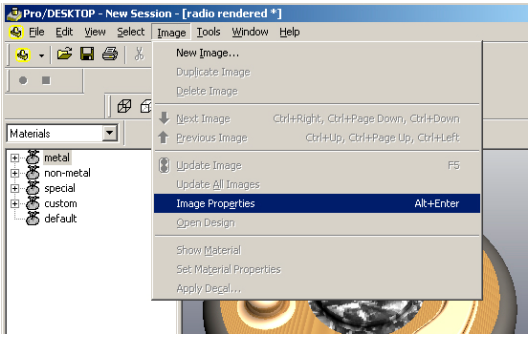
28. Now if your find it difficult to select the face '**zoom in**' use the roller on the mouse to '**zoom in and out**' of the image. You may also decide to change the view of your radio try it out. Click on '**view > Go to > Plan**' and you will see your radio in '**Plan**' view. **Please note you will need to click on the 'traffic lights' icon every time you change view or add a new material!**



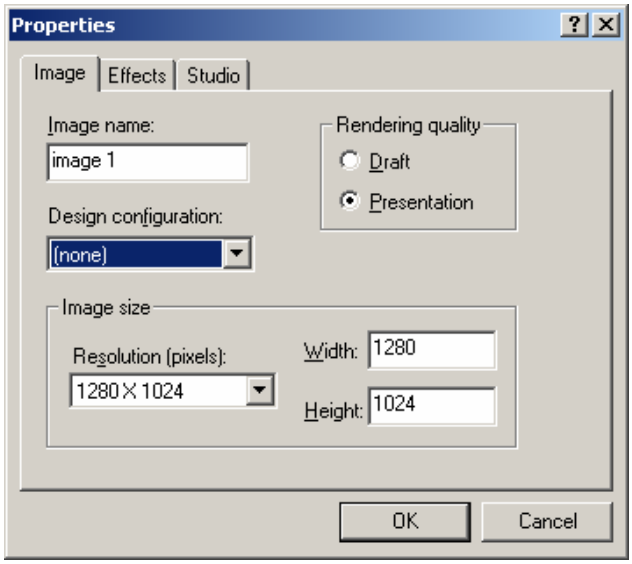
29. Now complete the rendering of your radio! Select the '**select face**' icon and then add different materials to all your buttons to make the radio look real. Don't use the same materials try a few different ones! **Note: This may take you some time! Try changing the view! Use the arrows on the keyboard to move the view around to get the best view then zoom in so it fills the screen!**



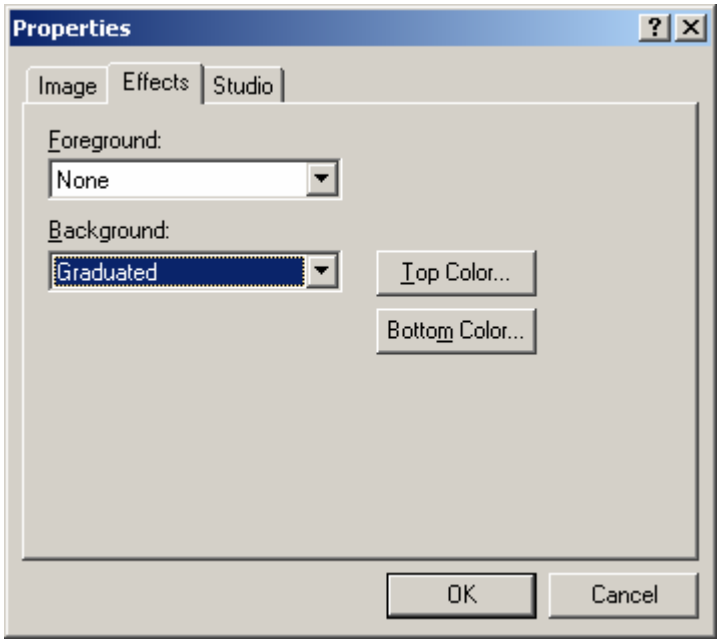
30. Once you are finished press '**save**' then click on the '**image**' menu and select '**image properties**'.



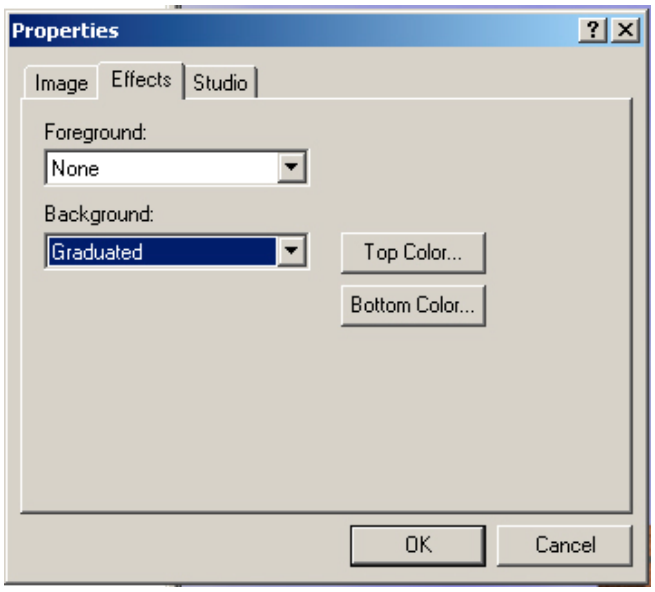
31. Now the image quality window will appear. Now click on **'presentation quality'** to improve the image quality. Then increase the **resolution to 1024 x 1280** again to improve the quality.



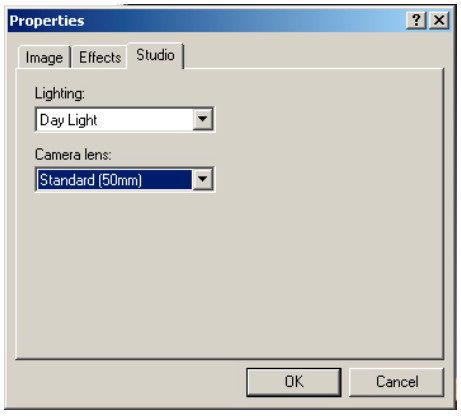
32. Now click on the **'effects'** tab. Here you can change the **'foreground'** and the **'background'** try it enter these details below! Press **'ok'** then press the **'traffic lights'** to see your image. You may need to **'zoom out!** If you wish you can change the top and bottom colour of the gradient here!



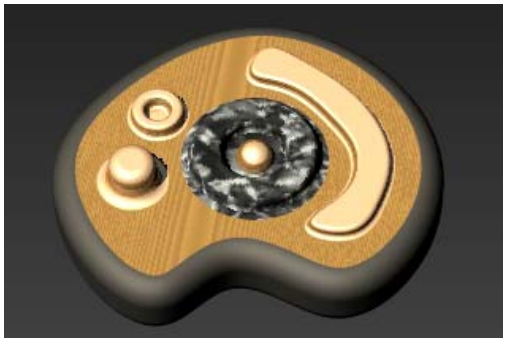
33. Next click on the **'image'** menu and select **'image properties' again.** Now **click on the 'effects' tab**, leave the foreground window for now. Now **'click on the background window'.** Now change the background window to **'graduated'** then **'click on the top colour button'** and set it to **'black' from the colour picker.** Then **'click on the bottom colour button'** and set it to **'white'** from the colour picker. Now **click on 'ok'.** Now click on the **'traffic lights'** option to see your rendered background.



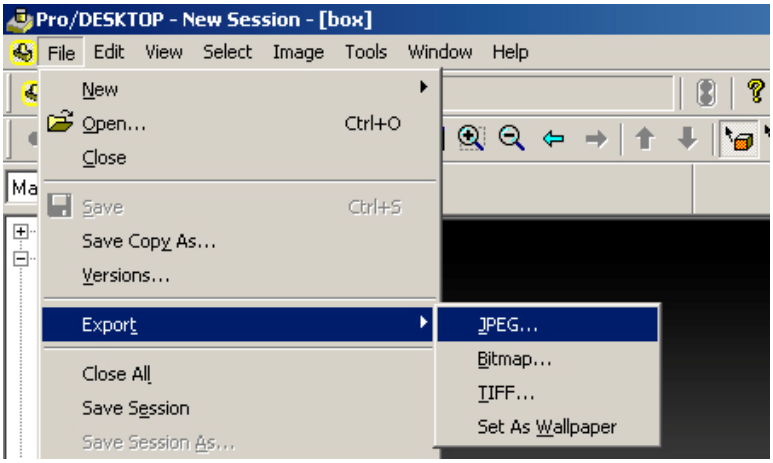
34. Next click on the **'image'** menu and select **'image properties' again.** Now select the **'lighting window'** and select **'day light'** Now click on the **'camera lens window'** and select **'standard lens 50mm'** then click on **'ok'** Now click on the **'traffic lights'** option to see your rendered background. Now **save** your file.



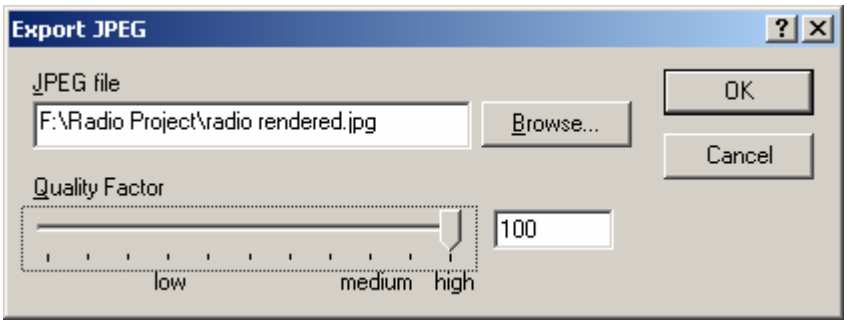
35. Now **change these options** 'image quality, background and foreground, and lighting effects' options to suit your box. Don't forget to keep on **saving your file**. When you are happy with your options then move onto the next step.



36. Now click on the file menu and press save. Then click on the **file menu** and select **'export'** then choose **'JPEG'**. We are exporting the rendered image as a jpeg so we can use it in other applications like word or PowerPoint.



37. Now set your options from the pop up window. Select the **'highest' quality** from the **'quality factor'** slider. Then click on the **'browse button'** and set the location to your **'my documents folder'** and find your **'box folder'** then click on **'save'** then click on **'ok'**. Your file will now be saved there.



Well done you have rendered a 3D Radio!

What now? Lets make a Radio Advert!

If you're ahead create a few rendered views of your radio! Save your files into a folder then open up Publisher and create an advert for your new radio. You should include:

- Three different rendered image views of your radio.
- A radio price and slogan.
- A fake shop that sells the radio and a fake address and phone number.
- Information about the radio such as information on renewable energy sources and how it helps the environment.