

**To close Visualiser**

► Choose File>Exit [ALT+F4].

### **To move the Visualiser toolbar**

► Click the mouse on the toolbar background and drag it around the screen.

You can drag it anywhere inside the Visualiser window or outside it. The current position of the toolbar is indicated by a gray outline. If you drag the mouse cursor over the edge of the window the orientation of the toolbar changes from landscape to portrait. Releasing the mouse button as the toolbar changes its orientation, attaches it to the edge or bottom of the window and enables you to drag the toolbar along the border.

**To load a world**

1. Choose File>Open [CTRL+O].
- 2 Click the FAIRGRND.VRT file from the C:\PROGRAM FILES\SUPERSCAPE\EXAMPLES directory (or the directory where you installed the software) and click OK.
3. The title screen is displayed. Press the RETURN key or click the left mouse button to continue.

A virtual fairground is displayed in the viewing area.

**Note**

- § In addition to .VRT files you can also load .SVR files into Visualiser. SVR files are compressed VRT files that you should use to publish worlds on the World Wide Web.

### To move around a world using the mouse

1. Load the `fairgrnd.vrt` world.
2. Try pressing keys 1 to 10 to move to different viewpoints. When you press 6 you appear to be driving one of the bumper cars.
3. Press `F12` to reset the world to its default position.
4. Move the mouse cursor to the middle of the screen and press the `SPACEBAR` to switch to mouse movement mode—a small square is displayed in the center of the screen which is known as the Mouse Home. Moving the mouse now changes your position in the world.  
  
Moving the mouse up above the home position moves the viewpoint forward, and moving it down below the home position moves the viewpoint backwards. Pressing the left and right mouse buttons and then moving the mouse lets you change the viewpoint in all the axes.  
  
If you get disorientated, press `F12` to reset the world.
5. Press the `SPACEBAR` again to return to mouse selection mode.
6. Press the `>` key to zoom into the current world, and the `<` key to zoom out.

### Notes

- § You can also change viewpoints either by choosing `View>Active Viewpoints` and selecting a view, or by clicking a viewpoint number on the view bar. If the view bar is not visible, choose `View>View Bar`.
- § If you have a peripheral proportional device (such as a Spacemouse) you need to configure Visualiser before you can use it to move around and interact with the world.
- § For further information on using the keyboard to control objects and viewpoints, see “Keyboard Controls” in the User Guide.

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{button ,AL("setting\_up\_proportional;movement")} [Related Topics](#)

### To move around a world using the movement bar

1. Load the `fairgrnd.vrt` world.
2. Click and hold the left mouse button on one of the three blue movement icons in the center of the bar, and then move the mouse.

As you move the mouse the arrows change to red to indicate which direction you are moving, and the viewpoint moves in the corresponding direction. The further you move the cursor from the icon the faster you move.

Release the mouse to stop the movement.

3. You can move in more than one axis at the same time by moving the mouse between two arrows.

If you get disorientated, press F12 to reset the world.

### Tip

§ If the movement bar is not visible at the bottom of the Visualiser viewing area, choose View>Move Bar.

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{button ,KL("mouse, Mouse Home")} [Related Topics](#)



Moves the viewpoint up and down, left and right in the Y axis.



Moves the viewpoint forward and back, left and right in the X and Z axes.



Tilts the viewpoint up and down.

**To display information about a world**

1. Choose File>World Information.
2. Use the Next and Previous buttons to step through the pages of information.

### To switch between consoles

- ▶ Press c.  
The next console is displayed. Selecting the last console in the world switches back to the first.

### Note

- § If the current world only has one console, pressing c has no effect.



### To reset a world

► Click the Reset World icon on the toolbar:



Reset World icon

### Tip

§ Press F12 to reset the world.

**To display a world full screen**

1. Choose Settings>Increase Resolution [SHIFT++ ] until the world is displayed at full screen resolution (this depends on the resolution that your graphics card supports). The screen resolution is displayed in the status bar.
2. Choose Settings>Hide Window Frame [CTRL+H].  
The title bar and window frame are removed, displaying the world on its own.
3. Press CTRL+H to display the window frame again.

**To switch to the system palette**

1. Choose Settings>Use System Palette Entries [CTRL+F].

The world uses the system palette entries to display the world.

2. Choose Use System Palette Entries again to switch back to the original palette colors.

**To change the screen resolution**

- ▶ Choose Settings>Increase Resolution or Decrease Resolution [SHIFT++ or SHIFT+-].  
The resolution switches between the resolutions supported by your graphics card.

### **To change the texture resolution**

- Choose Settings>Increase Texture Detail or Decrease Texture Detail [CTRL+ $\pm$  or CTRL+ $\pm$ ]. Texture resolution has five different settings from maximum to a flat area of color.

### **Tip**

- § Increasing the resolution of a texture displays the image in greater detail, but may slow down the speed of the world. It is more common to decrease the texture resolution when the world is running slowly (to increase the speed of the world), and then increase the texture resolution when you want to look closely at the texture.

### To change the movement step

1. Choose Settings>Setup [E].
- 2 Click the Display tab.
3. Either:  
Move the Movement Step slider; the value is shown in the box to the right of the scale,  
-or-  
Type in a new value in the box to the right of the slider.

### Tip

- § On the Visualiser toolbar, click the Movement Step icon.



Movement Step icon

The movement step changes to the next predefined value between 50 and 100000. This function wraps around, so that it changes from 100000 to 50 when selected.

### To change the angular step

1. Choose Settings>Setup [E].
2. Click the Display tab.
3. Either:

Move the Angular Step slider; the value is shown in the field to the right of the scale,

-or-

Type in a new value in the box to the right of the slider.

### Tip

- § On the Visualiser toolbar, click the Angular Step icon.



Angular Step icon

The angular step changes to the next predefined value between  $1^\circ$  and  $90^\circ$ . This function wraps around, so that it changes from  $90^\circ$  to  $1^\circ$  when chosen.

**To change the detail level**

1. Choose Settings>Setup [E].
- 2 Click the Display tab.
3. Either:

Move the Detail Level slider; the value is shown to the right of the slider,

-or-

Type in a new value in the box to the right of the slider.



### To change the zoom ratio

1. Choose Settings>Setup [E].
2. Click the Display tab.
3. Either:  
Move the Zoom slider; the value is shown to the right of the slider,  
-or-  
Type in a new value in the box to the right of the slider.

### Tips

- § If you think of the viewpoint as a camera, the Zoom field sets the focal length of its lens, from telephoto (small values) to wide angle (large values). Zoom has a range of 256–16384 with a default setting of 8192, in the middle of the range. Changing the zoom ratio effects the detail level seen on the screen in the same way as moving closer to the objects that you can see.
- § Press the > and < keys to zoom in and out of the current world. In Visualiser you can also use the Zoom icons on the toolbar:



Zoom In icon



Zoom Out icon

**To lock an axis**

1. Choose Settings>Setup [E].
- 2 Click the Display tab.
3. Select the Viewpoint Lock check box that corresponds to the axis that you want to lock—X, Y, Z.

You can lock as many of the axes as you wish.

**Note**

- § Normally all locks are off and a viewpoint attached to a rotating object rotates with it. In this case the object is always seen in the same orientation. If the object is rotated in an axis where the lock is on, the viewpoint remains stationary and the object is seen to rotate in that axis.

**To select crosshair or mouse as the object activation tool**

1. Choose Settings>Setup [E].
- 2 Click the Display tab.
3. Under Object Activation, click either Mouse or Crosshair.

**Tips**

- § When you use a mouse as your selection tool, you place the cursor over the object and click to select an item. If you use a crosshair, which is always displayed in the center of the viewing area, you need to manipulate the viewpoint so that the item is displayed under the crosshair. The item can then be selected by pressing the necessary key.
- § If you use a crosshair, make sure that the Crosshair Visible check box contains a tick, otherwise the crosshair is not visible.

### **To switch between background options**

1. Choose Settings>Setup [E].
- 2 Click the Display tab.
3. Under Object Activation, click an option from the Background list.  
The selection switches between Horizon, Solid, and Background (if loaded).

### **Tips**

- § Each background has a No Redraw option which instructs Visualiser not to redraw the background each frame. In this case, objects leave trails behind them as you move around the world. To switch back to the normal setting (redrawing the background each frame) press B.
- § It is generally preferable to use the horizon (default setting) as it makes it easier to orientate yourself.

### **To use Visualiser with 3-D Glasses and HMDs**

► Choose Settings>Interlace On/Off.

#### **Tip**

§ Press CTRL+I or choose the command again to switch back to normal mode.

**To print the current screen**

1. Choose File>Print [CTRL+P].

Select the printing options you require.

2. If you want to print the screen to a file rather than directly to the printer, click Print To File. (The filename will have a .PRN extension.)


**Tips**

- § To select a different printer, choose one from the drop-down list.
- § To change the paper settings, choose File>Print Setup.

### To setup and enable a device

1. Choose Settings>Setup [E].
2. Click the Devices tab if it is not already displayed.  
A list of devices that Visualiser supports is displayed.
3. Click the device that you want, and click Enable.
4. Change any settings to suit your system.

### Tips

- § When you have setup a device, you should select the Save Settings check box to save your preferences file so that the device is enabled next time you start Visualiser.
- § If you want to configure a device that is a Windows resource, such as a sound, graphics, keyboard or serial device, then you need to exit Visualiser, make the changes in the Windows Control Panel, and restart Windows. Note that you still have to enable them following the steps above so they work in Visualiser.
- § For Windows 95 or NT, you can get Help on an item by clicking  in the title bar, then clicking the item. For Windows 3.1, press SHIFT+F1 to see the Help pointer, then click the item.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

**To disable a device**

1. Choose Settings>Setup [E].
- 2 Click the Devices tab if it is not already displayed.
3. Click the enabled device and click Disable.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)



### To add a device

1. Choose Settings>Setup [E].

2. Click Add.

3. Select the .INF file for the device driver, and click OK.

An alert box warns you that you cannot initialize the device while Visualiser is running, and you should save your preferences and resource files. Click OK.

4. Close the Setup dialog box and then exit Visualiser [CTRL+ESC].

An alert box prompts you to save your changes. Click Save.

5. Click OK to save your preferences file.

An alert box warns you that the file already exists. Click OK to overwrite the existing file.

If the new device has associated dialog boxes, the Save Resource File dialog box is displayed.

6. Click OK to save the resource file (VISUALISER.RSC).

An alert box warns you that the file already exists. Click OK to overwrite the existing file.

7. Restart Visualiser.

The new device should be present in the Setup dialog box. It can now be enabled as usual.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To save the preferences file

1. Choose Settings>Setup [E].
2. After setting up and configuring devices, select the Save Settings check box and click OK.  
The current preferences file is selected (VIS.CFG).
3. Click OK.  
An alert box warns you that the file already exists.
4. Click OK to overwrite the current data with the new configuration.

### Note

- § If you make changes to a device and do not save the new configuration using Save Settings, you are prompted to save the changes when you exit Visualiser. Click Save in the alert box. The Save Preferences File dialog box is displayed, with the current configuration file VIS.CFG selected. Click OK and confirm the alert box to overwrite the current preferences file with the new configuration.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

**To set up the mouse movement switch**

1. Choose Settings>Setup [E].
2. Click the Devices tab if it is not already displayed.
3. In the devices list, click Mouse Movement.
4. In the Mode Select list, click a method.

**Note**

§ The transition between selection mode and movement mode can be made in one of three ways:

- Pressing SPACEBAR;
- On a three button mouse, using the center mouse button;
- The center mouse button can be set so that holding it down switches into movement mode. When released, the mouse returns to selection mode.

The keyboard method may be used in conjunction with either of the center mouse button methods.

**To set the mouse home position**

1. Choose Settings>Setup [E]
2. Click the Devices tab if it is not already displayed.
3. Under Mouse Home, click Floating or Centered.

Floating sets the home position to the point where the mouse is clicked in the viewing area; Center sets the center of the screen as the home position.

4. Select the Visible check box to set it to visible or invisible.

**Note**

- § The mouse home position is where the mouse must be in order to cause no movement.

**To set the movement and rotation sensitivity**

1. Choose Settings>Setup [E]
2. Click the Devices tab if it is not already displayed.
3. Move the Movement Sensitivity slider to set the sensitivity of the mouse in a translational direction.
4. Move the Rotation Sensitivity slider to set the sensitivity of the mouse in a rotational direction.

**Note**

- § The Movement Sensitivity and Rotation Sensitivity sliders dictate how the movement and rotations rates scale as you move the mouse further from its home position.

When the slider handle of the scale is at the left end of the scale, the distance of the mouse from its home position is used directly to determine how fast to move or rotate. When the handle is at the right hand end, the mouse position is scaled more for large values than small. This means that while small mouse movements still cause small movements in the virtual world, large mouse movements cause progressively larger world movements.

**To set the axes for mouse movement**

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. Click Functions.
3. Click Move or Select for the Left Mouse Button and the Right Mouse Button.
4. If you clicked Move, then select a movement option from the six list boxes for each mouse movement. The top row of list boxes set the sideways movement of the mouse, and the bottom row set its forward and backward movement.
5. Click either Relative or Absolute movement type beside each movement option.
6. You can reset mouse options to their defaults by clicking Restore.

**Tip**


- § For Windows 95 or NT, you can get Help on an item by clicking ? in the title bar, then clicking the item. For Windows 3.1, press SHIFT+F1 to see the Help pointer, then click the item.

### To set up the joystick

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click Joystick 1.
3. Click Move or Select for Button 1 and Button 2.
4. If you clicked Move, select the movement option from the list box that you want to apply to the joystick and button combination. The top row of list boxes set the sideways movement of the joystick, and the bottom row set its forward and backward movement.

Pressing both joystick buttons simultaneously normally activates objects.

### Tips

- § You can use two proportional joysticks with Visualiser, each of which can be independently configured. If you want to use a second joystick, you need to configure the second one using the Joystick 2 device in the Devices tab. Before you configure the devices, make sure that you have connected both correctly, you know which device is connected to which joystick port, and you have installed both the joystick drivers.
- § The sensitivity and deadzone for the axes can be set in the same way as for all the proportional devices.
- § For Windows 95 or NT, you can get Help on an item by clicking  in the title bar, then clicking the item. For Windows 3.1, press SHIFT+F1 to see the Help pointer, then click the item.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To set up the Spacemouse

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click Space Mouse.
3. In the Select Port list, click the serial port number that the Spacemouse is attached.

### Note

- § The Spacemouse is the recommended input device for use with Visualiser.
- § You should not install the Magellan Spacemouse software as this causes problems with VRT's own driver for the Spacemouse.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)



### To set up the Spaceball

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click Spaceball.
3. In the Select Port list, click the serial port number that the Spaceball device is connected to.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To set up the Flock of Birds

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click Flock of Birds.
3. In the Serial Port list, click the serial port number that the Flock of Birds is attached to.
4. In the Birds list, click the number of birds that you are using.
5. Move the Initial Delay slider along the scale to alter the delay between starting up the Flock of Birds and sending the initialization information. This can be set to between 1000 and 5000 ms (1 to 5 seconds).
6. Select the CRT Sync check box to switch it on if you want to use it. If you do not intend to use it make sure the option is clear.
7. Select the Sudden Change Lock check box so that sudden changes in position are reported back to Visualiser. If the check box is clear, sudden changes are damped out by the Flock of Birds.
8. The axes displayed represent the axes of movement and rotation for the bird in the virtual world; they can be changed if you need to setup different axes for it. The default setup should be fine for a horizontally mounted transmitter.  
If you need to change the setup, click on the axes letter to cycle between X, Y, Z, and on the sign to set it to + or -.

### Note

- § Up to three receivers may be used, so long as they are set up as a 'standard flock', where the first Flock of Birds unit has a receiver and a transmitter attached, and subsequent units have receivers only. See the "Flock of Birds" manual for details.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To set up the FASTRAK

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click FasTRAK.
3. In the Serial Port list, click the serial port number that the FasTRAK is attached to.
4. Move the Initial Delay slider along the scale to alter the delay (in milliseconds) between starting up the FasTRAK and sending the initialization information. This can be set to between 1000 and 5000 ms (1 to 5 seconds).
5. The axes displayed represent the axes of movement and rotation for the tracker in the virtual world; they can be changed if you need to setup different axes for it. The default setup should be fine for a horizontally mounted transmitter.  
If you need to change the setup, click on the axes letter to cycle between X, Y, Z, and on the sign to set it to + or -.

### Note

- § Up to three trackers may be attached to the FASTRAK (not four, due to the limitation of 18 axes). The one attached to the lowest numbered connector controls the first six axes, the next lowest controls the next six axes, and the third controls the final six axes. The number of trackers is sensed automatically by the software, and does not appear in the configuration information.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To set up virtual I-O glasses

1. Choose Settings>Setup [E] and click the Devices tab if it is not already displayed.
2. In the devices list, click i-glasses.
3. In the Serial Port list, click the serial port number that the i-glasses are attached to.

### Notes

- § If you are using Windows 95, make sure that you are using a monitor which runs at 50 or 60 Hz refresh rate in SVGA mode. See the Virtual I-O i-glasses documentation for further details.
- § You can only use the Virtual I-O i-glasses with virtual worlds that have been specifically configured for stereoscopic head mounted displays (HMDs)—the layout of each world has two windows that display the same image and must be displayed in interlace mode in Visualiser. Choose Settings>Interlace On/Off [CTRL+I] to display the screen in interlaced mode. To return to normal mode, choose the command again.


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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To configure proportional devices

1. Choose Settings>Proportional Control Setup.
2. To select a new device configuration, click Select and click a configuration from the Proportional Control Type list.
3. To set the number of simultaneous axes, click one of the Significant Axes options from the drop-down list.
4. Under Sensitivity, drag the slider or type values in the boxes provided, to adjust the level of sensitivity in each axis. Setting the sensitivity to zero switches the device off in that translation or rotation axis.
5. Under Deadzones, drag the slider or type values in the boxes provided, to adjust the deadzone value in each axis. Setting the deadzone slider to zero switches the deadzone off entirely, making the device sensitive to tiny amounts of force.

### Notes

- § Visualiser can support up to three proportional devices at the same time, each of which can be configured individually by clicking the tabs at the top of the dialog box. If you are using one proportional device, you only need to edit Device 1.
- § Visualiser comes with 40 preset configurations, which should cover most of the usual viewpoint or object control applications. Each viewpoint uses one of these configurations to dictate how the viewpoint or controlled object move when the proportional device is used. For more information on the configurations, see "Appendix A - Proportional Control Types" in the User Guide.
- § For Windows 95 or NT, you can get Help on an item by clicking  in the title bar, then clicking the item. For Windows 3.1, press SHIFT+F1 to see the Help pointer, then click the item.

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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

### To reset proportional devices

- Choose Settings>Reset Proportional Device [CTRL+F12]  
Active devices are reset to their default state.

### Tip

- § If a force is applied to the device when it is reset, the device may ‘creep’, moving the viewpoint when no force is applied to it. To correct this, you must reset again, effectively turn the device off and on again.


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{button ,AL("setting\_up\_proportional")} [Related Topics](#)

**To setup the Direct3D driver**

1. Choose Settings>Setup [E].
- 2 Click the Devices tab if it is not already displayed.
3. In the devices list, click Direct3D and then Enable.
4. Select Direct3D HAL to load the hardware driver, or RGB Emulation to load the software driver.

**Notes**

- § Worlds run in RGB Emulation mode may run very slowly compared to worlds using the Direct3d HAL driver or the default VRT graphics device.
- § For Windows 95 or NT, you can get Help on an item by clicking  in the title bar, then clicking the item. For Windows 3.1, press SHIFT+F1 to see the Help pointer, then click the item.

### **To network Visualisers**

1. Choose Settings>Setup [E].
2. Click the Devices tab if it is not already displayed.
3. In the devices list, click Network and then Enable.
4. In the Total Users list, click the total number of users. Each virtual world can be shared between a set number of users, but this number can be different from world to world, and it does not need to be the number of users on the network.
5. In the User ID list, click the user number for the computer.
6. Move the Long slider to the time, in milliseconds, to wait for the initial connection before stopping the program. The default setting is 30000.
7. Move the Short slider to the time, in milliseconds, to wait before giving up on each machine. The default setting is 10 seconds.

### **Notes**

- § Each user is allocated a different viewpoint at startup. On a single user system, Visualiser starts on viewpoint 1. On a multi-user system, user 1 starts on viewpoint 1, user 2 on viewpoint 2, and so on. The maximum number of users is twenty-five.
- § When you start the network, a dialog box is displayed in on the screen of User 1 which indicates the state of connection for each computer.
- § To install and configure NetBios we recommend that you contact your System Administrator.



**To stop a controllable object**

1. Press 0 on the keypad.
2. To start movement again, press 0.

**To move a controllable object**

1. Press 8 or 2 on the keypad to move the object forwards or backwards.
2. Press - or + on the keypad to move the object upwards or downwards.

If the object does not have a vertical velocity, the object will not be able to move up or down.

