

A guide to skinning by Magna Carta (AKA Steve Carey)

1. INTRODUCTION

Skins are the costumes you see players wearing in medal of honor multi-player mode. They can be any colour and any texture and you can mix and match different heads, headgear, uniforms and equipment to produce a skin customized for you.

Custom skins can be great fun. You can chose which name is displayed in the game play options and you can select which weapons a skin will use by default. You can set a skin to display only when you play on the Allies or only when you play Axis or you can set it to display the same custom skin no matter which side you play.

On most servers however, a custom skin must be authorized or you will be 'kicked'. Don't spend time making a really nice skin if you play on public servers as many will not accept them.

Be aware that any skin you make can only be seen by others if they have it loaded in their game. On-line multi-player gaming is clever but it's not magic! Unless other people have your PK3 file in their main folder they will only see you as a stock skin. Even Paul Daniels (sorry youngsters...David Blaine) has no influence here.

Skins are dictated by the image files within the PK3 folder. These image files can be tga or jpg files and are essentially pictures of what you want your skin to look like. Unfortunately the computer cannot work out what they are so you need text files to tell it where to look and what to look for. These are called TIK, TIK_fps and Shader files.

For basic skinning, work on the principle that you cannot mix trousers (pants) and tunics from different skins even though they come as separate image files. The skeleton for the model comes as one. A skeleton in MOHAA comes as a torso, arms and legs. You can only change hands, heads, headgear and gear. Any visual changes you do to the skin will be fine but they must be within the general restrictions of the skeleton you're using as a base. (There are exceptions to this but that is a subject for advanced skimmers.)

Good programs to use when skinning are Pakscape which allows you to unpack (or extract) the PK3 files and Paintshop pro (or similar) for actually making changes to existing skins. A suitable, and far less expensive, alternative is the simple and easy to use [Paintbuster](#) which I now use instead of PSP.

Good sources of custom skins are
[MOH Files.com](#) and [File Planet.com](#) and [Pure MOHAA UK](#)

2. SKIN COMPOSITION

The make up of Skins can vary but essentially each custom skin comes as a PK3 file which will consist of three folders as follows:



- **Models folder**

This normally contains one or two other folders. One is called 'gear' which will contain files which help the computer display the shape of 3d objects not already in the game. I do not intend to cover these files in this basic tutorial but you will learn about them as you gain experience of skinning and will find them essential to making truly individual skins.

The folder we will concentrate on is the one called 'player' which contains two text documents named TIK and TIK_fps. These are the files that tell the computer where to look for the shape etc of the skin. Each skin you modify will be based on an existing one already within the game loaded on your computer. Therefore the computer will need to know where to look to form a base for any modifications you make. These files will specify which existing 'skeleton' or 'head' etc it has to use to display your skin properly.

When you finish typing your TIK file save it as the name you want to display in the game multi-player options, ie Magna_Carta. If it's a TIK file call it 'allied_Magna_Carta.TIK' and if it's a TIK fps file call it 'allied_Magna_Carta_fps.TIK'

If you want the skin to display when you play on the axis side save them as 'axis_Magna_Carta.TIK' and 'axis_Magna_Carta_fps.TIK'

If you want your skin to show up on both sides duplicate the files and name one of them 'allied...etc' and the other 'axis...etc' and save all four files in the models/player folder.

If you want to use Russian or British weapons for your skin when playing allied save the files as 'allied_russian_Magna_Carta.TIK' or 'allied_british_Magna_Carta.TIK' and so on.

As well as the obvious the TIK file can also be used to set the voice and to select bare hands or gloves for your skin without any further entries or files elsewhere.

- **Scripts folder**

This normally contains only one text document saved as a 'shader' file. This tells the computer where to look for the image files needed to display your skin. This can point to textures already within the game or ones you have made or adapted. Normally it will point to tga or jpg files in your 'textures/models' folder.

Some scripts folders will contain two or more shader files pointing to different things, particularly gear or gloves. This makes no difference and you may as well keep everything in the same file.

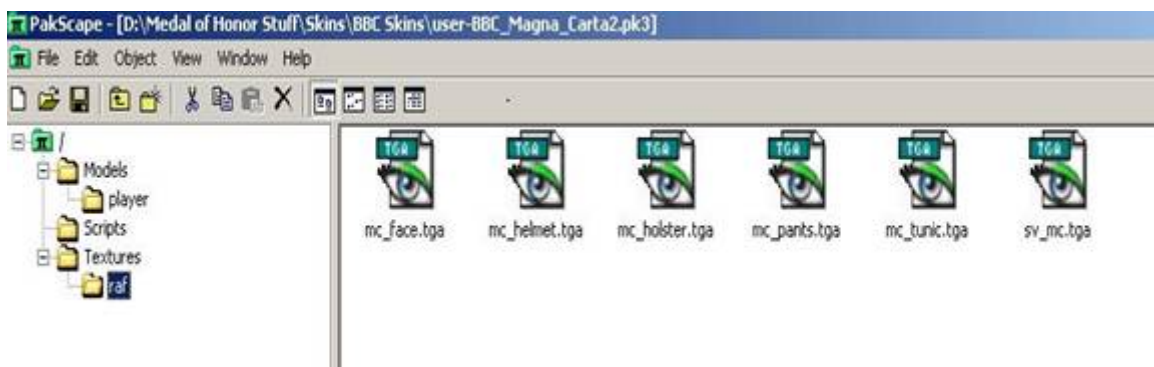
It is not too important what you call your shader file. Just type the details in a text document and when you save it, name it and add '.shader' to the end. For example, 'Magna_Carta.shader'

- **Textures folder**

This contains the tga or jpg images that you have modified or coloured to make your skin custom to you. They can be directly placed in the textures folder or in a series of other folders within the textures folder. The important thing to remember is that your shader file displays the right path to find the textures and that it states what type of file they are. In the below example the line identifying the holster would read:

```
mc_holster
qer_editorimage textures/raf/mc_holster.tga
cull none
map textures/raf/mc_holster.tga
rgbGen lightingSpherical
```

This tells the computer to look in the folders 'textures/raf' for the image file to use and identifies it as a tga file.



The corresponding line in the TIK file would read:

```
path models/equipment/germangear
skelmodel german_holster.skd
surface german_holster shader mc_holster
```

The first two lines tell the computer to look in the game for the shape and substance of the existing German holster. The last line tells it not to use the default in-game texture for that holster but to use the tga file named 'mc_holster' instead. You can put as many folders as you like within the three basic 'models', 'scripts' and 'textures' ones but the lines in the TIK and Shader files must point to the right place. Because of this I tend not to include additional folders. Remember, keep it simple and don't get carried away. Eagles may soar but weasels don't get sucked into jet engines!

There are several additions to the above composition but as previously stated you will pick it up as you learn more. This tutorial looks at the basics to provide a starting point for would-be skimmers.

3. FINDING THE BASIS FOR A SKIN

Start Pakscape (you can use winzip) and press open. Use this to navigate to the desired pk3 file. This can be one of the pk3 files included within Medal of Honor or one you've downloaded from one of the many websites hosting them.

Let's navigate to the 'main' folder in the game on your computer and open the pk3 file 'pak0.pk3'. In there you will see a number of folders including 'models'. Open that and find 'player'. Open that and you will see some folders (these contain the skd and lod files that produce the 3d image of models in the game). Ignore them and find the text files called 'German elite sentry.TIK' and 'German elite sentry_fps.TIK' and drag them to your desktop. (In pakscape dragging will copy the file to where you drag it not move the original file so don't worry).

Next, go back to the pak0.pk3 folder and look for the folder inside called 'scripts'. Now look in there for the shader file named, 'German sentry' and drag that to your desktop. You now have the text files but you also need the texture files so go back to Pakscape and open your main folder again but this time find 'Pak 2.pk3' and open that. In there you will see a folder called 'textures'. Open that, then 'models'/'human'/'german maps'. Drag the tga files for the german elite sentry onto your desktop and close pakscape.

Now we are going to get the paperwork right before changing the texture files and for the sake of clarity we are going to call our new skin 'Magna'.

4. MAKING THE SKIN

Firstly, let's rename all the textures. Just right click on them one by one and chose rename then call them Magna_pants, Magna_jacket and Magna_helmet. Or anything you like. It matters not, so long as it is consistent. Now remembering the set up of a PK3 file make a new folder on your destop called Textures and put them in it.

Now create another new folder called scripts and drag the shader file in there and then create a folder called models and one called player and drag the two TIK files into player and drag that folder into models. Confused? Don't be. Just make sure you now have three folders with a structure like this:



Now it's time to change the TIK files to point towards the texture files we want it to. We are only going to make changes to the helmet, pants and jacket at this stage so we don't need a tga file in the textures folder showing a head. We'll simply tell the TIK file to look for one already included in the game. We only need the head tga file within our textures folder if we are going to change it from what is already in the game.

- **TIK file**

Open this and you will see the first lines tell the computer that we are going to use the basic 'US skeleton' for our model. Next it tells it to look for the sentry uniform. This is where we need to edit it. Just overwrite any reference to sentry with Magna as follows:

```
surface wehrmact_pants shader Sentry_pants
surface wehrmact_tunic shader Sentry_tunic
surface wehrmact_tunic_c shader Sentry_tunic
```

Changes to:

```
surface wehrmact_pants shader Magna_pants
surface wehrmact_tunic shader Magna_tunic
surface wehrmact_tunic_c shader Magna_tunic
```

We will leave the head and face as it is but need to change the name of the helmet to

```
surface outside shader Magna_helmet
```

Leave the 'inside' shader line as it is. Now change the voice type to whatever you want. The line at the bottom that says:

```
'voicetype axis3 // set the voicetype to use for multiplayer instant
messaging'
```

can be set to a number of different ones but some quick examples are:

- **Insert this line for British**

```
voicetype british // set the voicetype to use for multiplayer instant
messaging
```

- **Insert this line for American**

```
voicetype army // set the voicetype to use for multiplayer instant
messaging
```

- **Insert this line for female**

```
voicetype manon // set the voicetype to use for multiplayer instant
messaging
```

- **Insert this for Russian**

```
voicetype russian // set the voicetype to use for multiplayer instant
messaging
```

We are going to make our man Russian so overwrite the voicetype settings with the above. Now go up to File, select Save as and save it as allied_russian_Magna.TIK.

Next, open the TIK fps file. All you have to do here is change the line about sleeveview to read 'surface viewsleeves shader viewsleeves_Mag' or 'sv_Mag' whatever you've called it. Then just save it as allied_russian_Magna_fps.TIK. It's always important that you use the underscores instead of spaces. It is also important that you get the name exactly the same as the TIK file with the addition of 'fps' at the end.

- **Shader file**

Now go to scripts and open the script document. We need to heavily edit this file so that all references to jacket, helmet and pants point to ours in the texture file not the ones in the game so:

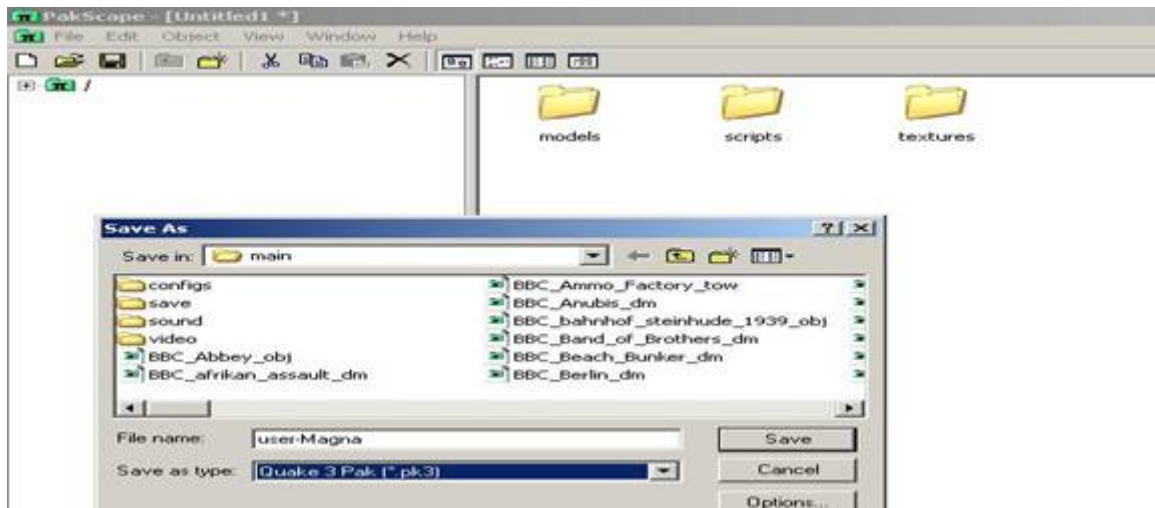
```
sentry_tunic
{
    qer_editorimage textures/models/human/germanmaps/elite_sentry/tunic_sentry.tga
    {
        map textures/models/human/germanmaps/elite_sentry/tunic_sentry.tga
        rgbGen lightingSpherical
    }
}
```

Changes to:

```
Magna_jacket
{
    qer_editorimage textures/Magna_jacket.tga
    {
        map textures/Magna_jacket.tga
        rgbGen lightingSpherical
    }
}
```

And so on. Because our tga files are in our 'textures' folder we don't need that big string of folders. Just textures/Magna_jacket.tga will do fine. Now save the file as 'Magna.shader' and that's the paperwork done.

It's always worth checking the thing works at this stage before you invest time in editing your skin so open Pakscape and press on the new file button. This will give you a blank screen with two sections. Just drag your three folders into the right hand pane and click file/save as and type 'user-Magna' and select PK3 as the file type:



You can save your file anywhere but it must end up in your MOH main folder so you may as well save it there. Once you've done this start up medal of honor and go to multi-player options and select it from the list. Remember, we have called it Russian so it will be Allied_Russian_Magna. It should look like this:



If you find an area doesn't show up or shows up as a grey colour then you have an incorrect entry somewhere in your TIK or shader file. Just re-check all the entries and make sure they all point to the right place.

The first time I loaded this one to check my own tutorial I found the tunic was grey and noticed I had changed the TIK entry from 'sentry_tunic' to 'Magna_tunic'. All very well but in this example I renamed the tga file 'Magna_jacket'.

It's easy to miss a line like this so if you do, don't feel bad, just read everything again carefully. If you find you've got it horribly wrong the game will just crash when you try to play. In this case don't worry, just go to your main folder and delete the pk3 file and start again. Some particularly complicated ones with lots of custom gear etc require a good night's rest before attempting to read the TIK files again!

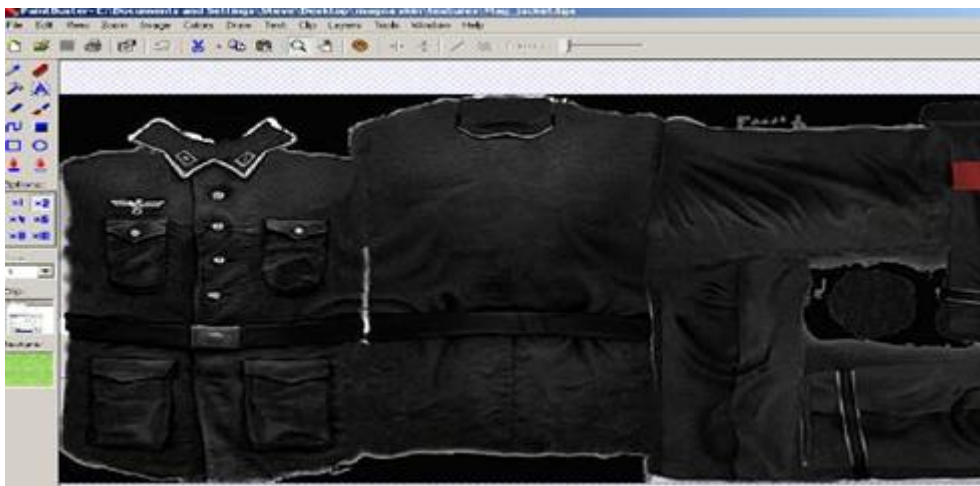
5. EDITING THE SKIN

This is the fun bit. All the hard work is done all we have to do now is make our skin individual. The easy way would be to change the colour, add a name to the jacket and Bob's your uncle. That's fine for now and we'll do that in this chapter just to demonstrate.

First, if you still have your three folders on your desktop open your textures folder and look at your tga files. If you deleted them when you made your pk3 file just open Pakscape and locate Magna.pk3 in your main folder and open it. Drag those three folders back onto your desktop.

Now open the one called Magna_jacket with whatever image program you use. I use PSP and Paintbuster which I find increasingly more useful as it gets further developed. I cannot go into the vagaries of every different image manipulation program here so I am going to use Paintbuster. You'll get the point, I'm only doing very basic things to show what's possible.

Anyway, your Magna_jacket looks like this:



Just to demonstrate a few things I'm going to edit the jacket so that it has a flap like many Russian ones, is lighter, has some epaulettes and badges and has a different belt. Then I'll lose the badges on the arms and then package it all up again and see what it looks like in the game.

I'll use the clone tool in Paintbuster to create the flap on the jacket by cloning the crease down the centre and placing it further to the left. I'm also going to use the clone tool to cover over the insignia on the arms. I'm also going to use the Paintbuster utility to lighten the whole skin. I could use a paint program to change the belt colour but I prefer finding one on a different skin, cutting it out and pasting it on to the one I'm working on. For the collar I used the paint brush in Paintbuster on transparency so I didn't lose the texture in the shading and I used one of the button functions for the collar rank badges. I also find the textures feature in Paintbuster is good. When you paint anything on a skin, like a badge or rank patch, use the texture tool to make it look woolen or metal – whatever you want. It's so much better than just using flat colour. It's also easy to use the cut tool to cut something off one skin and paste it on to the surface of another. Experiment and see how you get on. This is what I did:



Now, because we did all the paperwork first all we have to do now is save it and overwrite the original. Just use Pakscape the same as before and overwrite the original. Be aware - Never leave two of the same pk3 files in the game at the same time because this will cause conflicts. Even if you rename the pk3 file the Tik and shader files will still point at the same things and confuse the game.



This is what we get when I overwrite the original.

That's the basics of how to change a skin so you get an individual look. This has been a truly simple example for the purposes of this tutorial only. I'm sure you can come up with something much more complex with practice.

6. ADDING EQUIPMENT ETC

I get most enjoyment from adding different equipment to skins and changing hats and faces etc and there are three main ways of doing this:

(a) Searching the game

Searching the game for a piece of equipment you like and then locating the relevant TIK and shader files in the same way we extracted the files for this skin. Then it's simply a matter of seeing which lines of script in those files mention the gear you want and adding those lines to your files. This applies to all manner of equipment and hats but by way of example let's look at gloves. If you want your skin to wear black leather gloves look for the files for one of the models that wears gloves (ie, German Panzer commander – pak0/Models/Player) and you will find the TIK file contains these lines:

```
path models/human/hands
skelmodel hand.skd
surface hand shader l_gloves
```

We are going to change your skin from bare hands to gloves so add these lines to your TIK file, taking care to overwrite or delete the reference to hands new etc.

You will also need to alter your TIK fps file so if you check the TIK fps file for the Panzer Commander you will see it contains these lines:

```
// right hand
surface triggerhand shader lthr_gloveview

// different left hands
surface lefthand shader lthr_gloveview
surface garandhand shader lthr_gloveview
```

Add these lines to your fps file and now go into the scripts folder (as we did previously), and you will see the shader file for tank commander. This is because the tank commander's gloves are slightly different to the stock ones so it needs a separate shader entry. This entry is as follows:

```
l_gloves
{
    qer_editorimage textures/models/human/germanmaps/tank_commander/l_gloves.tga
    {
        map textures/common/reflection1.tga
        rgbGen lightingSpherical
        tcgen environmentmodel
    }
    {
        map textures/models/human/germanmaps/tank_commander/l_gloves.tga
        rgbGen lightingSpherical
        blendFunc GL_ONE_MINUS_SRC_ALPHA GL_SRC_ALPHA
    }
}
```

Add this entry to your Magna fps shader file.

So long as you add all those extra lines to your files and overwrite any reference to hands new, your skin will be wearing the German Panzer Commander gloves next time you re-pak it. No tga or jpg files are required as we are only telling the computer to use something already included in the game.

(b) Extracting the tga files

If you want to make changes to the standard gear in the game (ie, you want to alter the gloves to an individual look for instance) you need to open up Pakscape and go searching for the tga file you want to change.

Then you need to extract it, alter it and place it in your skin's textures folder. You then have to change the entries in your TIK and shader file slightly. To locate the gloves you will see that the existing shader file entry tells you where to go so open up Pak2 (ok, it doesn't tell you this, I just know these are in Pak2) and look in textures/ models /human/germanmaps/tank commander and you will see his gloves. Drag those to your textures file and rename them Magna_gloves. You now need to tell the computer to look for the new gloves in your textures folder and not in the game any more so you would need to change the lines in your shader file to:

```
Magna_gloves
{
    qer_editorimage textures/ Magna_gloves.tga
    {
        map textures/common/reflection1.tga
        rgbGen lightingSpherical
        tcgen environmentmodel
    }
    {
        map textures/ Magna_gloves.tga
        rgbGen lightingSpherical
        blendFunc GL_ONE_MINUS_SRC_ALPHA GL_SRC_ALPHA
    }
}
```

But remember also to change the reference in your TIK entry as we're no longer looking for 'lthr gloveview' but 'Magna_gloves'.

Adding a Thompson pouch

Just to demonstrate how it's done I'm going to add a piece of American equipment onto our new skin and the most obvious is the Thomson pouch so first we need to find the model in the game so we can check which entries we need to add to our TIK and shader files. So open Pakscape and look in Pak 1. Go to Models/human and find the TIK file for '1st Ranger Lieutenant' and you will see the entry there which relates to the Thompson pouch, which is:

```
path models/gear/us
skelmodel rangertommybelt.skd
surface tommybelt shader tommybelt
}
```

Open up your Magna TIK file and add this line. Then go back to Pakscape and look in the scripts folder as before. Find the one named 'us soldier shader'. Look in there and you will see the entry:

```
tommybelt
{
    qer_editorimage textures/models/gear/us_gear/thompsonpouch.tga
    cull none
    {
        map textures/models/gear/us_gear/thompsonpouch.tga
        rgbGen lightingSpherical
    }
}
```

Now go to Pak 2. Then go to textures/models/gear/usgear. Look for the tga file named Thompson pouch and extract that to your textures folder. Now it's as simple as changing the colour of the Thompson pouch (I think I'll just put a badge on it) and then changing the TIK and shader entries before we add them to our new skin. Don't forget we now want the computer to look for our new, modified Thompson pouch not the one in the game so we need to change the lines to read:

TIK FILE:

```
path models/gear/us
skelmodel rangertommybelt.skd
surface tommybelt shader Magna_tommybelt
```

AND SHADER FILE:

```
Magna_tommybelt
{
    qer_editorimage textures/Magna_thompsonpouch.tga
    cull none
    {
        map textures/Magna_thompsonpouch.tga
        rgbGen lightingSpherical
    }
}
```

Then re-pack everything and save in the game, making sure to over-write or delete the one already there.

This tells the computer to look in the game for the shape of the pouch (skd file-which is called tommy belt) but to look in our textures folder for the colour of the pouch (which we have called Magna-thompsonpouch).

Ok, one last example, adding a different helmet. Go to Pak 1 and look in the scripts folder and then us gear. You will see the following entry

```
us-helmet_private
{
    qer_editorimage textures/models/human/usmaps/ranger/private.tga
    cull none
    {
        map textures/models/human/usmaps/ranger/private.tga
        rgbGen lightingSpherical
    }
}
```

Look in Models/human and open the 1st Ranger private TIK file. You will see the lines:

```
path models/equipment/USGear/helmets
skelmodel us_helmet.skd
surface us_helmet shader us-helmet_private
```

You could over-write the existing lines in your files that talk about the German helmet straight away and the US helmet will then be displayed without further ado - but we're going to extract it and put it in our textures folder just to provide another example of how you have to change the files.

So let's go to Pak 2 and look in textures /models /human /usmaps/ranger and drag the private's helmet out and place it in your textures folder and call it Magna_helmet. Delete the old German one and now change the TIK file entry to tell the computer to look in the folder 'us gear' for the shape (skd file) of the helmet not German gear. Your entry will look like this:

```
path models/equipment/USGear/helmets
skelmodel us_helmet.skd
surface us_helmet shader Magna_helmet
```

The shader file entry will stay the same as we're not changing the name of the helmet. The shade file simply points to where the tga files are not where the shape is. I just got you to look in the scripts folder on this occasion so that you get the idea.

Now add some badges or something and then re-pack the whole skin. It should now look something like this:



It's fair to say I did this quickly for the benefit of this tutorial to demonstrate how easy it is to make your own skin but you can see how much difference there is between this and the original and that's with very little effort and just the addition of a few items of equipment from elsewhere.

(c) Extracting the tga files and skd and or lod files

As previously mentioned, skd files tell the computer what shape something is. The skd files for all items of equipment can be found in the pk3 files within the game and can be extracted in the same way as anything else. Some items are so individual that they need separate, extra skd files to tell the computer what to display. These are normally kept in a separate folder within your models folder, called gear. The entries for the TIK files are no different to the previous examples except they will include a line telling the computer to look in the folder within your skin instead of within the game. There are a number of custom skins available at download sites on the internet where these are included. If you come across one of these and want to use it just look carefully at the TIK and shader files and make sure you copy the lines correctly in your files. Where identity is given please remember to ask permission of the maker before using a custom item like this. I do not intend to go into this any further in this tutorial. You will get the hang of using these with practice.

7. PROBLEM SHOOTING

Some parts of the skin don't appear

Check your TIK file first. You've probably typed a line incorrectly or mis-typed the name of the file you are looking for.

Some parts of the skin appear grey and blurred

Check the shader file (followed by TIK). You have either incorrectly typed the path to the tga file or typed in the wrong name for it.

The path is correct but it still doesn't display

Check shader file entries point to Magna_tga and NOT Magna_jpg and vice a versa.

Items of equipment don't show up

You have either forgotten to include it's skd file location in your TIK file (ie, forgot to type 'path/models/gear/usgear' above the entry) or you've mis-typed the path in the shader file.

Sleeves on a jacket look different

You've forgotten to extract the tga file 'sleeveview' for the skin you are using as a base for your new skin or have forgotten to include a reference to it in your TIK fps file or your shader file.

The jacket and head shows up but the trousers don't

If all the above are correct then you've probably extracted trousers from a different skeleton to the jacket and they are not compatible.

Some equipment shows but some doesn't

If all the above are correct then you have chosen two pieces of equipment that are not compatible, normally because one would sit on top of another.

8. CONCLUSION

I hope this has been useful to you. If you have any comments you can PM me in the forum of [Pure MOHAA UK](#) or feel free to visit the [BadBoyz Clan website](#).