Light placement

1. First we'll start with a simple scene. Create a plane and then liberally decorate it with a number of primitive objects. Split your views and position the camera so that you can see the view at an angle. Be careful that your shapes are sitting on the plane and not poking through it. We'll now add some lights.

2. Add a lamp and then set it so that it's a Spot. In the side view rotate the light downwards and in the top view rotate it over to the right. Scale the size of the projection so it just about covers the objects. Next, add another Spot and then ensure that it's placed in the top left and is pointing to the bottom-right.

3. Ensure that you have the Shadows button pressed in on both the lights and in the Display buttons. Set the first Spot to be Halo and then adjust the Dist and HaloInt to get a good spread. Finally, Render. When you have done this, play about with the positioning of the lights to see what kind of effects you can get.
amount that the shadow is clipped. The 'Samples' button is used to set how many samples are used to generate the shadow – the higher the number the better – but this will come at the expense of speed. All of these buttons work together in order to create the final shadows that appear in your scene, and the best way to get a feel for how they work is to experiment.

'Halo' is an equally noticeable effect, producing a volumetric light look – such as light shining through a window. When activated, the 'HaloInt' slider will define the intensity of the light. The Dist button can also be used to set the distance of the halo light from the source, and therefore the size of the projection.

**Material world** Although we’ll be covering materials in more depth during next issue’s tutorial, we can make a simple start by applying a basic texture to a shape, thus changing how our new lights affect the material. Adding a material is done with the ‘Material’ buttons, and accessed with the [F5] button. Look for the box with a '-' symbol in it, and then click on it after selecting an object. Choose the ‘Add New’ option and a whole host of new buttons will appear for you. The most immediately useful are the RGB colour sliders, which can be used to add a simple pigment to an object. After this, try experimenting with some of the other sliders on offer. ‘Spec’ sets the reflective specularity of the material, ‘Hard’ alters how strongly to reflect light, ‘Emit’ makes it possible for an object to give out light, ‘Alpha’ governs transparency and ‘Ref’ controls the amount of reflection from lights.

**Render your image** Rendering an image is when you instruct Blender to create a full, high-quality image from your settings. Rendering can be as simple as just exiting the scene, and the best way to get a feel for how they work is to experiment.

As your scenes get more advanced, lighting plays an increasingly important role. You’ll soon discover that it generates most of the atmosphere in your work.

You can configure it much further using the Display buttons [F10]. The first thing to do is to alter the size of the rendered image to make it something more useable. A number of presents are listed along the right-hand side of the buttons, but you can enter your own with the ‘SizeX’ and ‘SizeY’ buttons.

Two other crucial features are the ‘Shadows’ and the ‘Panorama’ buttons. The former must be pressed in order for all of our hard lighting work to be visible, while the latter generates a wide-angle renderer. To finish off, simply ensure that the OSA button is pressed, this will smooth the outer edges of your objects for you. Also, double-check that all of your objects have the SetSmooth button pressed – this ensures that your objects are rendered smoothly, instead of appearing as blocks.

Finally, to save your image to a file, select the type (AVI, Targa, JPEG, PNG and more) from the drop-down box at the left of the screen and press [F5] to begin the render.

**BLENDER MASTERCLASS**

Learning Blender

Want to know everything that Blender’s capable of? Explore the various tools

Like any other piece of software, Blender is a complex and powerful tool that has the ability to do far more than the plain image rendering that it’s best known for. Blender can be roughly divided into three key areas—Modelling, Animation and Games.

Despite its varied abilities, modelling is by far the most important part of Blender. We have covered a number of the basic modelling options in our tutorial series, but Blender has a huge selection of tools for you to master. These include Spins, Repeats, NURBS and many other functions. The more time that you spend learning these tools will give you greater flexibility, and will allow you to achieve more with the program (as golfer Gary Player once said when he was described as lucky, “the more I practice, the luckier I get”).

If, for example, you’re using Blender in order to model buildings, you’ll not need to deal as with the tools for character modelling quite so much, whereas if you want to make an animated cartoon, you’ll need to know all of these and more.

Animation is another important area to get to know, and Blender supports Keyframe and IPO animation. We’ll take a brief look at animation in next issue’s tutorial, but Blender has a powerful motion engine. You can, for example, add bones to your characters and move these bones to perform complex animations. There are even entire animated cartoons that are developed entirely in Blender.

Finally, the Game engine allows you to create interactive games with Blender using Python for scripting. The game engine enables you to create lower polygon interactive games that can run without Blender. You’ll find many example games on the Blender site at www.blender3d.org. It’s worth taking a look at the engine if you would like to create 3D games without getting bogged down with too much coding.

GOING FURTHER

There is a huge variety of resources on the Internet available for furthering your Blender experience, including the recently added, and now freely available, manual. Most of these resources are at www.blender.org. Another useful resource is the discussion forum at www.elysian.net where many Blenderheads hang out.

NEXT MONTH

In the final part of our Blender guide we’ll tell you how to add materials to your 3D scenes.