

Do 3D Context Help

Window decoration

Title bar

Displays the Control menu icon, the name of the current world, and the Minimize, Maximize and Exit icons.

To move the window drag the title bar.

Toolbar

The toolbar provides quick mouse access to many commands used in Do 3D. By default, the toolbar is displayed across the top of the window, below the menu bar, but it can also either float or dock with the window at any location.

Docking bar

A possible location to dock a toolbar. To move a toolbar here, simply drag it with the mouse.

Scroll bars

Displayed at the right and bottom edges of a palette. The scroll boxes inside the scroll bars indicate your vertical and horizontal location. You can use the mouse to scroll the display.

3Space window

The 3Space window is where you build and preview your worlds. It can be displayed in three modes:

Edit Object mode - where you build your world by manipulating objects. You can add, resize, reposition and rotate objects and edit an object's actions.

Play mode - where you preview and interact with your world as it will be seen when displayed in Superscape's 3D browser Viscap. All objects and their attributes are automatically processed. This is the default mode when you start Do 3D.

Edit Material mode - where you resize, reposition and rotate textures on an object.

Status bar

The status bar describes actions of menu items as you select them or toolbar buttons as you move the mouse pointer over them.

Movement bar

The movement bar lets you move around the virtual world by clicking and dragging on the arrow icons in the center. These move the viewpoint in the vertical plane (left icon), in the horizontal plane (middle icon) and tilt the viewpoint up and down (right icon). The movement bar itself cannot be moved.

The movement bar contains icons at the right end which are used primarily when displaying virtual worlds on the World Wide Web in Viscap. From left to right these icons are: Level World; Reset World; Go to SuperCity (unavailable within Do 3D); and display the Viscap menu.

Level World and Reset World are also on the Do 3D toolbar.

The Viscap menu lets you set the display mode, change display options, configure devices, and save settings.

If not all the icons are visible, increase the size of the 3Space window.

For more information on using the movement bar, choose Help>Help Topics>How do I?>Move around a world>Use the movement bar.

Dialog boxes

Attributes palette

Click one of the tabs to display Action, Sound, Materials or Position attributes for the current object.

The Actions tab lists the URL fields for the object, and any additional properties you can set. The properties are specific to the object, created when the object is built in Superscape VRT. Not all objects have properties.

The Sound tab displays options about any sound attached to the object.

The Materials tab displays the materials ranges which defines the object's appearance, comprising colors and textures, if used.

The Position tab displays values for the position, size and rotation of the object, and lets you manipulate the object by typing in new values.

Getting Started

Specifies that a world based on one of the preset templates will load in the 3Space window.

Displays the Select Template dialog box which lets you choose a world from the list of templates.

Specifies that a blank world will load in the 3Space window. This contains only the horizon and a cube.

Specifies that an existing world will load in the 3Space window.

Displays the Open SVR File dialog box which lets you find the SVR file on your computer.

Specifies that this dialog box should not be displayed when you start Do 3D. If you do not display this dialog box, Do 3D will load the blank world by default.

If you want to redisplay this dialog, choose Edit>Preferences and select the Display Getting Started Dialog check box.

Object Attributes

Specifies a URL for a Web document and provides a space for you to type a new string. The string should contain the prefix 'http://'.

For example, to link the object to Superscape's Web Site, type **http://www.superscape.com**.

Specifies the window or frame that you want the link to appear in, and provides a space for you to type a new string. For example, if you want the link to appear in place of the current frame, type **`_self`**.

Specifies the description of the linked object that is displayed in the browser status bar when the mouse cursor changes to a hand, and provides a space for you to type a new string. For example, if you are linking to Superscape's Web Site, you may type **Superscape Home Page**.

A property or set of properties that will affect the behavior of the object. For example, you may be able to change the direction of a virtual human's walk, or the speed an object rotates.

The properties may be in any of the following forms: a text box where you enter a string, a check box, a drop-down list, and an edit box where you enter a numeric value. The numeric value will either be a whole number or a decimal.

For Help on individual properties click the What's This? icon on the end of the toolbar and click the object itself in the Warehouse.

Select Template

Displays all the available templates. Click the one you want to load and click OK.

The list includes a Blank World template, which displays the same world if you had chosen the Blank World option in the Getting Started dialog box.

Sound Attributes

Displays the name of the sound attached to the currently selected object.

If the object has a built-in sound no editing options are available except Play. You can change the built-in sound by dragging a new one in from Sounds in the Warehouse.

If the object has no sounds a message to this effect will be displayed.

Specifies how the sound is activated in the virtual world. The following options are available:

- § Click - the sound is played when you click on the object with the left mouse button;
- § Click On/Off - the sound is played when you click on the object with the left mouse button. Click the object again to stop the sound.
- § Reset - the sound is played when the world is reset;
- § Reset or Click - the sound is played when the world is reset or you click the object with the left mouse button;
- § Reset or Click On/Off - the sound is played when the world is reset or you click the object with the mouse. Reset the world or click the object again to stop the sound.

Drag the slider to set the volume level at which the sound is played. The further you drag the handle to the right, the louder the sound is played.

If the Ambient check box is clear, the volume slider sets the distance you must be from the object to hear it at maximum volume. The further you move the handle to the right, the further away from the object you must be to hear the sound at full volume.

Drag the slider to set the pitch at which the sound is played.

Sounds are played at different pitches, based on the MIDI standard note numbers. Middle C is defined as note 60, with lower numbers representing lower notes and higher numbers higher notes. Therefore, if you have a sample of the C below middle C which you want to play at middle C, you need to set the play pitch to one octave above its original level.

By default, the slider is set to 64 in the center of the scale. Drag the slider to the right to increase the pitch, and the left to decrease it. Each marker indicates an octave change.

Specifies that the sound is played at the same volume whatever your position in the world. The volume slider sets the base volume for the sound.

If this check box is clear, the sound will be distanced, so that it sounds louder when you are nearer the object and quieter when you are further away. The volume slider now sets the distance you must be from the object to hear it at maximum volume. The further you move the handle to the right, the further away from the object you must be to hear the sound at full volume.

Specifies that the sound will play in a continuous loop.

Plays the sound.

If you are playing a looped sound, how you stop it depends on the current setting for Trigger. Either click Play again (if the Trigger is Click On/Off, Reset, or Reset or Click On/Off) or temporarily clear the Loop check box (if the Trigger is Click, or Reset or Click).

Deletes the sound from the object.

Materials Attributes

Displays the materials range used in the selected object, with the current material highlighted. If an object has been colored using more than one range, all the ranges are displayed, letting you change the materials of different parts of the object independently.

Each facet in an object has a material which defines the object appearance. The material can be either a color in a given range or a texture. The color ranges are displayed first; if a texture is used, it is displayed at the end of the color ranges.

The black box with a white cross represents a stipple range, which you can use to create transparent objects.

To change the object's color, click a new color in the chart. The object's original color will now be highlighted by a one pixel yellow box, which you can click to return the object to its initial color.

Flips the texture vertically.

Flips the texture horizontally.

Rotates the texture 90° in a clockwise direction.

Position Attributes

Specifies the distance of the center of the object North of an arbitrary origin, and provides a space for you to type a new value. If you move the object in the 3Space window with the mouse this value changes automatically.

The origin is positioned behind the default viewpoint.

Specifies the distance of the center of the object East of an arbitrary origin, and provides a space for you to type a new value. If you move the object in the 3Space window with the mouse this value changes automatically.

The origin is positioned behind the default viewpoint.

Specifies the height of the center of the object above ground level, and provides a space for you to type a new value. If you move the object in the 3Space window with the mouse this value changes automatically.

Specifies the depth of the object in meters, and provides a space for you to type a new value.
If you resize the object in the 3Space window with the mouse this value changes automatically.

Specifies the width of the object in meters, and provides a space for you to type a new value.
If you resize the object in the 3Space window with the mouse this value changes automatically.

Specifies the height of the object in meters, and provides a space for you to type a new value.
If you resize the object in the 3Space window with the mouse this value changes automatically.

Specifies the angle of rotation in degrees about the North-South axis (Z axis), and provides a space for you to type a new value. If you rotate the object in the 3Space window with the mouse this value changes automatically.

Specifies the angle of rotation in degrees about the East-West axis (X axis), and provides a space for you to type a new value. If you rotate the object in the 3Space window with the mouse this value changes automatically.

Specifies the angle of rotation in degrees about the vertical axis (Y axis), and provides a space for you to type a new value. If you rotate the object in the 3Space window with the mouse this value changes automatically.

Preferences dialog box

Specifies whether the Apply Texture dialog box is displayed each time a texture is dragged from the Warehouse into a world. If this check box is clear the Apply Texture dialog box is displayed only the first time you drag a texture. This is very useful if you are dragging a number of textures all using the same mapping method and orientation.

You can use the ALT key when dragging textures to override this check box.

If you do not display the Apply Texture dialog box, the texture is attached to the object using the last set orientation.

Specifies whether the Getting Started dialog box is displayed each time you start Do 3D.

The Getting Started dialog box lets you choose which world to display as you load Do 3D. If the dialog is not displayed, Do 3D will load the blank world by default.

Specifies that both palettes, the toolbar and status bar are hidden when you click the Play icon, letting you view more of your world in the 3Space window.

To redisplay the palettes and bars, choose either Edit>Edit Objects or Edit Materials, depending on whether you want to return to Edit Object mode or Edit Material mode.

Apply Texture dialog box

Specifies how you attach the texture to the object. Select one of the following methods:

- § Wrap: the texture is wrapped around the object like a sheet of paper (it is adjusted in each axis so that it is not distorted). You can wrap the texture in the X, Y or Z axis.
- § Planar: the texture is mapped as a single image onto all the facets in the color range from one direction. You can apply the texture in the X, Y, or Z axis.
- § Cylindrical: the texture is wrapped around the object like a tube, covering all the facets in the color range. The tube can point in the X, Y or Z axis. Use this mode for cylindrical objects.
- § Spherical: the texture is wrapped around the object like a sphere, covering all the facets in the color range. The sphere can have its axis in the X, Y or Z axis. Use this mode for spherical objects.

Wraps the texture around the object in the direction of the Y axis (up-down).

Wraps the texture around the object in the direction of the Z axis (North-South).

Wraps the texture around the object in the direction of the X axis (East-West).

Applies the texture onto each facet in the direction of the Y axis (up-down).

Applies the texture onto each facet in the direction of the Z axis (North-South).

Applies the texture onto each facet in the direction of the X axis (East-West).

Wraps the texture around a cylindrical object in the direction of the Y axis (up-down).

Wraps the texture around a cylindrical object looking along the Z axis (North-South).

Wraps the texture around a cylindrical object looking along the X axis (East-West).

Wraps the texture around a spherical object looking down the Y axis (up-down).

Wraps the texture around a spherical object looking along the Z axis (North-South).

Wraps the texture around a spherical object looking along the X axis (East-West).

Specifies that this dialog box will only be displayed if you hold down the ALT key when you are dragging textures into the 3Space window. If you drag a texture in without holding the ALT key, the texture will map onto the object using the last set orientation. This is very useful if you are dragging a number of textures all using the same method and orientation.

If this check box is clear, the Apply Texture dialog box will appear every time you drag a texture into a world.

Warehouse Palette

Click one of Objects, Sounds, or Materials tabs to display the available objects, sounds, textures and colors that you can use in your world.

Each of the different items are subdivided into well-defined categories, which you choose from the Category drop-down list. The contents of each category are displayed in the scroll box below.

Lists all the available categories for the current item group.
The contents of each category are displayed in the scroll box below.

Displays all the objects in the current category that you can use in your world. To import an object into your world, either drag it into the 3Space window using your mouse, or double-click it. Dragging allows you to position the object precisely, whereas double-clicking loads the object in the center of the 3Space window.

You can get Help on each object by clicking the What's This? icon and then clicking the object you want.

Displays all the sounds in the current category that you can use in your world. To import a sound into your world, drag it onto an object in the 3Space window using your mouse.
Double-click a sound to listen to it.

Displays all the textures in the current category that you can use in your world. To import a texture into your world, drag it onto an object in the 3Space window using your mouse.

Some texture categories are particularly suited to certain types of objects, for example the textures in the Cylinders category should be placed on cylindrical objects, and the textures in the Lit Textures category look best on spherical objects.

Displays all color ranges that you can use in your world. To import a color range into your world, drag it onto an object in the 3Space window using your mouse.

Dragging colors from the Warehouse has the same effect as using the color range charts in Materials in the Attributes palette to change object colors .

Menu commands

Control menu

Restore command (Control menu)

Returns the active window to its size and position before you chose the Maximize or Minimize command.

Shortcut: 

Move command (Control menu)

Displays a four-headed arrow so you can move the active window with the arrow .

Note that this command is unavailable if you maximize the window.

Size command (Control menu)

Displays a four-headed arrow so you can size the active window with the arrow.

After the pointer changes to the four-headed arrow:


- 1 Press one of the arrows to move the pointer to the border you want to move.
- 2 Press an arrow key to move the border.
- 3 Press ENTER when the window is the size you want.

Note that this command is unavailable if you maximize the window.

Shortcut: Drag the size bars at the corners or edges of the window with the mouse.

Minimize command (Control menu)

Reduces the application window to an icon.

Shortcut: 

Maximize command (Control menu)

Enlarges the active window to fill the available space.

Shortcuts: Double-click the title bar with the mouse.



Minimize icon (Title bar)

Reduces the application window to an icon.

Maximize/Restore icon (Title bar)

Enlarges the active window to fill the available space, or, if the window is already maximized, restores it to its previous size and position.

Close command (Control menu)

Closes the active window or dialog box.

Double-clicking the Control-menu icon is the same as choosing the Close command.

Shortcuts: ALT+F4



Switch To command (Control menu)

Enables you to switch between Windows applications, via the Task List dialog box.

File menu

New command (File menu)

Clears all current settings and creates a new world based either on the default blank world or on one of the preset world templates. Displays the Select Template dialog box that lists the available templates, including a Blank World template.

Shortcuts: CTRL+N



Open command (File menu)

Opens a world. Displays the Open File dialog box.

Shortcuts: CTRL+O



Save command (File menu)

Saves the active world with its current name and location.

If you have not saved the current world before, then choosing Save displays the Save File dialog box which lets you choose the filename and location.

Shortcuts: CTRL+S



Save As command (File menu)

Saves the active world with a name and location that you specify. Displays the Save As dialog box.

You can:

- Name a new world.
- Save an existing world under a new name.

The original remains unchanged.

Shortcut: `CTRL+SHIFT+S`

Import VRML command (File menu)

Imports a VRML 2.0 file as an object in your current world.

Displays the Import VRML File dialog box.

Only the geometry and textures of the objects within the VRML file are loaded.

Export VRML command (File menu)

Exports your current world in VRML 2.0 format. Displays the Export VRML File dialog box which lets you specify a filename and directory. Each file has a .WRL file extension.

Do 3D only exports geometry and textures. If you want to add behaviors you must use a VRML editor and edit the world after export.

Page Setup command (File menu)

Selects a printer and printer connection. Displays the Print Setup dialog box where you may specify:

- Page size - width and height
- Paper orientation (landscape or portrait)
- Other printer setup options.

Print command (File menu)

Prints the contents of the 3Space window to the specified Windows printer or to a file.

Displays the Print dialog box where you may specify:

- The number of copies.
- The destination printer and print quality.
- Print to printer or to a file (as a *.PRN)
- Other printer setup options.

Shortcuts: CTRL+P



Recent File List command (File menu)

Displays the last four files that you had open. Clicking on a filename reloads the world.

Exit command (File menu)

Exits Do 3D. You are prompted to save any unsaved changes that you have made. Click Discard to exit without saving the changes.

If you click OK, the Save File dialog box is displayed showing the current Do 3D file. Click Save to save any unsaved changes to the current file. Click Cancel to stop the operation.

If you have changed the Do 3D setup but not saved the changes, the Save Preferences dialog box is displayed showing the current preferences file. Click Save to save the file and click OK in the alert box to overwrite the existing data. Click Cancel to stop the operation.

Shortcuts: ALT+F4



Edit menu

Undo command (Edit menu)

Reverses the last action or sequence of operations. Both the command and toolbar icon gray out when there is nothing left to be undone.

You cannot use the Undo command to remove an object just loaded from the Warehouse or from a Paste operation. Simply delete the object by pressing **DELETE**.

Shortcuts: **CTRL+Z**



Cut command (Edit menu)

Removes the currently selected object from the 3Space window and places it on the clipboard. This command is unavailable if no object is selected.

Note that you can only cut objects, not textures, sounds or colors.

Shortcuts: CTRL+X



Copy command (Edit menu)

Copies the currently object from the 3Space window to the clipboard. This command is unavailable if no object is selected.

Note that you can only copy objects, not textures, sounds or colors.

Shortcuts: CTRL+C



Paste command (Edit menu)

Inserts an object from the Clipboard into the current view in the 3Space window.

This command is unavailable if there is no object on the clipboard.

Note that you can only paste objects, not textures, sounds or colors.

Shortcuts: CTRL+V



Delete command (Edit menu)

Deletes the currently selected object from the 3Space window.

Shortcut: DEL

Preferences command (Edit menu)

Displays the Preferences dialog box so you can set options for Do 3D.

View menu

Play command (View menu)

Switches Do 3D into Play mode, which lets you view your world as it will be displayed in Viscage.

Choose View>Edit Objects or Edit Materials to return to Edit Object mode or Edit Material mode.

Dragging objects and sounds from the Warehouse will also return you to Edit Object mode; dragging materials from the Warehouse will return you to Edit Material mode.

A tick (✓) appears next to the menu item when you are in Play mode.

Shortcuts: CTRL+W



Edit Objects command (View menu)

Switches Do 3D into Edit Object mode which lets you move, resize or rotate objects by clicking and dragging on them with the mouse in the 3Space window.

Dragging objects and sounds from the Warehouse into the 3Space window will also switch Do 3D into Edit Object mode.

A tick (✓) appears next to the menu item when you are in Edit Object mode.

Shortcuts CTRL+D



Edit Materials command (View menu)

Puts you into Edit Material mode, which lets you move, resize or rotate textures using the mouse in the 3Space window. Displays the Texture toolbar.

Dragging materials from the Warehouse into the 3Space window will also switch Do 3D into Edit Material mode.

A tick (✓) appears next to the menu item when you are in Edit Material mode.

Shortcuts: CTRL+F



Walk command (View menu)

Lets you walk through the world and collide with objects in Play, Edit Object and Edit Material modes. The Up and Down arrows in the movement bar are unavailable. You are able to walk over small objects and climb stairs.

A tick (✓) appears next to the menu item when you are in Walk mode.

Shortcuts: CTRL+K



Fly command (View menu)

Lets you fly anywhere in the world in Play, Edit Object and Edit Material modes. All arrows on the movement bar are available.

A tick (✓) appears next to the menu item when you are in Fly mode.


Shortcuts: CTRL+L



Set Viewpoint command (View menu)

Sets your current position as the initial viewpoint, so that when you reset or restart the world it will load at this position.

Choose Edit>Undo to return to the previous initial viewpoint.

Shortcut: 

Display mode command (View menu)

Lists the available display driver modes for your system. Which modes are available depends on your hardware.

We recommend that you use the Auto Detect option (default) which checks your system every time you start Do 3D and selects the best match for it. If you have trouble with the selected mode, you may be able to solve the problem by switching to another mode.

For further information choose Help>Help Topics>Troubleshooting>My 3Space Window Display Looks Poor.

Reset World command (View menu)

Resets the view to its initial position.


You can change the initial position by moving to the view you want and choosing View>Set Viewpoint.

Shortcuts: F12



Level Viewpoint command (View menu)

Sets the viewpoint so you are level with the ground, looking straight ahead.

Shortcut: 

Window menu

Toolbar command (Window menu)

Displays or hides the toolbar. The toolbar contains buttons for some of the most common commands. A tick (✓) appears next to the menu item when the toolbar is displayed.

Warehouse Palette command (Window menu)

Displays or hides the Warehouse Palette, which contains all the objects, textures and sounds that you can use in your world. Items are subdivided into different categories under each of the options.

A tick (✓) appears next to the menu item when the Warehouse Palette is displayed.

Attributes Palette command (Window menu)

Displays or hides the Attributes Palette, which lets you configure the objects, textures and sounds in your world.

A tick (✓) appears next to the menu item when the Attributes Palette is displayed.

Status bar command (Window menu)

Displays or hides the status bar. The status bar, at the bottom of the window, describes the action to be executed by the selected menu item or toolbar button.

A tick (✓) appears next to the menu item when the status bar is displayed.

Help menu

Help Topics command (Help menu)

Displays online Help.

Shortcut: F1

What's This? command (Help menu)

Lets you access Help on portions of the Do 3D interface and objects contained in the Warehouse. When you choose this command, the mouse pointer will change to an arrow and question mark. Then click somewhere in the application window, for example, on a toolbar button or an object in the Warehouse. Help will be shown for the item you clicked.

Shortcuts: SHIFT+F1



Tutorials command (Help menu)

Runs Do 3D's online tutorials.

Tip of the Day command (Help menu)

Displays the Tip of the Day dialog box, letting you view helpful hints and tips about using Do 3D.

About Superscape Do 3D command (Help menu)

Displays program, copyright and version information about Superscape Do 3D.

License command (Help menu)

Displays the Superscape license and warranty agreement.

Texture toolbar

Move Texture command (Texture toolbar)

Lets you drag a texture around an object using the left mouse button. The texture retains its current orientation.

You can constrain the movement of the texture to just one axis by pressing **SHIFT** as you drag.

Scale Texture command (Texture toolbar)

Lets you enlarge or shrink a texture on an object using the left mouse button. The texture retains its current orientation.

You can constrain scaling the texture to just one axis by pressing SHIFT as you drag.

Rotate Texture command (Texture toolbar)

Lets you rotate a texture around the initial position of the mouse cursor using the left mouse button.

You can constrain the rotation of the texture by pressing the following keys as you drag:

SHIFT to rotate the texture 90° at a time;

CTRL to manipulate the texture on a single facet, without affecting the texture on any of the other facets.

If the object is replaced by simpler objects as it moves into the distance, the texture will be redisplayed in its original orientation.

Viscape dialog boxes

Active Viewpoints dialog box

Lists the preset viewpoints that have been setup in the world by the world designer. When you click a viewpoint, the viewpoint in the world changes to the new position immediately.

If the world has been created in Superscape VRT, it can have up to 100 preset viewpoints that can be static, follow predefined paths, or attached to objects to create controlled objects which you can steer around the world.

Mouse Buttons and Movement dialog box

Specifies that the mouse button would cause movement in the axes defined below.

Specifies that the mouse button would act as it does in mouse selection mode, where moving the mouse pointer around the screen simply does that—clicking the left mouse button activates objects and the right button displays the history menu in most editors.

Lists the available sideways movements and rotations for each axis for the current mouse action. To assign movement or rotation to this mouse action, click on one of the available options from the drop-down list. These options are only available if the mouse is in Move mode.

Lists the available forwards and backwards movements and rotations for each axis for the current mouse action. To assign movement or rotation to this mouse action, click on one of the available options from the drop-down list. These options are only available if the mouse is in Move mode.

Specifies that the distance of the mouse pointer from the home position determines the speed of rotation or movement. This option is only available if the mouse is in Move mode.

Specifies that the distance of the mouse from the home position determines the absolute orientation or position of the viewpoint. This option is only available if the mouse is in Move mode.

Resets all the movement options to their default settings.

Viscape Setup dialog box

Devices tab (Viscape Setup dialog box)

Lists all the devices that Do 3D supports, their type (for example, proportional) and their current state (for example, enabled).

Enables the selected device.

Disables the selected device.

Resets the selected device to its default settings.

Adds a device to the list. Displays the Open File dialog box.

Specifies that you will be prompted to save the changes you have made in the preferences file (.CFG) when you exit the dialog box.

Devices: Mouse Movement

Specifies how you switch between mouse selection mode and movement mode. This can be done in one of three ways:

- Keyboard - pressing SPACEBAR.
- Key and Center Button - using the center mouse button on a three button mouse.
- Center Button (Hold) - the center mouse button can be set so that holding it down switches into movement mode. When released, the mouse returns to selection mode.

In selection mode, moving the mouse pointer around the screen simply does that—clicking the left mouse button activates objects and the right button displays the history menu in most editors. In movement mode, moving the mouse around the screen causes the viewpoint or controlled object to move in the virtual world. Pressing the left and right mouse buttons modifies the movement to use different axes.

Click this to set the axes for mouse movement. Displays the Mouse Buttons and Movement dialog box.

Specifies that the mouse home position is visible.

Specifies where the mouse must be in order to cause no movement. Floating sets the home position to the point where the mouse is clicked in the viewing area; Centered sets the center of the screen to be the home position.

Specifies how fast you move in the world as you move the mouse further from its home position. The further the slider is to the right, the faster you move in the world with the minimum mouse movement. When the slider 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; the further from home position the faster you move. When the slider is at the right hand end, the mouse position is scaled more for large values than small. This means that while small mouse movements may still cause relatively small movements in the virtual world, large mouse movements cause progressively larger world movements.

Specifies how fast you rotate in the world as you move the mouse further from its home position. The further the slider is to the right, the faster you rotate in the world with the minimum mouse movement. When the slider 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 rotate; the further from home position the faster you move. When the slider is at the right hand end, the mouse position is scaled more for large values than small. This means that while small mouse movements may still cause relatively small movements in the virtual world, large mouse movements cause progressively larger world movements.

Devices: Joystick

Specifies that the button would cause movement in the axes defined below.

Specifies that the button would act as it does in selection mode.

Lists the available sideways movements and rotations for each axis for the current button option. To assign a movement or rotation, click on one of the available options from the drop-down list. These options are only available if the button is in Move mode.

Lists the available forwards and backwards movements and rotations for each axis for the current joystick option. To assign a movement or rotation, click on one of the available options from the drop-down list. These options are only available if the button is in Move mode.

Device: Spacemouse

The Spacemouse is the recommended input device for use with Do 3D. The Spacemouse senses the amount of pressure or twist applied to the 'cap' in each of the six axes. Pushing it forward pushes the controlled object or viewpoint forward. Rotating the cap rotates the controlled object or viewpoint.

Select the serial port that the Spacemouse is attached to.

Device: Spaceball

The Spaceball is a common input device for use with the Do 3D. The Spaceball senses the amount of pressure or twist applied to the ball in each of the six possible axes. Pushing the ball forward pushes the controlled object or viewpoint forward. Rotating the ball rotates the controlled object or viewpoint.

Select the serial port that the Spaceball is attached to.

Device: Flock of Birds

The Ascension Flock of Birds position tracker is a device that follows the motion of a small sensor (known as a Bird) in the real world, and communicates this position to the computer using a serial port.

The Bird is a small plastic device approximately one centimeter in size attached to a cable. Using the Bird merely consists of moving it in the real world. 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.

Select the serial port that the Flock of Birds is attached to.

Drag the slider to alter the delay between starting up the Flock of Birds and sending the initialization information. The range is from 1000 to 5000 milliseconds (1 to 5 seconds).

Specifies the axes of movement for the bird in the virtual world. To change the setup, click on a new X,Y, or Z option in the drop-down list of the axis you want to change.
The default setup should be fine for a horizontally mounted transmitter.

Specifies the axes of rotation for the bird in the virtual world. To change the setup, click on a new X,Y, or Z option in the drop-down list of the axis you want to change.

The default setup should be fine for a horizontally mounted transmitter.

Specifies that sudden changes in position are reported back to Do 3D. If this check box is clear, then sudden changes are damped out by the Flock of Birds.

Specifies whether you wish to send your own sync pulse to the bird. If you want to use the sync pulse signal supplied with the bird, make sure this option is clear.

Specifies the number of birds that you are using.

Device: Polhemus FASTRAK

The Polhemus FASTRAK position tracker is a device that follows the motion of a small sensor in the real world, and communicates this position to the computer using a serial port.

The Tracker is a small plastic device approximately one centimeter in size attached to a cable. Using the Tracker merely consists of moving it in the real world. 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.

Select the serial port that the device is attached to.

Drag the slider to alter the delay between starting up the device and sending the initialization information. The range is from 1000 to 5000 milliseconds (1 to 5 seconds).

Specifies the axes of movement for the device in the virtual world. To change the setup, click on a new X,Y, or Z option in the drop-down list of the axis you want to change.

The default setup should be fine for a horizontally mounted transmitter.

Specifies the axes of rotation for the device in the virtual world. To change the setup, click on a new X,Y, or Z option in the drop-down list of the axis you want to change.

The default setup should be fine for a horizontally mounted transmitter.

Device: Virtual I-O i-glasses

The Virtual I-O i-glasses is a head mounted display (HMD) device that produces a stereoscopic display. You can only use the i-glasses with virtual worlds that have been specifically configured for stereoscopic HMDs—the layout of each world has two windows that display the same image and must be displayed in interlace mode in Do 3D.

The i-glasses is an orientation tracker only, providing pitching and rolling information through the serial port. If you require positional information, you need to use a second device such as the keyboard or mouse.

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.

Select the serial port that the i-glasses are attached to.

Device: Display

Lists the available display driver modes for your system. Which drivers are available depends on your hardware.

We recommend that you use the Auto Detect option (default) which checks your system every time you start Do 3D and selects the best match for it. If you have trouble with the selected driver, you may be able to solve the problem by switching to another.

For further information choose Help>Help Topics>Troubleshooting>My 3Space Window Display Looks Poor.

Device: Network

Specifies the user number for the computer. Each user is allocated a different viewpoint on startup. On a multi-user system, user 1 starts on viewpoint 1, user 2 on viewpoint 2, and so on.

Specifies the total number of users sharing the virtual world. This number can be different from world to world, and does not need to be the number of users on the network.

Drag the slider to adjust the time to wait for the initial connection before stopping the program. The default setting is 30000 milliseconds.

Drag the slider to adjust the time to wait before timing out on each machine. The default setting is 10 seconds.

Display tab (Viscape Setup dialog box)

Selects the crosshair or the mouse pointer as the selection tool. When the crosshair is set as the selection tool, you select items by moving the world until the item is under the crosshair and pressing the activation key. If you have a proportional device such as a Spacemouse, you can use a crosshair to select items.

Select Crosshair Visible to display the crosshair tool in the center of the screen.

Drag the slider or type a value in the space provided to set the movement step size for each time you press a key in the world. Movement step has a range of 0–100000.

Note that at present Movement Step has no effect in Do 3D.

Drag the slider or type a value in the space provided to set the angular step rotation for each time you press a key in the world. Angular step has a range, in degrees, of 0.00–90.00
Note that at present Angular Step has no effect in Do 3D.

Locks the viewpoint in the selected axes.

Drag the slider or type a value in the space provided to set the amount of detail shown on screen by globally changing the distances at which all replacements are applied. Details level has a range of -10 to +10, with 0 as its default. Negative values give less detail and replacement distances are brought closer to the view point. Positive values give more detail by placing replacement points further away from the viewpoint.

Drag the slider or type a value in the space provided to set the size of the 'window' on the virtual world. Zoom level has a range of 256 – 16384. Low values show more of the world in the screen and high values zoom in so that less of the world is visible on the screen.

Specifies whether the background display to is a solid background (Solid) or has a ground and sky (Horizon). The solid background is black by default.

Each option has an additional No Redraw selection that instructs Do 3D to use the previous option but not update the screen each frame. It is not recommended you use the No Redraw option as it can cause image trails to be left on the screen.

Proportional Control Type dialog box

Click the control type you want and click OK.

Do 3D has 40 preset control type settings that you can use to control how the viewer sees worlds.

These work within the six basic axes of movement (so that moving in the Z+ axis moves forwards and rotating in the Y+ axis spins clockwise). They comprise 10 basic settings each with four different levels of sensitivity and viewpoint as follows:

- Car Cntl Lets you control and 'drive' car type objects.
- Fly Cntl Provides total control over an object.
- Fly No Z Same as Fly Cntl but with no object tilt.
- Man Cntl Lets you control and 'walk' humanoid type objects.
- Plane Cntl Lets you control and 'fly' airplane type objects.
- View Move Provides total control over the viewpoint.
- View No Z Same as View Move but with no viewpoint tilt.
- View Spin Moves a viewpoint around an object.
- View Stat Allows control from a stationary viewpoint. It only has movement in the three rotational axes.
- View Walk Where vertical movement or tilt is not required.

Following the basic settings in each case is a number between one and six, which indicates that the device should take input from that number of different axes simultaneously, and either Hi or Lo, which refers to the sensitivity of the viewpoint.

Proportional Device Setup dialog box

Displays the current control type. Click Select to choose a different configuration.

Click this to choose a new control type. Displays the Proportional Control Type dialog box.

Specifies how many axes (1–6) the proportional device operates in simultaneously. When set to 1, only the axis with the greatest amount of force applied passes information to the world at any one time. This makes it easy to use the device to move the viewpoint or object in one direction without accidentally operating other axes. When the field is set to 6, information from all the axes affects the viewpoint or object. This increases operational speed but needs skill to accurately control the viewpoint or object.

Drag the sliders or type values in the boxes to set the sensitivity along and around each of the six basic axes of the control device. Sensitivity has a range of 0 (off) to 15 (maximum).

The higher the value (indicated by the number to the right of the slider), the more sensitive the device is to pressure in that axis, and the faster you will move or rotate in that axis.

Drag the sliders or type values in the boxes to specify the amount of force required before the device starts moving in the axis. A device's translational and rotation deadzones are individually adjustable for the X, Y, Z axes in 64 steps (0–63).

The higher the value (indicated by the number to the right of the slider), the greater the input required to start the device operating in that axis. This can help to avoid accidentally moving a viewpoint or object with very small inputs from the device.

World Information dialog box

Displays the previous page of help text.

The world information for the current world. This text is read-only.

Displays the next page of help text.

Adds pages of help text

Deletes pages of help text.

