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Mass Effect Modder

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Mass Effect Modder

1. Mass Effect Game Series Texture Modding Tool

Mass Effect Modder is a tool intended to permanently replace textures in all three Mass Effect games.

Some Mass Effect Modder's features are as follows:

- Lighting fast, rock solid and easy to use Mass Effect Modder's goals are two in one: to provide a reliable and simple way to perma-mod your ME games, and to do it quickly!
- Mass Effect Modder is original game friendly:
 - Any modification in game files by Mass Effect Modder is done with the goal to keep the structure and storage of modded game files as close to vanilla as possible.
 - Mass Effect Modder does not change the LOD Textures Group of modified textures, so those will remain as per original game files.
 - Mass Effect Modder injects required LOD settings into the game's **.ini** config file to ensure modded textures are rendered in-game correctly.
- Complete texture map after initial game scan.
- Single and bulk texture replacement. Bulk texture replacement is done via Mass Effect Modder mod files (**.mem**), which are easy to build and install.
- Original game files modified during a modding run are recompressed again, so Mass Effect Modder is a disk space saving tool for modded games.
- Furthermore, Mass Effect Modder includes other additional and optional compress functions to help you save some extra disk space when your modding run is done.
- It's a x64 tool so it will work in 64-bit Windows versions only.

NOTICE, please:



- Mass Effect Modder is intended as a "standalone" tool, not conceived to offer compatibility for other ME game series modding tools.
- Mass Effect Modder does not support **.tpf** textures pack files installation.

2. What You Will Need to Use Mass Effect Modder:

- MassEffectModder tool – download it from GitHub:

<https://github.com/Mass Effect Modder/Mass Effect Modder/releases>

Just unzip the downloaded file into a folder and you are ready to go.

- Original (vanilla), unmodified, game files



NOTICE, please:

Any non-texture mods (like, among others, game controller mod, interface scalling mod, DLC or **.pcc** based mods...), you may want to add to your game will always have to be installed prior to your textures modding run using Mass Effect Modder.

- The modded textures to apply in **.dds** format. These texture files must have:
 - A valid texture file name – including, at least, the texture CRC (i.e. 0x0CF382B7).
 - A valid texture file format, that is:
 - with the same texture file format (DXT1, DXT5, V8U8...) and aspect ratio – squared (1x1), non-squared (2x1, 1x2...) – as per the vanilla texture.
 - and, as a general rule, with all mipmaps according to its size.

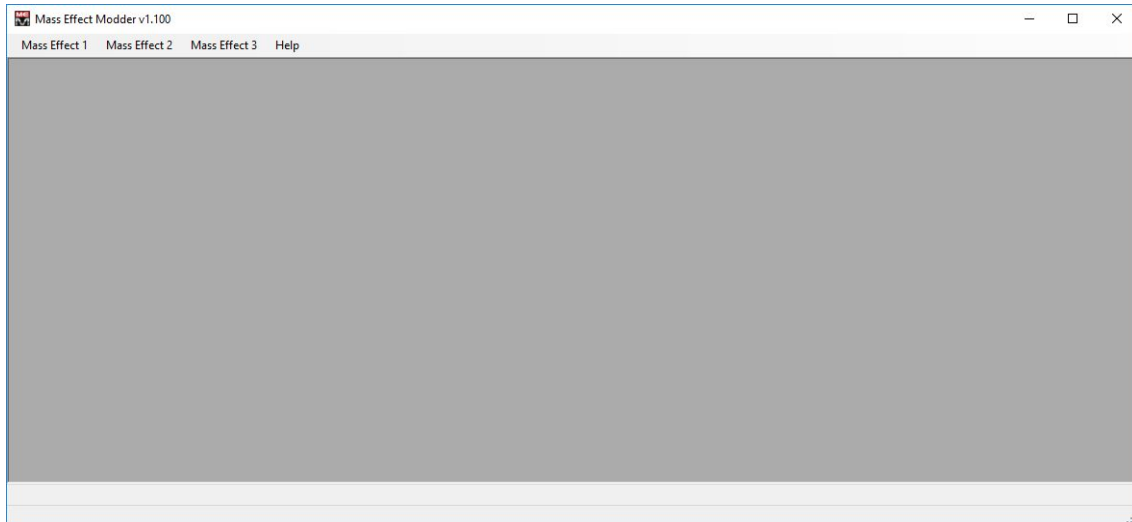


NOTICE, please:

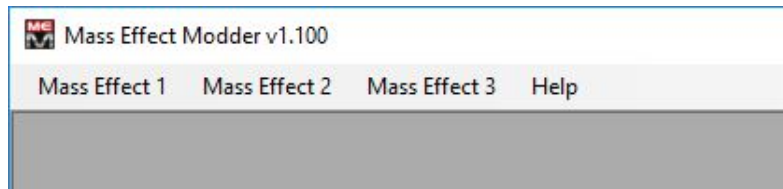
In the previous case, at least, 4x4 pixels mipmaps and above are always required but any missing 4x4 pixel (or smaller) mipmaps not present in the modded texture will be replaced by vanilla ones.

3. Mass Effect Modder Interface Overview

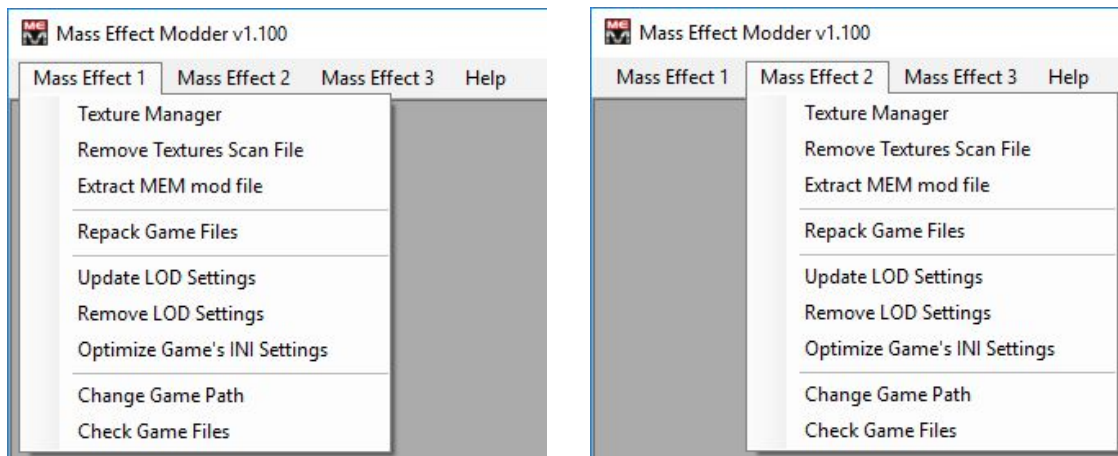
Upon opening, Mass Effect Modder features a game-oriented (ME/ME2/ME3) basic interface as Mass Effect Modder will require a game context to work properly.



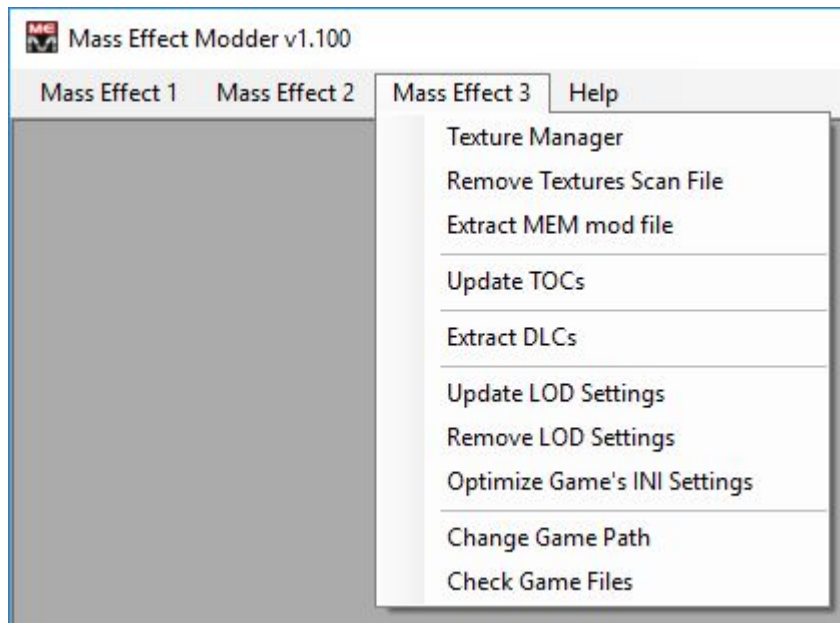
Notice the Mass Effect Modder version is displayed at the main window title bar, in the upper left corner.



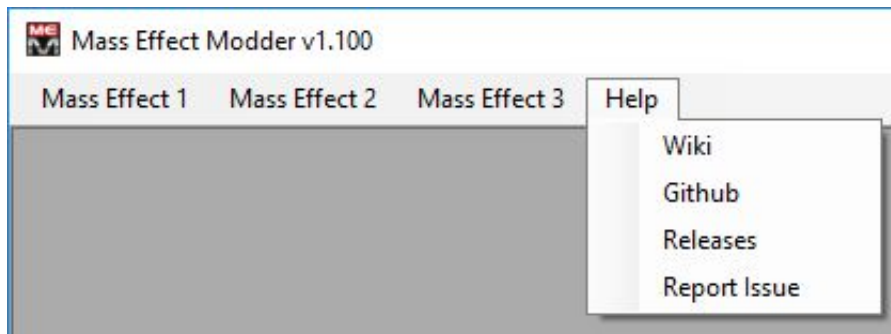
Initial menu options are the same for ME and ME2 games.



While for ME3 initial menu is slightly different, lacking one optional item but including some unique ones.

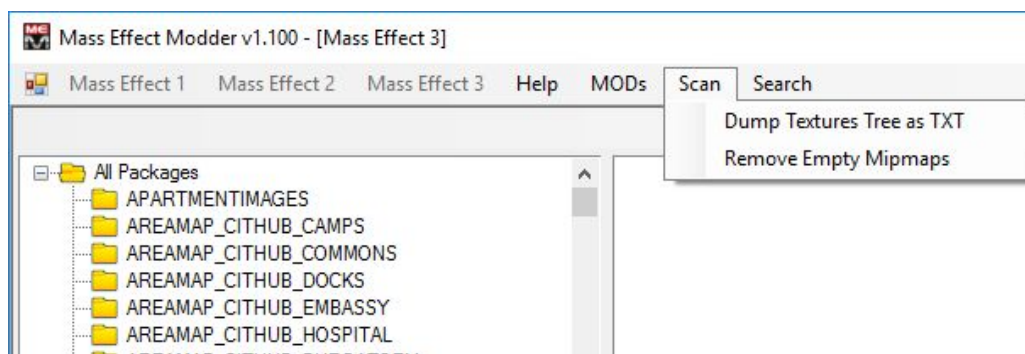
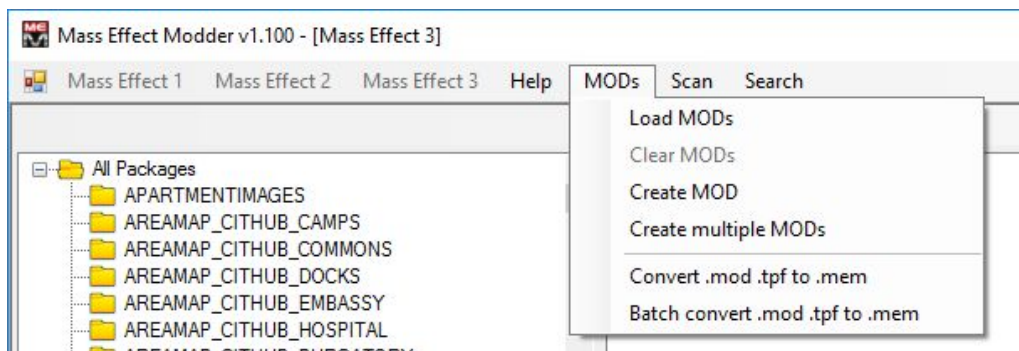
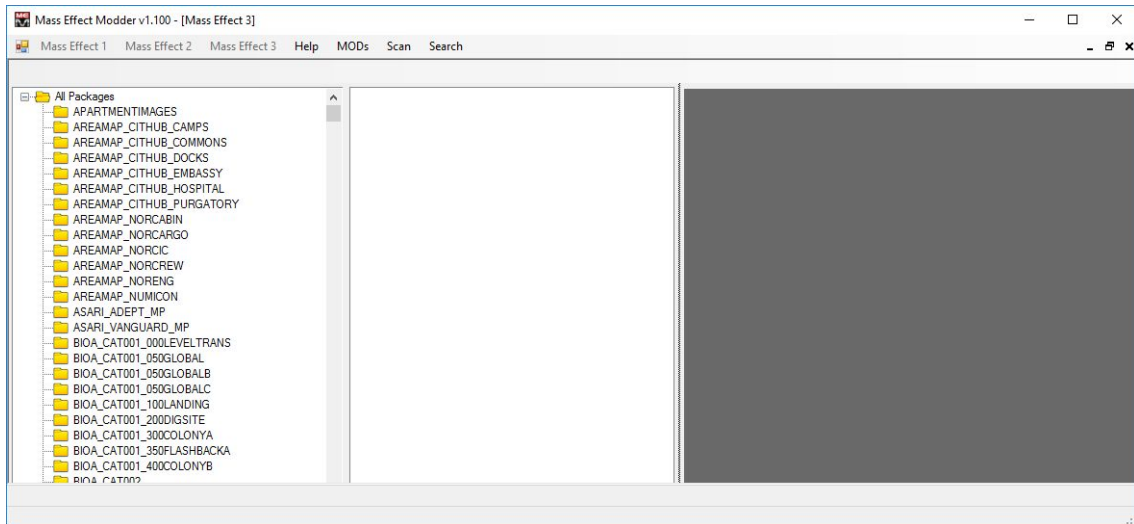



Help menu is always available.





If you have already completed the initial game scan process, selecting any ME game's **Texture Manager** will split the Mass Effect Modder interface into three window panes (left, center and right) and you will have additional menus related to the selected ME game's modding process:



 NOTICE, please: **Search** menu has no submenu items.

-sample images related to ME3 game modding-

4. Mass Effect Modder Menus Overview

Texture Manager

First time use: scans game data and generates a textures scan file.

The textures scan is stored in the current user profile at “\AppData\Local\Mass Effect Modder\” folder in a file named **me1map.bin** / **me2map.bin** / **me3map.bin**, depending on the scanned game.

After this first time setup, use **Texture Manager** to access the game’s textures map.

Remove Textures Scan File

Unlike above, this deletes your current textures scan file. Notice that when doing so you will need to generate a new one using **Texture Manager**.



NOTICE, please:

Removing your textures scan file will require you to roll back your game to its vanilla state prior to generating a new one.

Extrac MEM mod file

Extracts all texture **.dds** files included into a **.mem** mod file in the selected folder.

Repack Game Files



Provides additional compression for the modded ME & ME2 game files. Please note this will save disk space but, as a side effect, further modding runs will perform a tad slower due Zlib compression effects. In any case, this Repack is just optional.

Extract DLCs



Extracts ME3 game’s DLC content archives (**.sfar** files). This is mandatory prior to any ME3 game texture scanning and modding.

Update LOD settings

Provides correct LOD settings for the different Texture Groups at the game’s required **.ini** config file so any upscaled modded textures will be rendered in-game properly.

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Remove LOD settings

This instead removes any previously updated LOD settings for the different Texture Groups at the game's required **.ini** config file.

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Optimize Game's INI Settings

Provides additional settings to the game's required **.ini** config file to improve in-game visuals.

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Change Game Path

Mass Effect Modder relies on Windows registry keys to determine ME game paths. Use this to set the current game path when Mass Effect Modder is unable to detect the correct game path or unable to detect any game path at all.

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Check Game Files

Checks your current game setup to ensure it is in the vanilla state. This is useful if you are in doubt after restoring your game to its vanilla state.

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5. Mass Effect Modder Additional Menus Overview

Load MODs

Launches the modding run mode of Mass Effect Modder. Loads **.mem** mod files for bulk texture replacement.

Clear MODs

Closes the modding run mode of Mass Effect Modder. Unloads any previously loaded **.mem** mod file(s).

Create MOD

Launches the modding run mode of Mass Effect Modder. **Create MOD** generates a **.mem** mod file from **.dds** texture files stored in a folder. The fresh **.mem** mod file will be placed in the parent folder of the one containing the source **.dds** texture files.

Create multiple MODs

Launches the modding run mode of Mass Effect Modder. **Create multiple MODs** generates multiple **.mem** mod files from **.dds** texture files stored in different subfolders. The fresh **.mem** mod files will be placed at the parent folder of those containing the source **.dds** texture files.

NOTICE, please:



In terms of performance, the more textures included in a single **.mem** mod file, the better as long as you had 8 Gb's of RAM -or more-.

If you have just 4 Gb of RAM in your system, it is advisable to build multiple and smaller **.mem** texture mod files.

Convert .mod .tfp to .mem

Mass Effect Modder can convert **.mod** texture or mesh mods and **.tfp** texture packages built using other tools into **.mem** mod format files. Use this for single mod file conversion.

Batch convert .mod .tpf to .mem

Use this for bulk file conversion just selecting a source folder including the multiple **.mod** and/or **.tpf** files to convert. Mass Effect Modder will generate a single **.mem** mod file per every **.mod** and/or **.tpf** file correctly processed.



NOTICE, please:

Some **.mod** and **.tpf** mod files may include content that cannot be converted into a **.mem** mod file properly, like textures with wrong naming, format or missing mipmaps, in example. Those will be skipped and won't be included in the resulting **.mem** mod file.

Search Texture (CTRL+F)

This will open a floating window containing a search box to find textures by its full CRC or full name only.



NOTICE, please:

You can use * as wildcard for partial texture name string search.

6. How to: Using Mass Effect Modder

There is a standard procedure to apply modded textures to any ME games using Mass Effect Modder.

Generally speaking, the best practices for modding textures with Mass Effect Modder are as follows:

Tasks to do BEFORE your textures modding run using Mass Effect Modder:

- a) Ensure you start with a vanilla (unmodified) game
- b) Install DLCs
- c) Install any other non-texture mod you may want to add to your game setup
- d) Ensure all the above is working flawlessly

Now you can start your textures modding run using Mass Effect Modder:

1. **Unpack DLCs** (ME3 game only)
2. Scan game files by launching **Texture Manager**

From now on, it's the mod building/installing process. Depending on whether you need to build a **.mem** mod file or you already have one/some, continue from step (3) or (4):

- If you do not have any Mass Effect Modder **.mem** mod file, you can now build it:
 3. Use **Create MOD/Create multiple MODs** to build as many **.mem** mod files as you want.
- If you already have any Mass Effect Modder **.mem** mod file(s), you can now apply it:
 4. Use **Load MODs** to load **.mem** mod file(s), then install.
 5. Use **Clear MODs** to unload any loaded and unprocessed **.mem** mod file or to simply finish your modding run.
 6. **Update LOD Settings**
 7. **Optimize Game's INI Settings** (optional but recommended)

At this point your modding run should be done.

OPTIONAL – If you want, for ME & ME2 games some free disk space can be restored using **Repack Game Files** compression utility after completing your textures modding run.

NOTICE, please:

From the previous suggested best practices, you will only have to run the following once:



1. **Unpack DLCs** (ME3 game only)
2. Scan game files by launching **Texture Manager**
3. **Update LOD Settings**
4. **Optimize Game's INI Settings** (optional but recommended)

After those required steps you can build and/or install as much **.mem** mod files you may want anytime.

NOTICE, please:



When in doubt during your game modding run, if you want to install textures using Mass Effect Modder, follow this simple rule:

Mass Effect Modder is the LAST step in your modding run.

NOTICE, please:



Adding any DLC/.pcc based mod after your completed modding run using Mass Effect Modder may break your modded game.

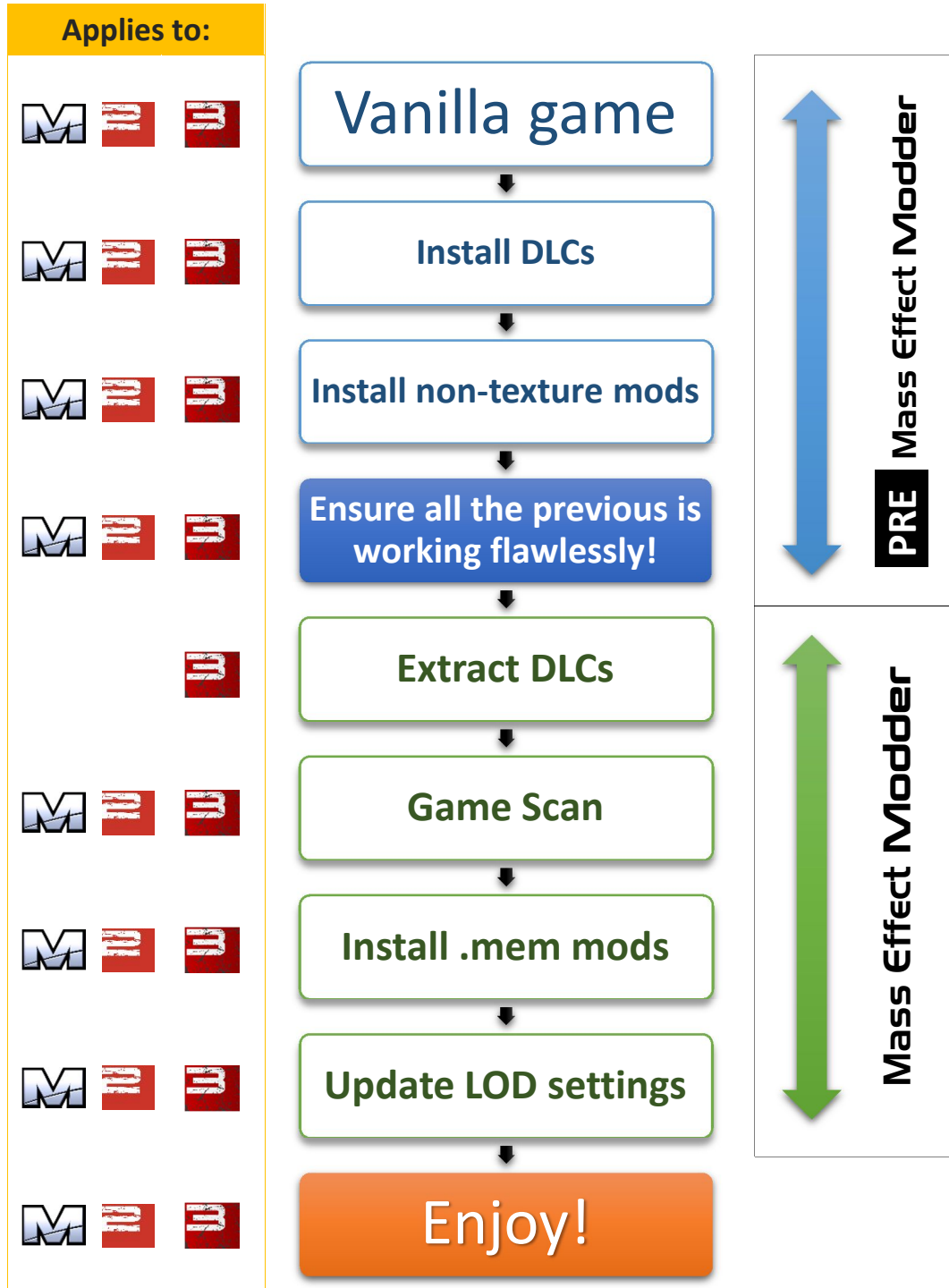
As a resume, you can use the following flowchart as quick reference guide for your modding run using Mass Effect Modder.

7. How to: Quick Reference Sheet

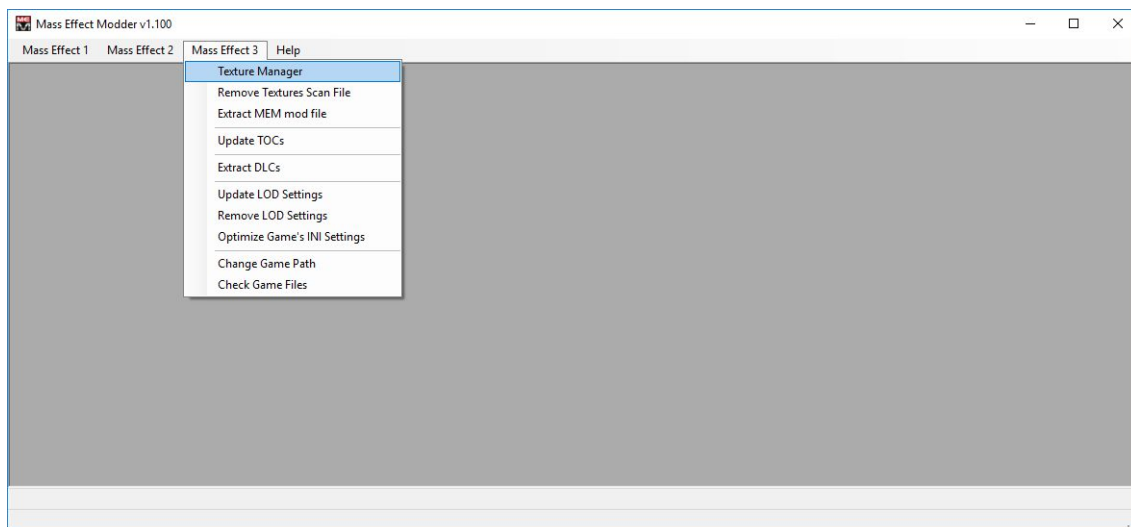


Mass Effect Modder

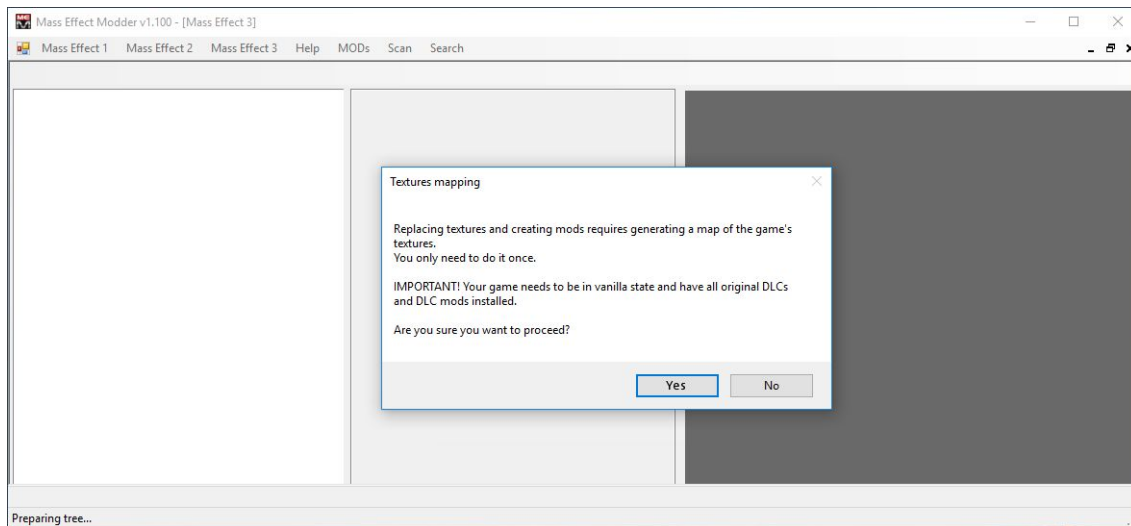
Suggested modding run.



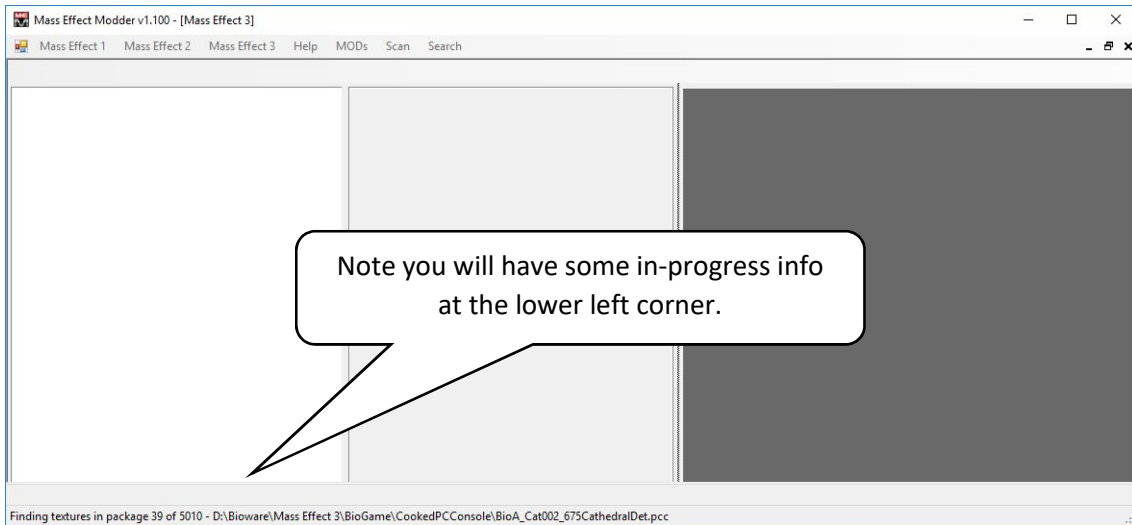
8. How to: Texture Manager



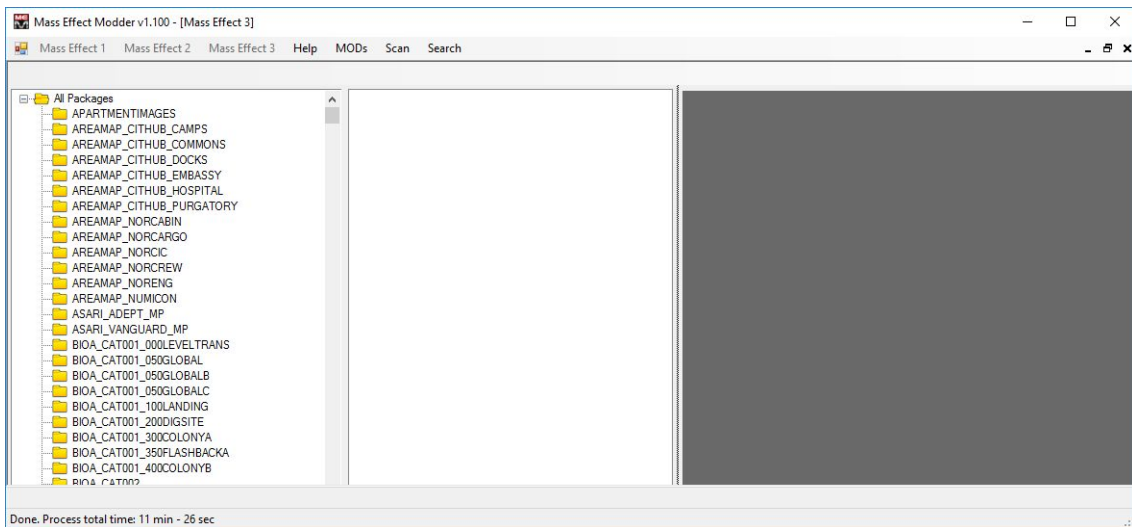
First time set up: as soon as **Texture Manager** is launched, main window splits in three window panes and, only for the first time, you will receive an informative floating window asking for your approval to continue.



Just click "Yes" to start the game scan that may take a just a few minutes depending on your game setup and computer specs.

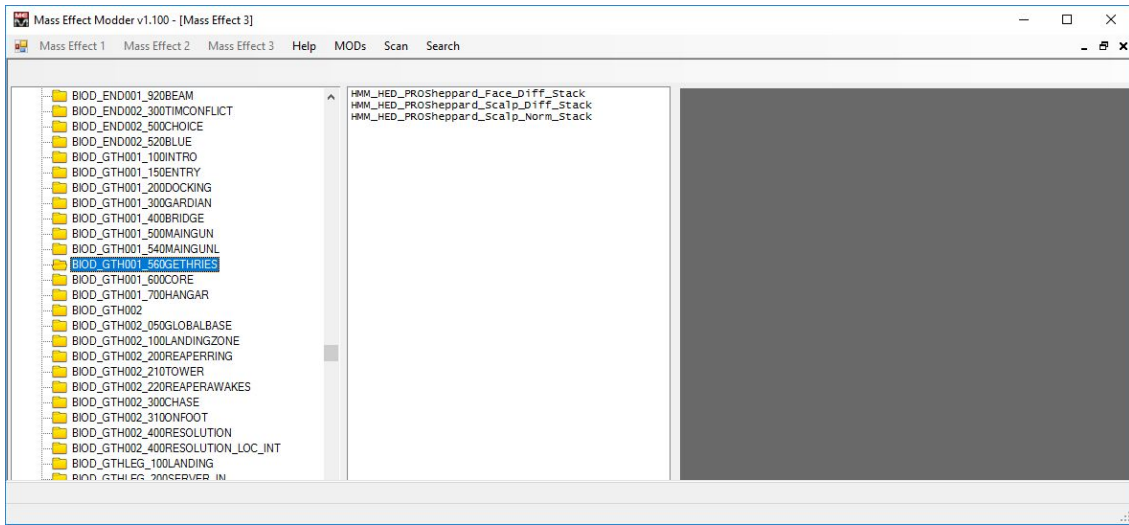


And as soon as game scan is done, in every further use of **Texture Manager**, you will have the game map in the left window pane:

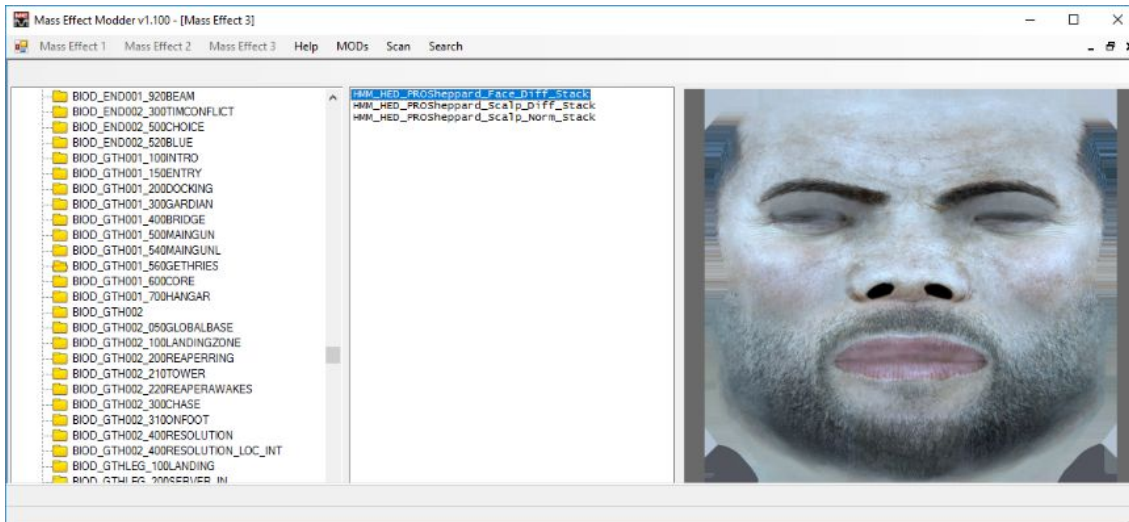


The game map is a tree with one folder for every scanned game **.pcc** file containing textures. Those folders are named as per the **.pcc** game files.

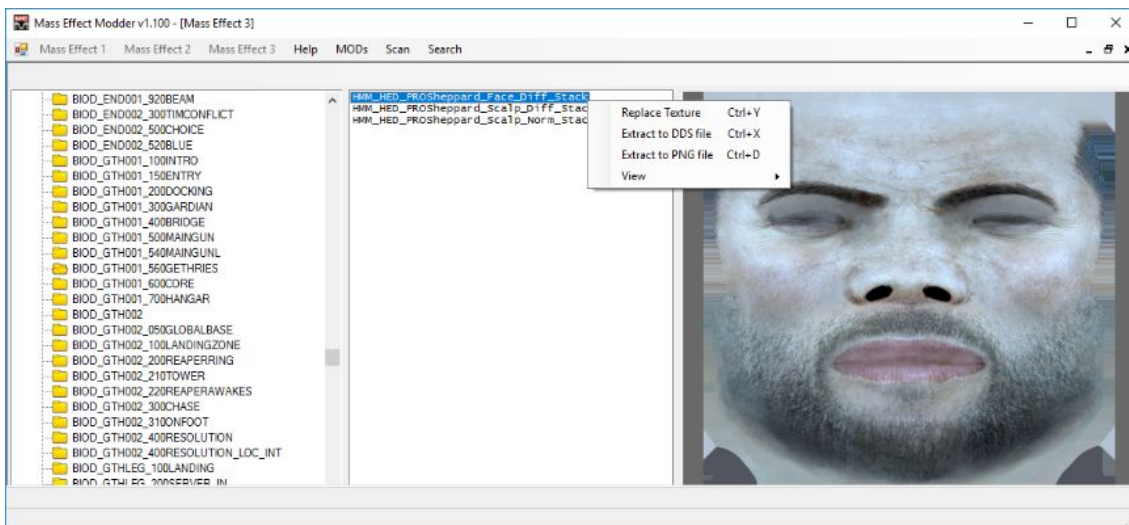
You can navigate those folders and selecting one will display its content in the center pane.



Selecting any texture in the center pane will show a preview in the right pane.



Right-click in a selected texture will offer you an useful context menu:



Replace Texture (Ctrl+Y)

Replaces the selected texture by a **.dds** format texture file.

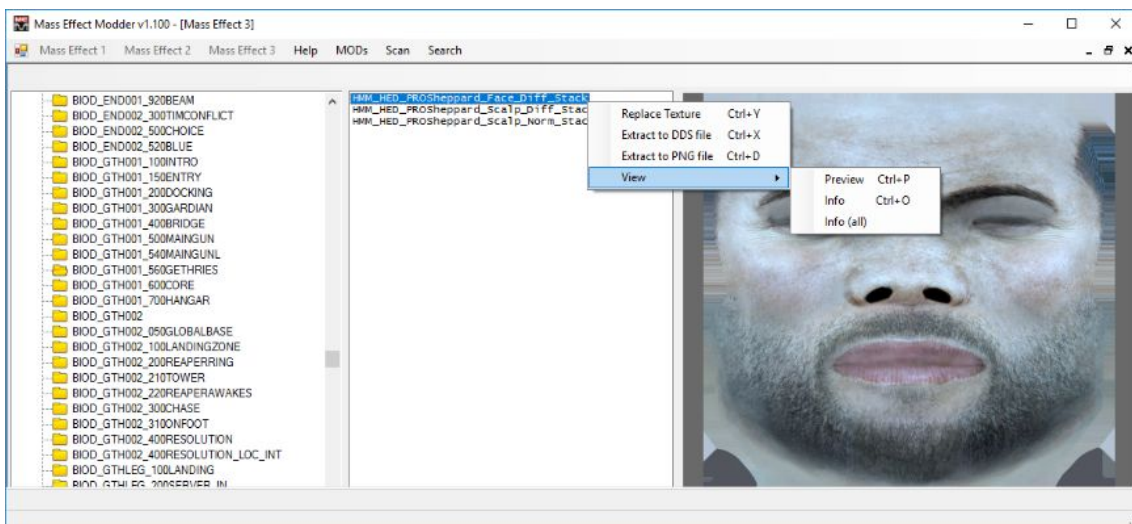
Extract to DDS file (Ctrl+X)

Extracts the selected texture as **.dds** format file.

Extract to PNG file (Ctrl+D)

Extracts the selected texture as **.png** format file.

View menu offers additional info about the selected texture:



View → Preview (CTRL+P)

Displays the selected texture preview.

View → Info (CTRL+O)

Displays detailed info for the selected texture main instance.

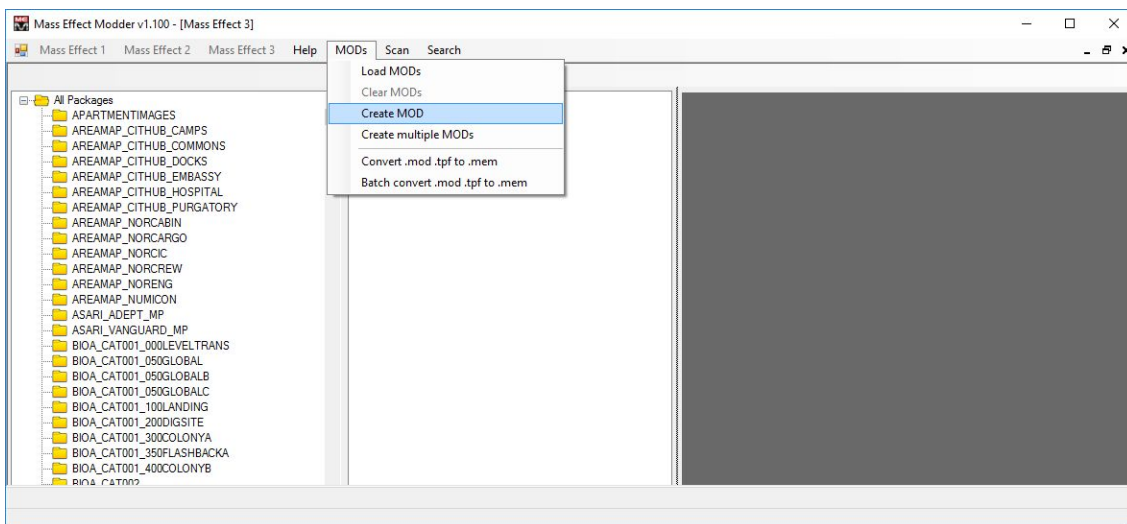
View → Info (all)

Displays detailed info for all the selected texture's instances.

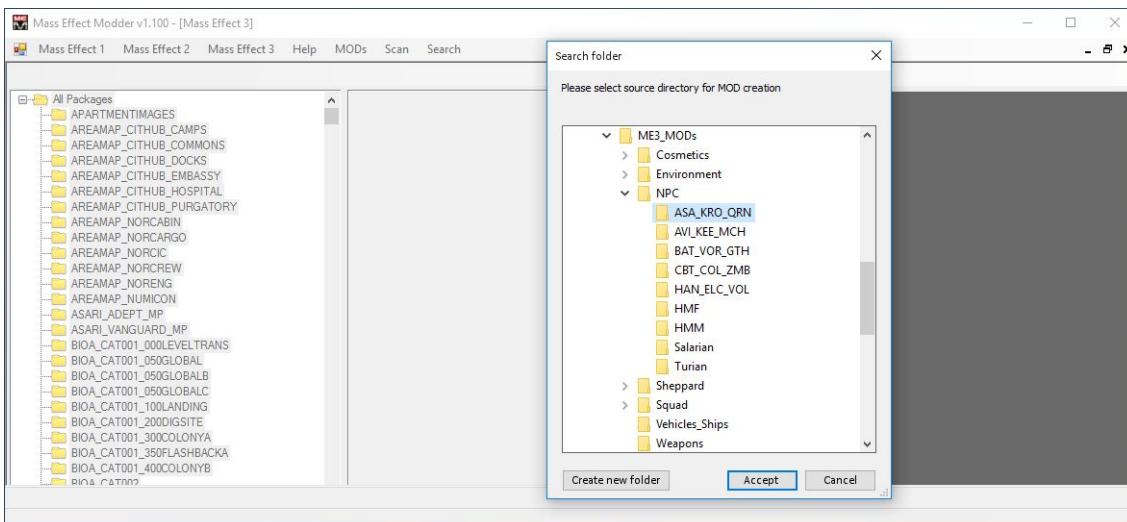
9. How to: Creating MODs

For bulk texture installation, Mass Effect Modder uses its own mod file format. These are the **.mem** mod files.

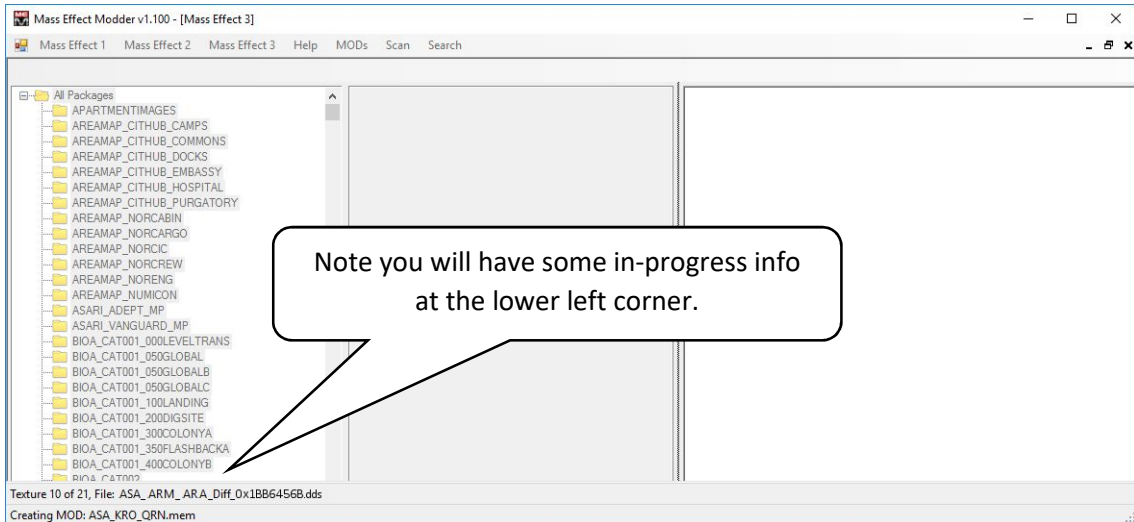
Prior to build up a new **.mem** mod file, you must have all the required **.dds** texture files stored in a folder. And to create any **.mem** mod file, you have to have launched **Texture Manager** first.



Create MOD will open a floating window where you can navigate your PC to select the folder containing the **.dds** files to include in the **.mem** mod file.



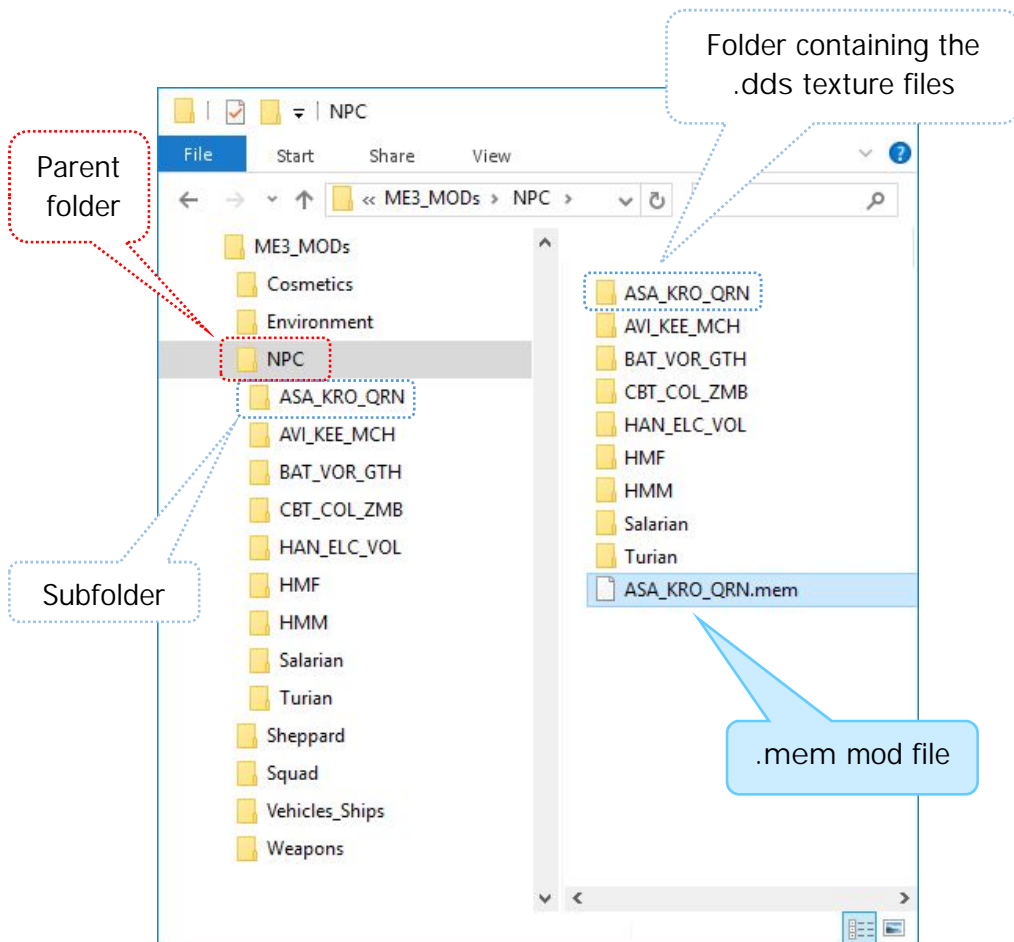
In previous image, we are building a **.mem** mod file from the **.dds** texture files stored in the **"ASA_KRO_QRN"** folder, a subfolder of **"NPC"** one.



When a **.mem** mod file is created successfully you will receive a message at the lower left corner.

Please, note the resulting **.mem** mod file will be:

- Named as per the folder containing the source textures
- Stored at the parent folder of the source textures folder.
- Compressed as game format.



Note there is no limit –generally speaking- about how many textures to include in a **.mem** mod file. No matter if you wanted to build up a **.mem** mod file including just a few or hundreds **.dds** texture files.

As said before, In terms of performance, the more textures included in a single **.mem** mod file, the better as long as you had 8 Gb's of RAM -or more-. If you have just 4 Gb of RAM in your system, it is advisable to build multiple and smaller **.mem** texture mod files.

NOTICE, please:



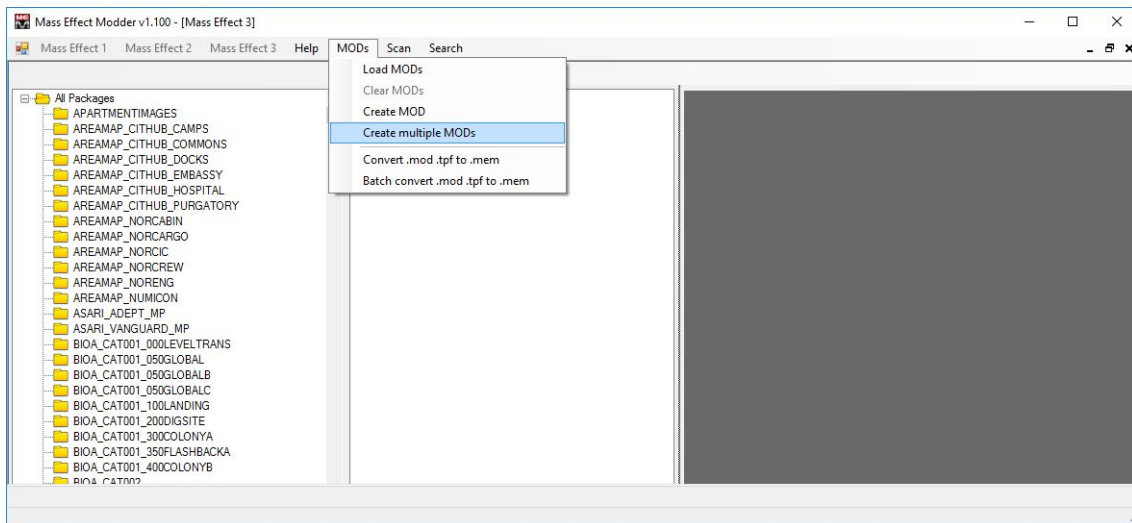
If an error occurred during the **.mem** mod creation process due faulty source textures, you will receive an informative floating window pointing out a possible cause (like source textures not having proper format, source textures not found in game your current game setup...) and a detailed list of those textures will be displayed at the right pane.

Notice any faulty texture will be skipped and not included in **.mem** mod file.

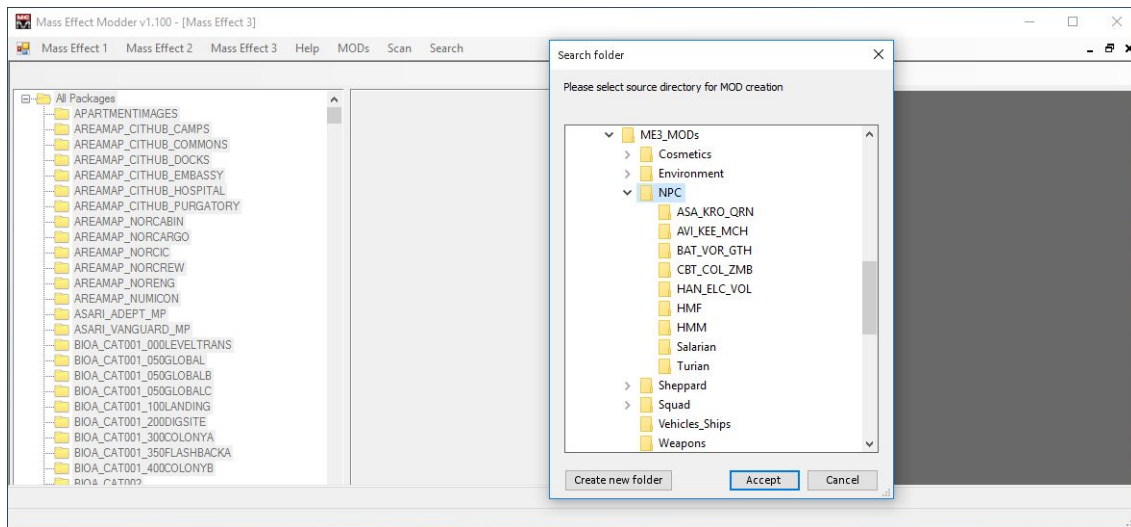
You can always select and copy that error information log at the right pane and paste it into a text file for further reseach.

In previous sample, **Create MOD** created a **.mem** mod file from the **.dds** texture files stored in a folder.

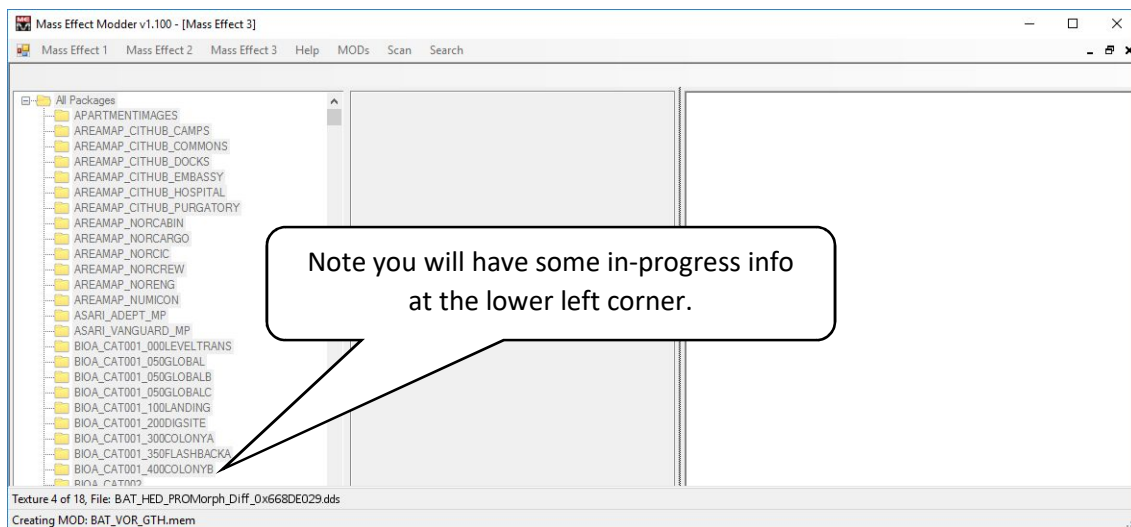
Create multiple MODs creates **.mem** mod files from **.dds** texture files stored in multiple folders, building up one **.mem** mod file per folder containing textures.



Create multiple MODs will open a floating window where you can navigate your PC to select the parent folder of those containing the **.dds** files to include in the **.mem** mod files.



In previous image, we are building **.mem** mod files from the **.dds** texture files stored in all the “NPC” subfolders.



When done, you will have one **.mem** mod file per every single subfolder containing textures. Once more, those **.mem** mod files will be:

- Named as per the folder containing the source textures
- Stored at the parent folder of the source textures folder.
- Compressed as game format.

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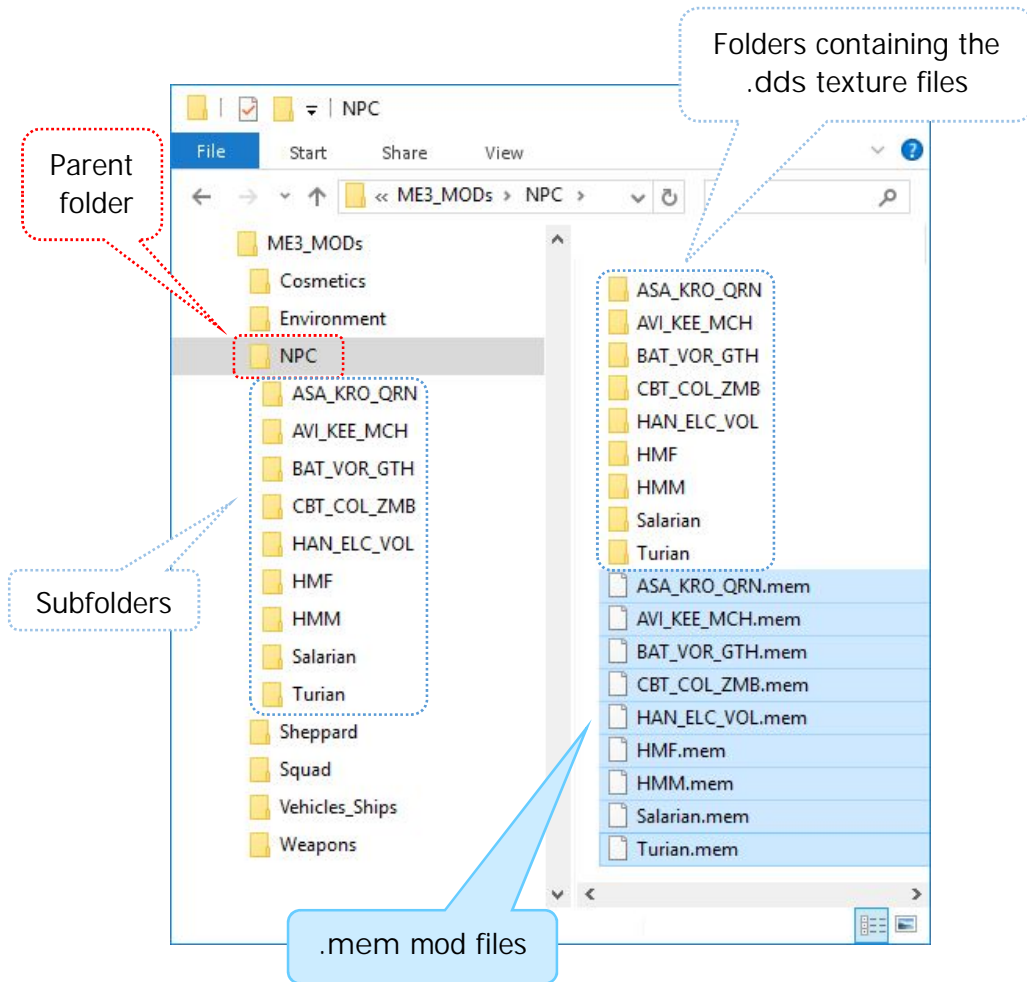
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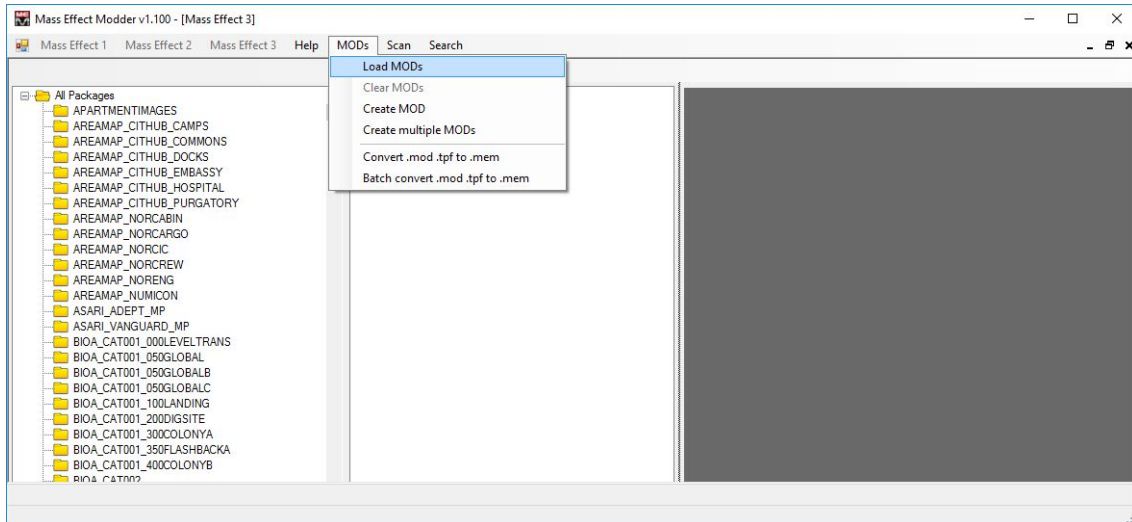
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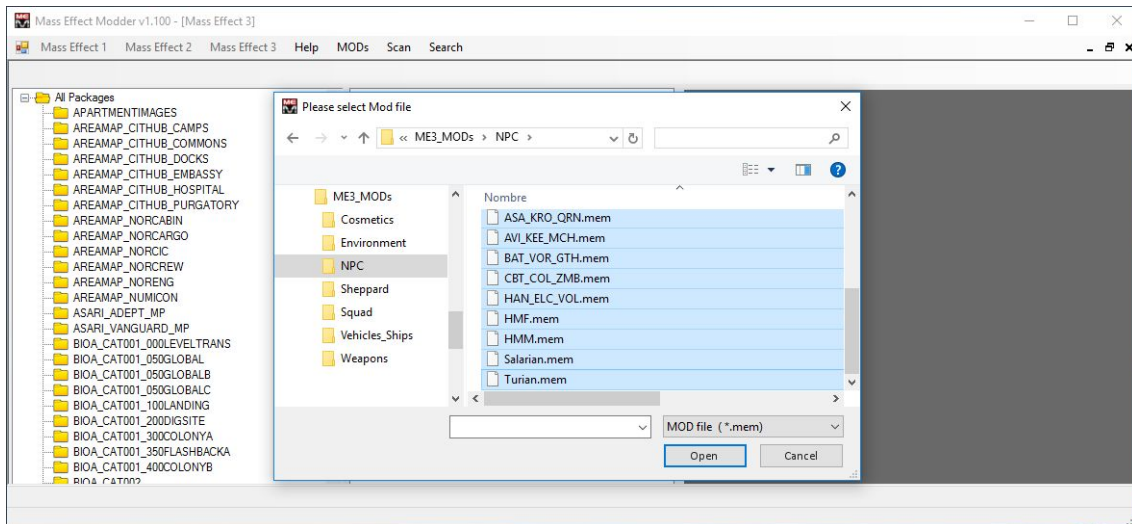


10. How to: Installing MODs

Once you have the **.mem** mod files containing the textures you may want to add to your game, you can install them using **Load MODs**. Again, you have to have launched **Texture Manager** first.



Load MODs will open a floating window where you can navigate your PC to select the the **.mem** mod file(s) you may want to install.



When selecting the **.mem** mod file(s) the game's tree at the left pane will be replaced by the loaded **.mem** mods. No matter how much **.mem** mod files you may want to load for your modding run.

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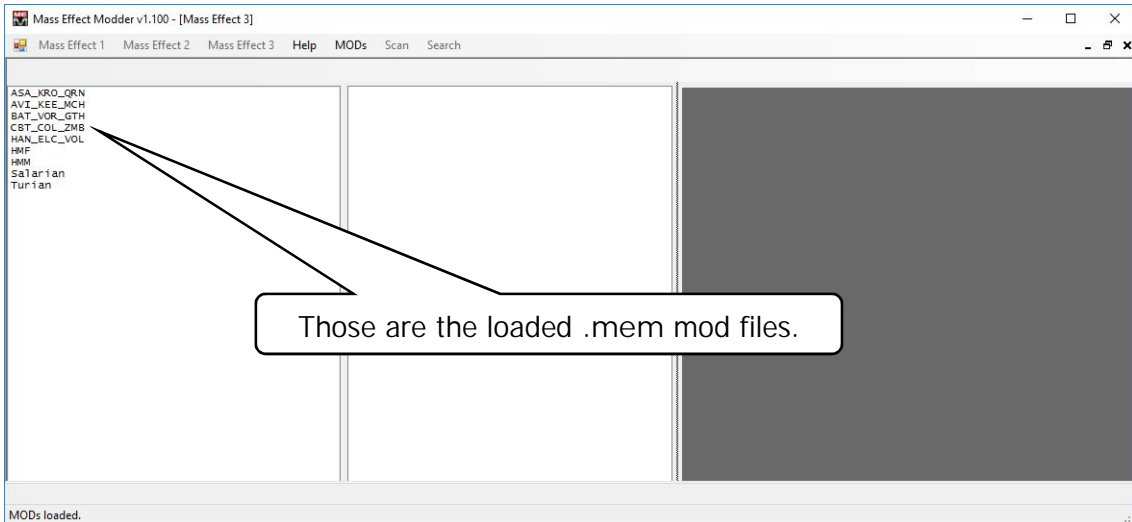
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At this point, you can also navigate the mod content and have a texture preview, populating all three panes as explained in **Texture Manager**.

Selecting a mod at the left pane, its content will be displayed at the center pane.

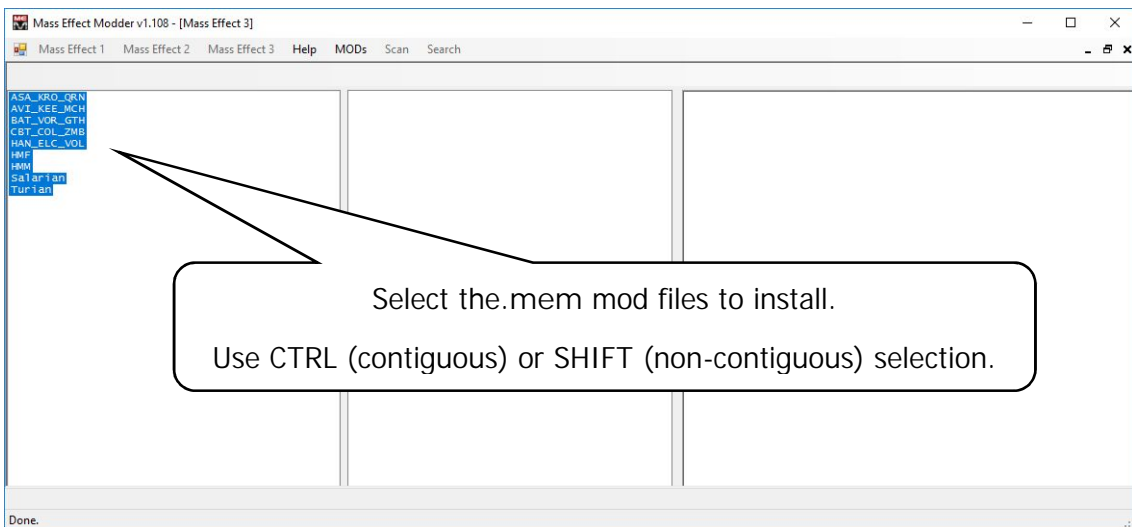
Selecting a texture at the center pane, a preview will be displayed at the right pane.

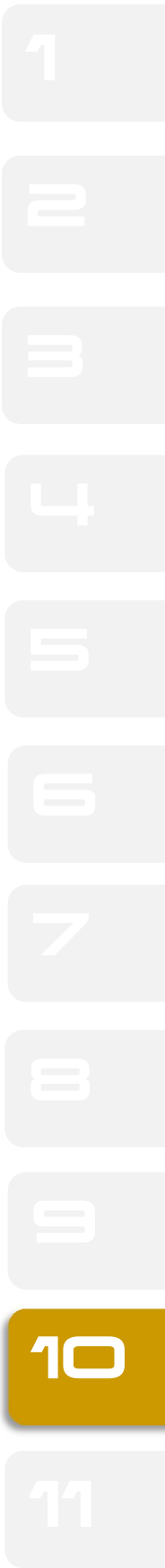
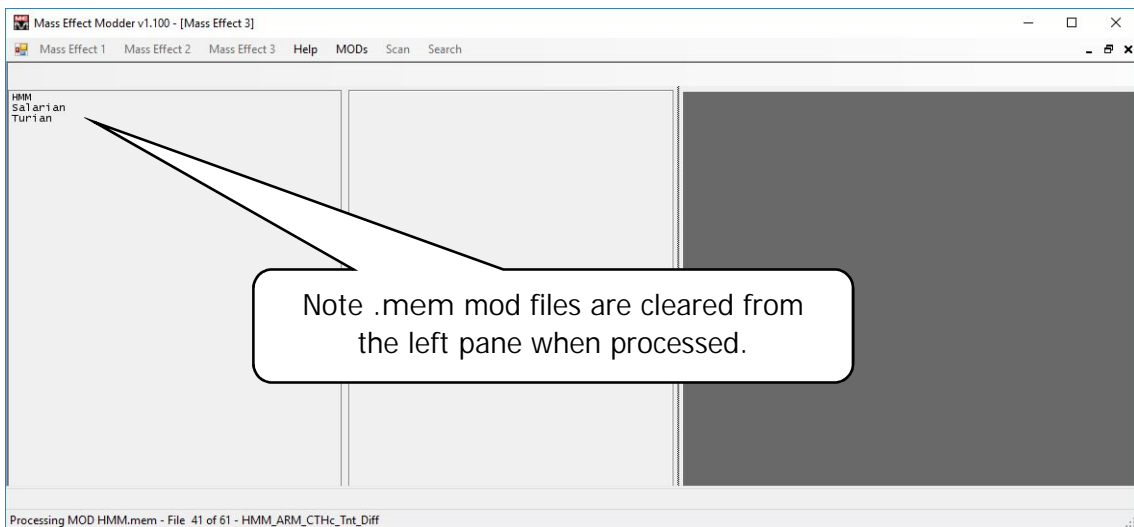
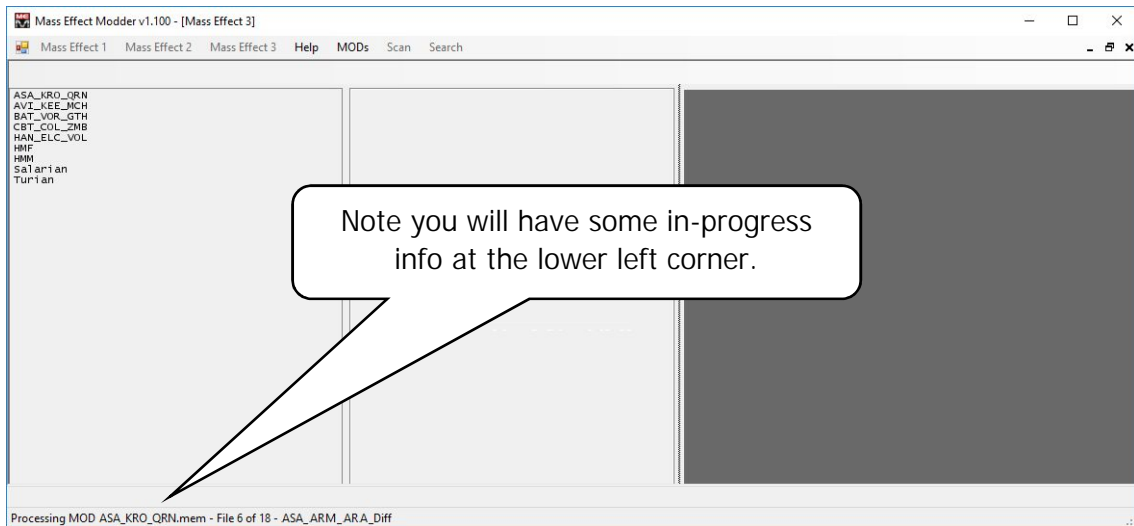
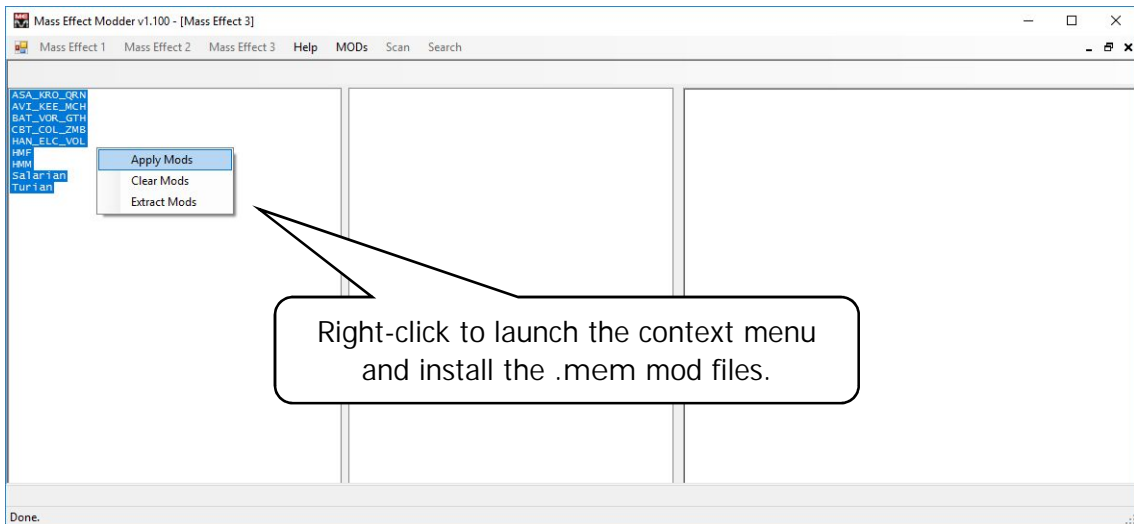


NOTICE, please:

For installing a single **.mem** mod file you only need to double-click it.

For installing multiple **.mem** mod files you will need to select them and right-click to launch the context menu.





11. How to: Updating INI settings

Mass Effect Modder can update game's **.ini** config files in two different ways:

Update LOD settings

Update LOD settings injects required LOD settings into the game's **.ini** config file to ensure modded textures are rendered in-game correctly. This is a mandatory step for every game modded using Mass Effect Modder.

MassEffectModder will add required LOD values as new lines at the main **[SystemSettings]** section at the beginning of the **gamersettings.ini** config file when those are missing; if existed, those will be replaced.






NOTICE, please:

if you roll back your game to vanilla state, ensure to use **Remove LOD settings** to remove those previously updated LOD settings.

Optimize Game's INI Settings

Optimize Game's INI Settings provides additional settings to the game's required **.ini** config file to improve in-game visuals. This is a recommended but optional step.

The following charts shows you the path and the **.ini** config file updated depending on the game and the different LOD and optional settings provided by Mass Effect Modder:

Game	Path	File
	\Documents\BioWare\Mass Effect\BIOGame\Config	BIOEngine.ini
	\Documents\BioWare\Mass Effect 2\BIOGame\Config	GamerSettings.ini
	\Documents\BioWare\Mass Effect 3\BIOGame\Config	GamerSettings.ini



LOD settings

```
TEXTUREGROUP_LightAndShadowMap=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_64=(MinLODSize=128,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_1024=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_512=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_256=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_128=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_64=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_GUI=(MinLODSize=64,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Diff=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Norm=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Spec=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Promotional=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
```

Optional settings

```
MaxShadowResolution=4096
MinShadowResolution=64
DynamicShadows=True
ShadowFilterQualityBias=2
ShadowFilterRadius=5
bEnableBranchingPCFShadows=True
MaxAnisotropy=16
TextureLODLevel=3
FilterLevel=2
Trilinear=False
MotionBlur=True
DepthOfField=True
Bloom=True
QualityBloom=True
ParticleLODBias=2
```



LOD settings

```
TEXTUREGROUP_LightAndShadowMap=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_RenderTarget=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_64=(MinLODSize=128,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_64=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_128=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_256=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_512=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_1024=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_UI=(MinLODSize=64,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Promotional=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Diff=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Norm=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Spec=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
```

Optional settings

```
MaxShadowResolution=4096
MinShadowResolution=64
ShadowFilterQualityBias=2
ShadowFilterRadius=5
bEnableBranchingPCFShadows=True
MaxAnisotropy=16
Trilinear=False
MotionBlur=True
DepthOfField=True
Bloom=True
QualityBloom=True
ParticleLODBias=2
```



LOD settings

```
TEXTUREGROUP_Environment_64=(MinLODSize=128,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Environment_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_64=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_128=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_256=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_512=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_VFX_1024=(MinLODSize=32,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_128=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_256=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_512=(MinLODSize=1024,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_APL_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_UI=(MinLODSize=64,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Promotional=(MinLODSize=256,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_1024=(MinLODSize=2048,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Diff=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Norm=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
TEXTUREGROUP_Character_Spec=(MinLODSize=512,MaxLODSize=4096,LODBias=0)
```

Optional settings

```
MaxShadowResolution=4096
MinShadowResolution=64
ShadowFilterQualityBias=2
ShadowFilterRadius=5
bEnableBranchingPCFShadows=True
MaxAnisotropy=16
Trilinear=False
MotionBlur=True
DepthOfField=True
```