

## Script Editing

### Reference

This data sheet is intended as a reference for most of the commonly used script commands.

### Level

This is a basic script command which should be present on all levels and it takes the following form:

**Level= DATA\PALACES,107.**

This takes the form DATA, (the data folder where .tr4 files are kept) followed by the .tr4 name (wad name) followed by the background audio track which plays on opening the level.

### Load Camera Coordinates

This item appears in the script as follows:

**LoadCamera= 11088,-1100,28896,11119,-1399,31486,0**

This is used to set the Load screen for the level. If you have not set this up in your level the game will crash when existing back to the main menu or when Lara dies in game.

*How to set up the Load Camera coordinates*

When developing a new level the easiest way is to set up all the coordinates as zeros:

**LoadCamera= 0,0,0,0,0,0,0**

You won't get a nice load screen but the game won't crash. When you are ready to release your new, magnificent level do the following:

Place Lara in a room which you would like to display as a Load Screen. Play the game. Press the F1 key. In the top left hand corner you will see a set of numbers. Jot these down and transfer these to your script file. Convert the script and the next time you play you will see your new Load Screen.

### Lensflare

Lensflare is a global lens flare not to be confused with the Lensflare nullmesh object. It is defined in the script as follows:

**LensFlare= 250000,-32000,110000,128,96,0**

Where the first three numbers are the 'world' coordinates and the last three numbers are the RGB values for the colour of the Lensflare. Trial and error is required for the position.

An example of global lensflare is shown opposite (Fig.5 (bottom)). (note that the NL button in the level editor switches global lensflare off in that particular room).

### Horizon and Sky

If you wish a horizon to appear in your level you need to enable it in the script. Ensure you have a Horizon object in your Wad.

**Horizon= ENABLED**

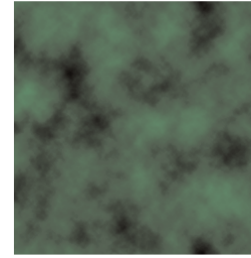
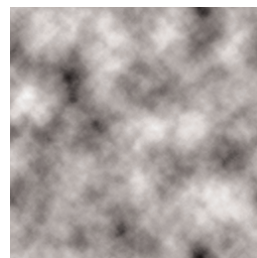
When using TR4 horizons additional script lines are needed for the 'scrolling sky' effect. Note that the clouds and background are a separate image file stored alongside the wad (eg. City.raw).

**Layer1= 56,72,8,16**

This command controls the colour of the *clouds* and the scroll speed

**Layer1= x,y,z,speed**

Where x, y and z are the RED, GREEN, BLUE components of the cloud colour and speed is the scrolling speed. Negative number causes scroll direction to be reversed.

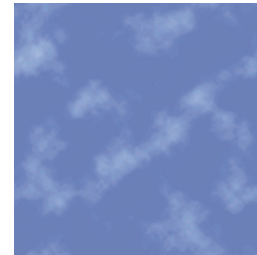


For example the colour in the example script line is a dark green which will colour the cloud area in the sky to that dark green colour when seen in game.

A final command relating to sky is the ColAddHorizon

**ColAddHorizon= ENABLED**

Add this in addition to the Layer1 command when you wish to retain the original colours of the raw file, for example the bright blue in the Coastal level. The Layer1 colour will affect the cloud colour.



### Mirror

This script has the form:

**Mirror= 11,\$7000**

This script item is used when you create a 'mirror' room as seen in the 'Coastal' level. The first number is the room number of the 'mirrored' room. The second number is the hexadecimal number required. How to create a mirror room is fully explained in the manual.

### UVRotate

This is a command used to 'scroll' textures in game. It takes the following form:

**UVrotate= 8**

Where the number is the speed of scrolling. (between -16 to +16 where a negative number reverses the direction).

To set up a UV tile I suggest downloading Icebergs TBuilder. This program enables you to create your own UV tiles.

<http://trlc.planetaclix.pt/TOOLS/tbuilder.htm>

Iceberg fully explains the principles behind UV rotate and how to create a UV texture in his help file.

In short once you have created your texture, in the room editor you need to delete all existing animation ranges and define the UV rotate texture FIRST, then your other animation ranges (such as water). Add the UV rotate line to your script and place the texture in your level and it will scroll when viewed in game.

### ResetHUB

This command is primarily used when you need to change Laras costume. It takes the form:

**ResetHUB= 3**

The number refers to the next level, the level Lara jumps to next and should be placed in the current levels script. For example if Lara changes costume in Level 3, the ResetHUB line should be in the script for level 2.

Using this command has the effect of also losing certain items from her inventory such as pickup items, new guns, etc. Also if she jumps back to the previous level all puzzles and triggers will be reset in this level.

A note about costume changes. If you change any of Laras meshes you need to use the ResetHUB line (if you do not the level will crash). If you just retexture Lara then you do not need to include the ResetHUB line.

### Puzzle, Key and Pickup items

Puzzle and Key items take the following form:

**Key= 2,The Guards Keys, \$0004,\$0300,\$0000,\$c000,\$0000,\$0002**

**Puzzle= 5,Holy Scripture, \$0017,\$04b0,\$4000,\$0000,\$0000,\$0002**

Where the first number is equal to the puzzle item in the wad, for example PUZZLE ITEM 2 in the wad would of course be Puzzle= 2 in the script. This is followed by the name of the item. You can change the name of the puzzle item, but you must also change the name in the English.txt file. The next group of 6 hexadecimal numbers represent how the object is displayed in the inventory menu. If you do not add puzzle or key items to your script your level will still work ok but the item will be displayed as 'Load' in the inventory menu.

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## Fog

When this script command is used, the level will contain a distance fog throughout. Not to be confused with fog bulb. To make distance fog work, volumetrics fx needs to be switched off. Conversely fog bulbs require volumetric fx to be switched on. So the two fogs are mutually exclusive. The fog command takes the form:

**FOG=** *x,y,z*

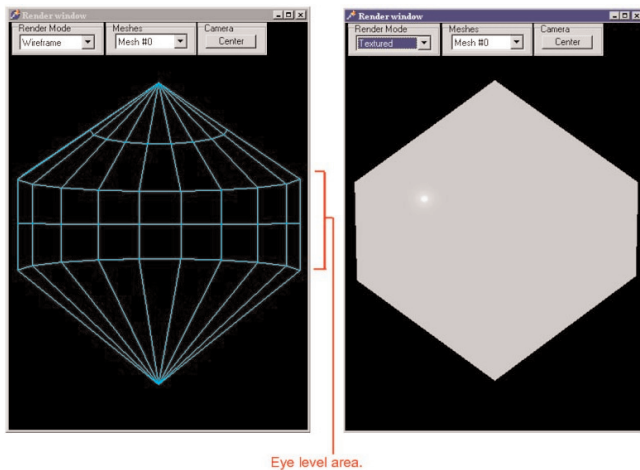
Where x,y and z are the Red, Green and Blue components of the fog colour

### Uses of distance Fog

Using distance fog is useless if not combined with a suitable horizon. The main purpose of using distance fog (and I am a big fan of this) is to prevent Pop-up and visible polygon redrawing in large outdoor areas. Here is the best approach to achieve this.

1. Use a TR3 style horizon.
2. Texture this horizon with textures of predominantly the same colour. In the example below a shot is taken from Strpix which shows the predominantly grey horizon with a faded sun. Note that you cannot have details such as buildings, mountains, etc appearing at eye level (see diagram) Although you can have detail higher up, for example planets, sun, moon, stars, clouds etc. In this example a grey colour is used. So the result line would be

**FOG=** *128,128,128*



When no Fog line appears in the script, the game engine uses a 'Black' fog, thus when using black horizons (such as the City level) no distance fog needs to be defined as it uses the black default effectively.



Fig.5. Effective use of distance fog. Titia's Stargate (top) and my Planet of the Ancients III (set on Mars).

## Miscellaneous

### Lightning

Takes the form

**Lightning=** *ENABLED*

Enables a lightning type effect where thunder sounds play and the sky flashes intermittently.

### Examine Item

Takes the form

**Examine=** *2,The Rules of Senet,\$0000,\$0500,\$0000,\$0000,\$0000,\$0002*

The examine item is quite interesting as when selected in the inventory menu it shows a scroll and text. You can change the text which appears by doing the following. Open the English.txt file and look for the block of text, about three quarters way through, which looks like this:

**PETEPOO:For the serpents to live,\nall must first be stilled.\nprovoke each in turn,\nand the circle will burn\nincomplete.**

Edit the text to the text of your choice. Where you wish a line break to occur press backslash (/) followed by a lower case 'n'. For example if you wished to have the following text appear:

**The examine item  
is a useful item for  
conveying information  
to the player.**

You need to alter the script to read as follows:

**PETEPOO:The examine item\nis a useful item for\nconveying information\nto the player.**

Do not use carriage returns. The /n is highlighted in red for clarity. (Before you ask I don't know who PETEPOO is!).

### Train

Takes the form

**Train=** *ENABLED*

This script line is used when you wish to create a Train type level. The UVRotate line must also be added. A full explanation of train levels is beyond the scope of this datasheet and will be the subject of a complete tutorial in the future.

This data sheet is accurate as far as I know. Please report any errors/omissions or feedback to:

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Use this data sheet at your own risk.