

Compilation

Upon compilation using the make command you can define the dimensions of the window by setting the following variables X_LEN and Y_HEIGHT.

The default is 1920x1080

Example make command:

make re X_LEN=1920 Y_HEIGHT=1080

Menu Navigation

Click on the top right hamburger menu to show/hide the basic menu.

Click on the first button to select an object in the scene to manipulate.

Click on the settings button to modify the ambient light settings.

Click on the print button to print the scene currently displayed to the terminal.

Clicking on reset will reset the scene to the originally provided .rt file

Clicking on add objects will allow you to add a new object, the new object will be automatically selected.

Note: New objects will appear slightly in front of the camera. Lights however will be added at the exact position of the camera.

Global Settings:

Enter = when in a pre-render state, hitting enter will create a fully rendered image

H = Turns on/off ambient lighting

J = Turns on/off diffuse lighting

K = Turns on/off specular lighting

L = Turns on/off shadows

Object Manipulation

All objects can be manipulated, depending on their individual properties.

Movement:

W = Move upwards (relative to the camera)

A = Move downwards (relative to the camera)

S = Move left (relative to the camera)

D = Move right (relative to the camera)

Q = Move away from the camera (forwards if the camera is selected)

E = Move towards the camera (backwards if the camera is selected)

Resizing:

+ = Increase diameter (cylinder, sphere, cone) Increase intensity (lights)
- = Decrease diameter (cylinder, sphere, cone) Decrease intensity (lights)
0 = Increase height (cylinder, cone)
9 = Decrease height (cylinder, cone)

Rotations (camera):

Up = Pan down
Down = Pan up
Z = Pan left
X = Pan right

Rotations (objects with vector):

Note: Object rotations are done from the map perspective and not the camera perspective, hence they will look a little strange from the camera view. A bit of trial and error is required to understand the rotations

Up = Rotation around y axis
Down = Opposite rotation around y axis
Left = Rotation around x axis
Right = Opposite rotation around x axis
Z = Rotation around z axis
X = Opposite rotation around z axis

RGB:

With a shape selected pressing R, G, or B will enable RGB mode for that object, repressing one of those keys or the menu button will disable RGB mode.

With RGB mode enabled pressing plus or minus will increase or decrease the colour value respective to the key pressed (R, G, or B)