

Weight Map Injection: How to inject weight maps with Poser

It's possible to inject an entirely new rig into Poser, one that replaces the existing rigging on a figure. This may be useful for creating monsters or fantasy figures. This requires a great deal of hacking files. Somewhat less with Poser 12 than when this was originally written for Poser 9 but still a lot. The example is based on the

Introduction to Weight Map Injection

When weight maps were introduced for Poser 9/2012 there was no way to copy them between figures. The idea was raised that they might be injectable. I decided to actually do it. We CAN inject weight maps and Animated joint centers. Those of you thinking about weight mapping some older figures and wondering if you can make a distributable Injector to do it, the answer is "Yes". You just need to know your way around a CR2. For those of you who know the innards of a CR2 some of the new stuff is very obvious and some of it is a bit more obscure. We're going to do 3 things with 1 Injection file.

First is Inject a new morph. This is old news to many but Poser can inject a Morph (FBM, JCM or whatever) using PMD technology. In Poser you DO NOT need empty channels to inject a morph like some inferior programs do. This will create a Full Body Morph that needs Animated Centers. Next we'll add the animated centers using the same injector. This little trick only varies slightly from the existing JoiNT injection files some of you have used. Than for the icing on the cake I'll show you what needs to be included to make a Weight Map injection. This stuff is all new but the methods are old school Poser file hacking.



What you need

1. I can't recommend Poser File Editor enough. It makes this kind of hack easy. But a Text editor do if you're poor and/or brave.
2. You will need a CR2 with all the Joints, Weights, Morphs and every thing already done to act as a donor.

3. A PMD that contains only the Morph you created. If you distribute a PMD with somebody else's morph you'll likely get an invitation to explain why to a judge.
4. Poser with the latest updates

PMD Morph Injection

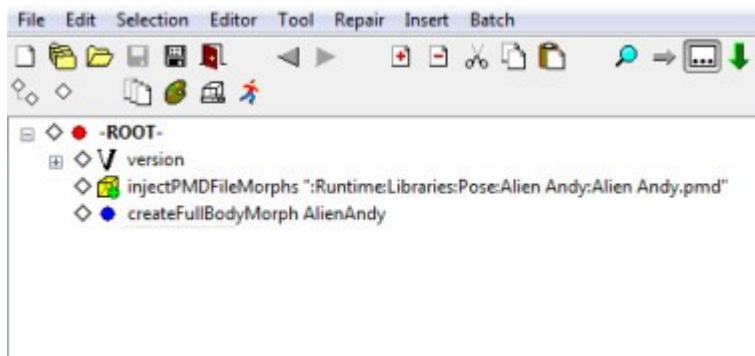
In older versions of Poser you had to create Morph Injections by using stupid tricks and hacking files. In Poser 11 the ability to export a morph injection was added. In Poser 12 exported Morph Injectors include Animated Centers as well. That makes the morph part of this much easier. When you export the Morph Injection from Poser be sure to only include your new morph. If you include somebody else's morphs you can get in copyright trouble. Poser also exports the animated center info when you export the morph. So the Animated Centers Step is covered too.

Below you'll find the old school way of doing this if you're curious what's happening when you export a morph.

You'll need a PMD that only has your morph in it. The easy way is to use Dimension 3D's PMD editor. The other way is to start with a totally blank figure and load or create your morphs on that "DEV" figure. Save the figure to the library and Poser will create the PMD in the same folder the figure is saved in.

Once you have the PMD file the actual injector is really easy. Basically it's just 2 lines First "injectPMDFileMorphs" and the path to the PMD file. Then "createFullBodyMorph" with the name of the Morph in the PMD.

If you have Poser File Editor it has a menu command to do this whole thing in a couple of clicks.



Adding Animated Centers

If you're using a modern version of Poser this will be included with the Morph Injection that can be exported from Poser. What's below simply documents what's being done automatically by the export function.

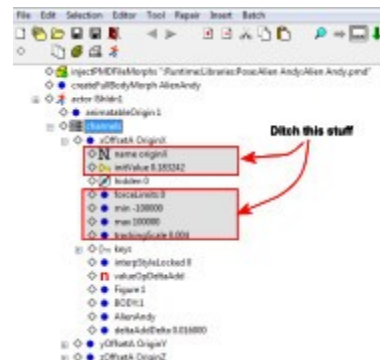
To get the animated centers we will pretty much just be doing the same thing as an EMC injection with the addition of the new channel information.

The easy way to do this is to copy the channel from the Donor CR2 (the one that has all this stuff setup) and paste it in below the PMD stuff we just did.

We'll need each body part that's getting it's centers moved and we need 4 sections of the CR2 copied into the Injector. First is the animatableOrigin 1 statement. This will go just below the body part name in each actor.

The next part is inside the channels group. We need 3 channels copied. "xOffsetA OriginX", "yOffsetA OriginY", and "zOffsetA OriginZ" need to be copied. It's OK to just copy the entire channel and everything inside or if you want you can pare the channel down to just what we really need. That's the EMC link information (The 5 magic lines) that tell the channel it's a slave of the AlienAndy morph.

The Key data is also required. You need to unhide the channel to get it in sync with the Animatable Origins check box value we injected.



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Weight Map Injection

Finally we've got to the really good stuff. Injection of the actual weight map data. One really important thing to remember is this only works on "like" geometry. Just like morphs you can't inject morphs from one figure into another. The weight maps rely on vertex order in the underlying geometry. If the geometry is different all you'll end up injecting is a bunch of garbage.

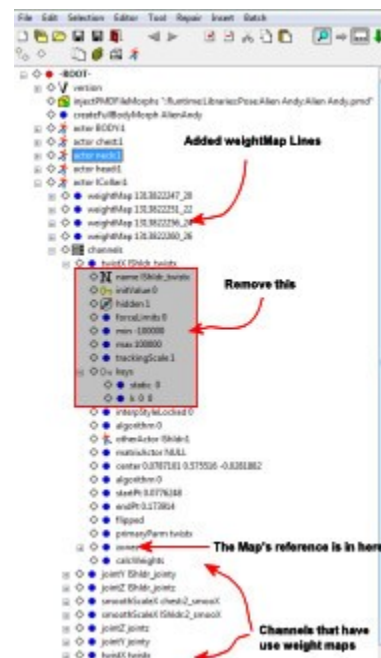
This requires hacking files. There is no function to exports a weight map in Poser. You'll need to copy the weight maps and joint data into your new injector. This is where you need either a good CR2 editor or, for the brave, a text editor.

The first part to copy over is the actual weight map data. These are in each body part. And begin with something like "weightMap 1313822272_30" or "weightMap bulgeRight_rShldr_jointz". The numbers will be different for each map, figure and joint. If you are working in a text editor you will see a very long list of whole numbers and decimal values. This is the map data. It sort of looks like raw morph data. Copy all the weight maps to your Injection File. The Weight Map data goes just below the "animatableOrigin" statement.

We also need to copy all of the channels that actually use Weight maps. There's a bunch of them. Your typical joint will have 8 channels that need to be copied. 2 Twist, 4 Bend and 2 SmoothScale Channels. Hands, Chest and any place where the hierarchy has "branches" there will be more. If you are not sure about a channel Look in the Zones section of the channel. It it says "weightmapzone" in there any where it's using a weight map and needs to be copied.

As with animated centers you can just copy the entire channel and that will work fine. It's better to pare the channel down to just what's needed. With these channels most of the stuff there is actually relevant especially if you've been messing with the rig. Remove the Name, Limit lines, Hidden, Tracking and Keys. The rest of it is relevant. Basically its the first 10 or so lines in each channel.

The actual references to the Weight Maps are in the "zones" branch. You may need to remove



Click to enlarge

references to legacy joint zone setups in this section. It's not necessary but it makes the injector neater.

Now as a final bonus and just to make this a little cooler we're going to add a bit of treatment to the figure's Body, where the AlienAndy dial is. We can set limits, add a group and refine the name of the dial as it will appear in Poser.

Once again we'll copy the whole body part but we just need a little bit out of it. Basically the groups, and the AlienAndy channel. I'm setting limits on, putting a space in the name to make it more readable and making a "Full Body Morph" dial group to put it in.

Conclusion

A Weight Map Injection is just another Joint Injection file. It contains just a bit more information than a traditional JNT file in that it contains the actual weight map. These file are distributable as they contain no geometry or morphs from the original figure. They do contain rigging information but only the rigging you created in the original donor file. JNT injection will probably find more use with the new weight maps because switching geometry requires a new weight map too.

And for those who learn by examining the finished product:

[The finished Injector for Alien Andy](#)

This injector only works with "MilkManAndy" in Poser's Additional Figures in the Character Library.