

# DOOM 3 Mod Setup 101

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# **WELCOME ALL TO DOOM 3 Mod STARTUP.**

It is my understanding that many just don't know where to begin when making a mod for doom 3 with this tutorial I hope to get you on your way and off to a good start.

First let's begin with reviewing having the proper tools to start a mod for doom 3.

1. **Doom 3** game obviously...
2. **Doom 1.3 patch** applied
3. **Winrar** and **Winzip** it's good to have both apps.
4. A good .txt editor **ConText** is preferred for guis and script with a doom 3 highlighter is best.
5. Image editing software like Photoshop or Paint Shop Pro, gimp etc...
6. ATi compressonator: doom3 compatible for .dds files

Once you have the basic programs to work with we can begin by locating our target directory, the doom3 folder. By default The game will install to C:\Program Files\Doom 3 ; notice all the spaces between words, not good. If you can have your game installed in **C:\Doom3** this will eliminate lots of headaches later on. And mind the space between doom and the number 3 make it "doom3" not "doom space 3"

After the game is installed and patched to version 1.3 lets begin by making our directory directly accessible by making a shortcut on our desktop.

By going to Start on your lower left on your desktop select all programs and navigate to accessories and to windows explorer. Open your C: drive directory and locate the doom3 folder. Now right click on it and select send to (create desktop shortcut). This will now place a shortcut on your desktop to D3.

Here we can now easily access our doom3 folder more readily.

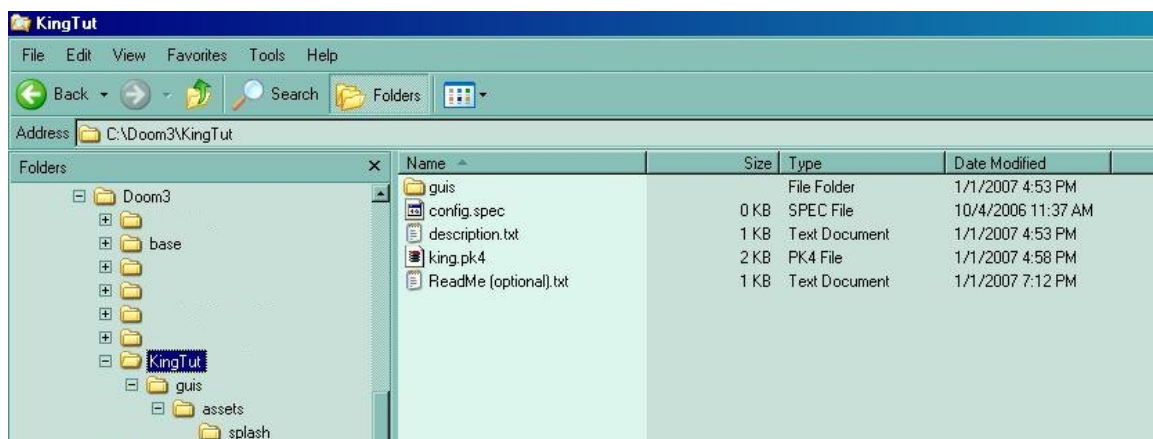
Let's begin by opening the folder and take a look inside.

This is where your new mod will have its home when it's finished being built from the initial base directory. I'll explain,

For an example and for this tutorial lesson let's call our mod **KingTut** This is our new mod. Everything that will be related to your mod for distribution will be here in this one folder when completed.

So now in the doom3 folder you will see other files and a folder called base. Here you will make a new folder under base not IN base but outside of that folder by making a new folder called KingTut. So you should now have C:\Doom3\KingTut Here's the critical info everyone wonders about, what goes in my new mod folder to make it work.

Well let's explore that right now.



Here are the files inside of your new mod folder \*KingTut  
Inside are as follows:

1. **guis** and its contents of an assets folder and a splash folder.
2. **config.spec**
3. **description.txt**
4. **king.pk4**
5. **ReadMe** file which can be optional

This is what's contained in your new mod folder are these 5 files.

Let's start by understanding what each of these files are.

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### 1. **guis**

This folder needs to be created in the KingTut folder as a subdirectory for the opening screen of your mod. So in your empty **kingtut** folder create a new folder and name it **guis**. Inside of that create another folder called **assets**, and one more inside that called **splash**: **guis/assets/splash**  
Inside the splash folder goes your first picture called **launch.tga** this is your opening screen. Make a pic 640x480 Of anything you like and name it **launch.tga** and place it in the splash folder in **guis**: like this  
**C:\Doom3\KingTut\guis\assets\splash\launch.tga**

### 2. **config.spec**

Now that is done lets open the **base** folder in doom3 and find a file called **config.spec**

Right click on it and select copy and open your kingtut folder and right click and select paste you should now have a [config.spec](#) file in your mod folder as pictured above.

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### 3. [description.txt](#)

This is the mods name as it will appear in the doom3 mods directory. It is simply a .txt file written with notepad or equivalent and has the name with a ^ symbol and a number for the color of the name. an example is ^1KingTut would read as **KingTut** in red.

And for each color they are as follows:

^1KingTut	=	<b>KingTut</b>	1= Red
^2KingTut	=	<b>KingTut</b>	2= Green
^3KingTut	=	<b>KingTut</b>	3= Yellow
^4KingTut	=	<b>KingTut</b>	4= Blue
^5KingTut	=	<b>KingTut</b>	5= Lt. Blue
^6KingTut	=	<b>KingTut</b>	6= Violet
^7KingTut	=		7= White
^8KingTut	=	<b>KingTut</b>	8= Gray
^9KingTut	=	<b>KingTut</b>	9= Black

The highest number is 9 as 10 would make it **OKingTut**  
When you've selected a color you like, all that gets written in the description.txt file is (example) ^1KingTut  
^1 for red text and saved as  
description.txt

That's all that's needed here.  
Save your file and let's move on.

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Next comes the guts of your mod the .pk4

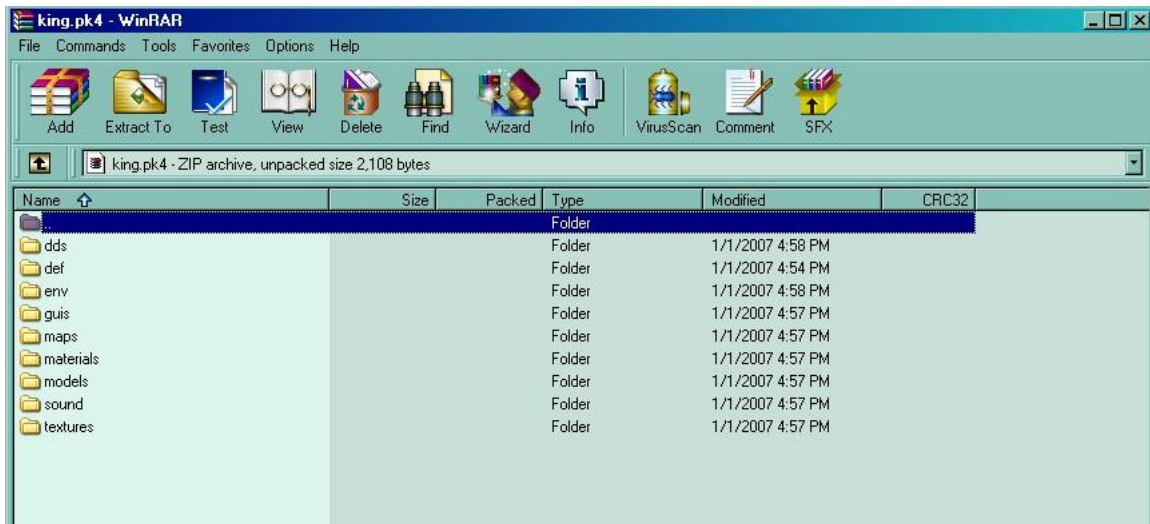
.....

#### 4. king.pk4

The .pk4 is what contains your main assets for your mod. Here I just named the file king, it doesn't really matter what you name it but the shorter the unique name is the better. A .pk4 file is basically a .zip file with a doom3 extension hence .pk4

Inside the .pk4 file it will contain your mod directory that is in your base folder for your mod and not any assets from Doom3. Your .pk4 will contain the following folders.

Using Winrar for this here's an example below:



To make a .pk4 let's begin by using these steps.

In your KingTut folder create a new folder and call it def  
Then in your doom3 base folder open pak000.pk4 and locate the def folder inside then find test.def and drag and drop it to the def folder in the KingTut folder in the doom3 directory (your mod folder named KingTut) Once the test.def is in the def folder in KingTut right click on it and select add to archive, when the dialog opens rename it to king.pk4 select .zip as type not .rar and select best for compression type. This will create your starting .pk4 file.

You can now delete the first .def file in the mod folder as it is now no longer needed because there is now a copy in the .pk4.

Now inside the .pk4 file opened with **Winrar** you'll need to right click and add some new folders to the .pk4 rename them as exemplified below.

The files in the .pk4 for a mod should at least have these folders.

1. dds
2. def
3. env
4. guis
5. maps
6. materials
7. models
8. sound
9. textures

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\* at this point the folders should all be empty except for def and have test.def inside the def folder.

Here's a short description of some of the folders....

1. dds = .dds textures/compressed
2. def = .def at least one .def file is needed
3. env = this is where skybox textures go like front,left etc.
4. guis = here is where the map loading comes from
5. maps = heres where your actual maps are located
6. materials = this is for your shaders descriptions .mtr files
7. models = here goes your .ase or .lwo files for your models
8. sound = all sound assets go here with a sound shader file
9. textures = here is where your custom textures go.



First let's understand what each folder needs and why.

### **dds**

The dds folder, will contain usually compressed textures using the .dds file format but for our purposes it will contain the main title of our mod. Unless you'd like your mod to say DOOM3 instead of King Tut this step is important. This will also use the utility ATi compressonator for making it work with doom3.

Inside the dds folder you'll need to make other folders inside to maintain the proper structure. So inside the dds folder make another folder called guis then make another folder called assets then another called mainmenu so your file structure is like this in the .pk4 for the dds files.

dds/guis/assets/mainmenu

This will be in the pk4 for the main title of our KingTut mod. Inside the mainmenu folder will go 4 .dds files named

doom3.dds	make name here with transparency
doom3_1.dds	same as above
doom3_2.dds	same as above
doom3_3.dds	same as above
marshhighlight.dds	make black and re-save as.

These files are what controls what you see at the main menu of Doom3. Take and open the compressonator and save the .dds files as compressed versions of the same files And have the commpressonated files put in the mainmenu folder in the dds folder of the .pk4

The doom3.dds is 128 x 256 in size as are the 1, 2 and 3 copies also. The marshhighlight.dds is 256 x 256 in size and Will be made as just a all black image. This will hide any anomalies from the original main menu of doom3.



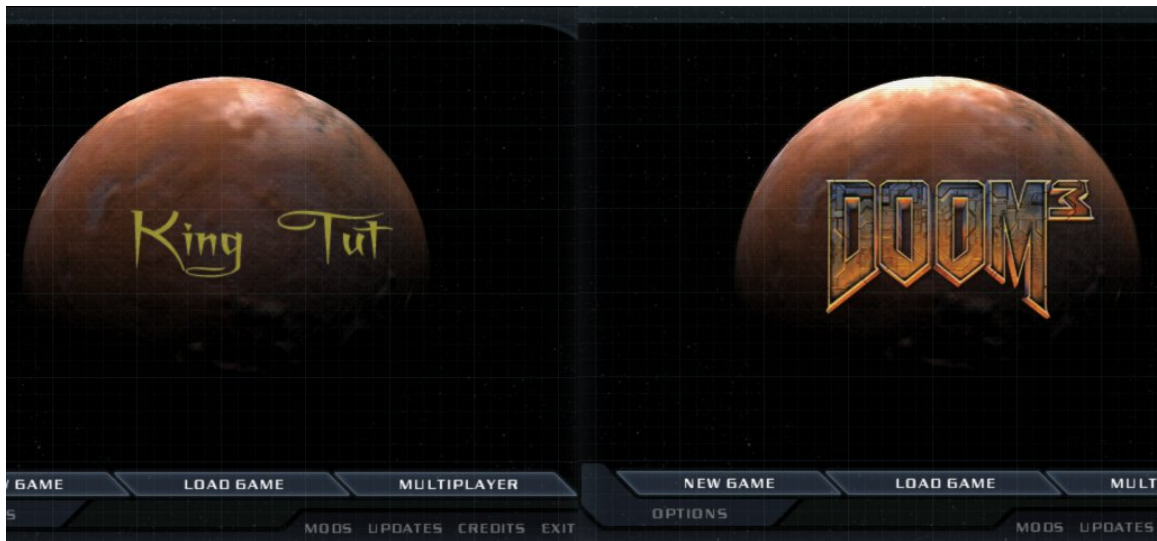
you'll need to build a copy structure in the .pk4 guis folder using .tga's as well.

Like this: (inside .pk4) guis/assets/mainmenu/doom3.tga

And its copies of 1,2 and 3 in the mainmenu folder above included as well. So its 5 files of each in each directory.

One set .dds the other set .tga

Here's an example of the difference between the original and your new mod if done correctly:



On the left is the new title and on the right is the original. So if all went well yours should look like the left picture example. So far so good, we'll deal with the planet soon.

## def

Next is the def folder, all that is needed is the test.def file in this folder which was done earlier when we made the .pk4

## env

In the env folder is where any skybox textures go and they need to be labeled correctly. There are 6 textures that go here and they are to be made accordingly:

Your sky will have a name, for KingTut we'll have it called sunset.tga If you know how to make skyboxes just transfer the files over to the .pk4

In the env folder will be the skybox's folder name and 6 .tga's Like this env/sunset/sunset\_front.tga,sunset\_back.tga etc...

The 6 textures are labeled as follows:

I'm using sunset as an example so it's whatever name that is used. example:

- sunset\_forward.tga
- sunset\_back.tga
- sunset\_left.tga
- sunset\_right.tga
- sunset\_up.tga
- sunset\_down.tga

These are the correct definitions for the skybox textures and go in the skybox name folder in the env folder in the .pk4 from your base development files. Essentially any updated files just get transferred from the base working folders into the .pk4 specific to your mod. Like the levels and textures, sounds, and materials. It's a simple drag and drop operation

## guis

This is an important folder in getting your mod to launch properly as there will and can be many files depending how many levels you intend to have. This folder is responsible for loading your maps and displaying a screen and any info . And here we can change the planet or remove it altogether here in this folder.

In the guis folder will be 3 folders and 3 files.

Folder 1. assets  
Folder 2. loading  
Folder 3. map  
File 1. intro.gui  
File 2. loading.gui  
File 3. mainmenu.gui

These folders and files are what goes in the guis folder in the .pk4. so lets begin by opening the .pk4 and opening the guis folder, inside right click and create a new folder and name it assets, then make another folder and name it loading, then make one more folder and name it map

Now each of these folders have specific contents, lets cover assets first. Here goes the main menu screen when starting the game, but this will be for our mod with a new screen and letters. Inside the assets folder if it hasn't been done already you'll need to create a new folder and name it mainmenu all one word. Inside this folder goes the doom3.tga's +the 3 copies and the marshhighlight.tga files. This will take care of our logo of our mod on the main menu. Now for the background of our menu you will create a background image approximately 1024 x 768 image file as a .tga and name it title.tga and place it in the assets folder  
'not the mainmenu folder it's place is before that.

Example:

**Logo letters with transparency**

.pk4/guis/assets/mainmenu/ doom3.tga  
and the doom3\_1.tga,doom3\_2.tga and the doom\_3.tga  
as well as the marshhighlight.tga.

**Background Image**

.pk4/guis/assets/title.tga

This will take care of our main menu images.

Next folder is the loading folder ,inside here are the background images for when our level is loading.  
And these will be the name of the level in .tga format  
So if our first level is called throne the image in this folder will be named throne.tga and any other levels as well will be named the same as the level name. This will take care of the loading screen images for when the level is starting up.

The next folder is named simply map  
.pk4/guis/map

In here are .gui files with the same name as the level.  
.pk4/guis/map/throne.gui

This is what provides the information on screen when the level is loading, like location,place, description etc...

The .gui file will have to be edited to have the proper information in it and can be edited with context or any equivalent text editor.

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\* Remember at any time you can take apart the sample mod and find it's files to see if your on the right track.  
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The .gui files are just windowDef Desktop files and there are 4 lines that need to be changed.

The first line is line 10 and this needs to be the name of the level line 10 will say  
*background"guis/loading/throne"*

The next is line 109

And will say text "eat at Joe's or whatever"  
This is whatever description you'd like the screen to say.

The next line is 117        text    “King Tut Mod”  
This can be the title of the mod or any description you like.

Then line 126 will say text “Location: Chambers”  
Here you can have it say a location description .

Then save the file as the level name throne.gui  
Type in the extension(.gui) after the name and select all files  
as the type and save as in the .pk4/guis/map    folder

And the do the same for any other levels that will come  
after, make a loading image.tga and a levelname .gui  
For each new level.

That’s it for the folders now for the 3 files  
intro.gui  
loading.gui  
mainmenu.gui

these files can be found in the doom3 base folder in the  
000.pk4 files under guis. Or just use the intro and loading  
guis from the example mod and copy them over to the guis  
folder in the .pk4, these 2 files can be use as is and do not  
need to be edited.

Now this is important, the mainmenu.gui is what loads your  
first map. And displays the mars planet. This is a large file  
and allows save games and load game as well as a quit  
game, it’s the mainmenu’s functions. Let’s start by taking a  
look at the mainmenu.gui  
You will only need to change 2 or 3 lines depending if you  
want the mars planet or not.

Open the mainmenu.gui with context or equivalent  
And find line 4 make sure it says  
*background "guis/assets/title"*

if not make sure it does then scroll down to line 233  
here is where you can change the planet model to render or  
not to remove the planet from the main screen just place  
two forward slashes at the beginning of the line and the  
mars planet will be gone like this:

```
//      model      "models/wipes/planet2.lwo"
```

the 2 forward slashes will tell the game not to include the  
planet lightwave model and will remove it.

If you wish to replace the planet with another lightwave  
model you can just make a .lwo model and place it in the  
models folder in the wipes folder and name it planet2.lwo  
but remove the 2 forward slashes first to have the model  
render in the main menu.

But for now were just gonna remove the planet  
and put the two forward slashes in line 233

Then scroll down to line 292 here you can do the same for  
the marshhighlight if you wish but when we made the  
marshhighlight.dds and .tga all black it will render invisible  
anyways, again it's a choice.

Let's scroll down further to line 21438  
And you will see the statement

```
set  "cmd"      "startgame throne" ;
```

Where throne is should be the name of your first level and  
will load that level by name.

When done save and place file back in  
.pk4/guis/mainmenu.gui

That will do it for the .pk4/guis folder we can move on.

The next folder is **maps**

Here is where your actual levels go and there can be 6 map files for each level: example..

throne.map

throne.aas48

throne.aas96

throne.cm

throne.proc

throne.script

.....

The .bak file is just for the editor only and is not needed for your mod and can be left out.

In the .pk4/maps folder goes all your maps(level) files  
And any objective folders. For objectives the image needs to be named the same as the level name in a folder named the same as the level with a folder inside named objectives.  
Example:

.pk4/maps/throne/objectives/throne.tga

(128 x 128) image for display in the objectives window in game. But for now just be sure your level files are in the maps folder and we can move on.

Next comes the **materials** folder, here is where you just transfer your .mtr file into your .pk4 materials folder.

Next is the **models** folder here again just transfer only the models files and folders relevant to the mod only to the .pk4



Next is the **sound** folder in this folder move your sound assets here as well as the sound shader relevant to your mod. Keep in mind that if you have a finished mod and you forget a file that file will be missing, like say you have a special door sound and forget to include it and you've uploaded your mod for the public, without that one file no one will hear that special sounding door because it was overlooked? Do triple check all files and folders to be sure that everything for your mod IS included and not forgotten.

And have your mod tested and retested, I can't begin to tell you how important this is. Test it to death! 😊

And the last folder is **textures**.

Again just transfer the relevant folders and files only that belong to the mod only. Any textures from doom3 the game will automatically find them in the games default directories.

But any custom textures need to be added to the .pk4

And the last step which is optional is to include a ReadMe file and can be placed in the mod folder saying and development notes install instructions, hints, etc...

Then when it's all done and finished take the mod folder right click on it and select copy and go to the C: drive and right click and paste you should now have the mod folder in C: drive an example is,

C:\KingTut

Then right click on the mod folder and select add to archive using winrar and choose .zip as the type and best for compression and zip it up and send it out to whomever as your mod will now be packaged for distribution.

Let's recap a bit:

1. new mod folder in Doom3 folder
2. separate guis folder in mod folder
3. config.spec file
4. description.txt
5. .pk4
6. ReadMe

Once you've learned what goes where and why and how you should be on your way to making a new mod for doom3 be sure to look at the sample mod for help also.

Good Luck and Best Wishes and Happy Modding everyone  
I hope this has been of some help getting started and am looking forward to seeing some new mods out there. Just don't make em say King Tut lol  
Take Care all and have fun!

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1/1/2007

