aniMate2 User Guide

We are always looking for way to improve our documentation and videos. If you have questions please let us know.

We have included videos for each section of the User Guide. Any time you see this icon..., click on it to watch.

The Basics - Overview of Our Approach to Animation

AniMate2 takes a building block approach to 3D animation. Animations are broken down into editable chunks (aniBlocks) that can be stored and reused similar to the way video clips are used in a video editing application. Just as video editing software doesn't care how the video clips were created, aniMate doesn't care where the animation clips were created either. AniMate2 is a DAZ Studio plugin and can only be used within DAZ Studio. A DAZ Studio scene is made up of a collection of objects. Objects are things like characters, cameras, lights and props. All objects in a DAZ Studio's scene can be aniMated with aniBlocks.

AniMate2 was designed to be as easy to use as is possible, with special emphasis on human/character movement. The "blocked" nature of aniBlocks allows you to create compelling animated scenes with great ease. aniMate2 has expanded on this to allow the following:
- Sub-tracks that allow for morphs/pose aniBlocks layered on top of a base track.
- Sub-tracks that allow for overriding body parts to facilate such things as waving while walking.
- Easy adjustment of existing aniBlocks using Keyframe Levels.
- Easy creation of Morph and Pose Offset aniBlocks.
- Creation of Full Motion aniBlocks.

Where do I find my aniMate2 Stuff after install?

The aniMate2 installer puts files in the following places:

Windows

DAZ>Studio>plugins>aniMate2.dll
DAZ>Studio>content>aniBlocks>aniMate>
(sample aniBlocks)

Mac

DAZStudio>Plugins>libaniMate2.dylib
DAZStudio>Content>aniBlocks>aniMate>
(sample aniBlocks)

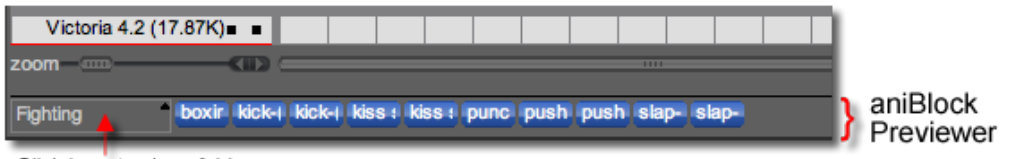
> These are the STANDARD installation locations. If you have installed DAZ Studio in a NON-STANDARD location, AND aniMate gets installed in this STANDARD location you will have a problem. Two plugin folders will be created, one with all the normal stock plugins that come with Studio that you see when you start it up, the other with the aniMate plugin, not being seen by Studio. To solve this problem you need to find both plugin folders (do a search for "plugins"), then put the "libaniMate2.dylib"(mac) from one "plugins" folder into the other "plugins" folder with all the other .dylib(mac) files. Now you should be able to see aniMate2 as described below.

Once installed, aniMate2 will show up inside DAZ Studio as a tab. Go to View/Tabs and you should see "aniMate2". AniMate2 was designed to dock at the bottom of your DAZ Studio window, but you can put it wherever you would like. Now that you've found the plugin, we should probably tell you where to find your aniBlocks inside of Studio. There are two places you can browse for aniBlocks and then drag them into the aniTimeline. First, you can browse to them in the normal DAZ Studio content browser. The other way is to use the "aniBlock Previewer".

aniBlock Previewer

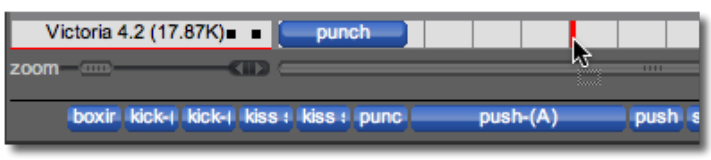
The Previewer by default should show up underneath the aniTimeline but if it is hidden you can always show it by right clicking on any "blank" space inside the aniMate2 tab and selecting "Preferences". Check the box next to "Show Previewer". Of course, unchecking this box turns the Previewer off.

The Previewer is a great way to search for aniBlocks because when you roll over the aniBlock it animates the current character you have selected so you can see exactly what you are getting before you drag it onto the timeline.



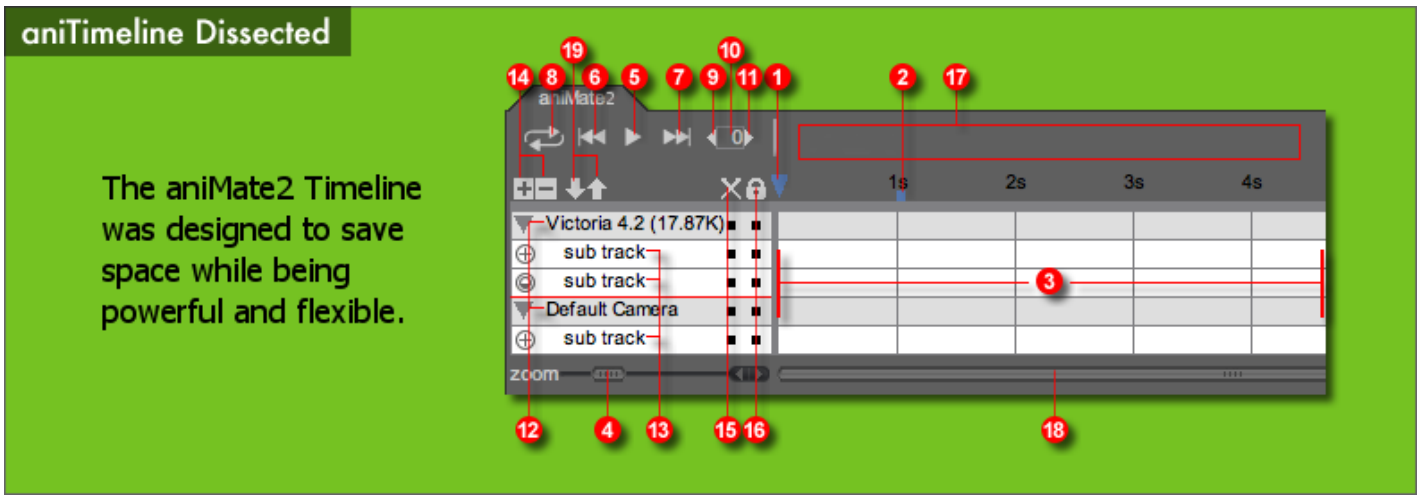
Click here to show folders

aniBlocks in the Previewer expand to show you their name as you roll over them. Drag aniBlocks to the aniTimeline. A red line shows you where the aniBlock will start when you drop it.



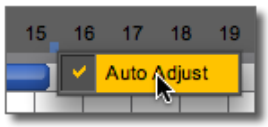
By clicking on the "Folder Dropdown" you can see all the folders located at "DAZ>Studio>Content>aniBlocks". After picking a folder, the aniBlocks in that folder will appear in one row along the bottom of the aniMate2 tab. They are displayed in a very condensed, space saving way but they will expand to reveal their names as you roll your mouse over them. After previewing aniBlocks that you like, just drag and drop them into the timeline. A red line will show you where the aniBlock will start after you drop it.

The aniTimeline



1 Scrubber
The scrubber's location indicates what point in time is being shown in the 3D viewport, AND what frame you are currently editing. You can preview your animation by clicking and dragging the scrubber along the timeline in either direction.

2 Scrubber Stop
This little square can be moved anywhere along the timeline. When the scrubber reaches it, the scrubber is sent back to the first frame of the current play range. It is set by default to automatically move to the end of the last aniBlock in the timeline. If you move the scrubber position manually, the "Auto Adjust" is turned off until you turn it on again. You can turn the Auto Adjust on and off by right clicking on it and toggling it.



3 Play Range
The play range is adjusted by using the "Play Range" scroll bar and the "Zoom" scroll bar. Basically, the visible portion of the animation tracks is the play range. The scrubber will only play within the play range.

4 Zoom
The zoom scrollbar expands or condenses the amount of time you can see in the aniTimeline. You can also use your mouse's scroll wheel on the Timeline to zoom in and out.

5 Play/Stop
This starts (or stops) moving the scrubber forward in time.

6 First Frame
Moves the Scrubber to the first frame of the aniTimeline

7 Last Frame
Moves the Scrubber to wherever the "Scrubber Stop" is, OR the end of the Play Range (whichever is first).

8 Loop
Sets the Scrubber to loop through the Play Range

11 Next Frame
Moves the Scrubber to the next frame.

12 Track
A row (for containing aniBlocks) in the aniTimeline that is assigned to a specific object in the scene. Each object in your scene can have its own Track. A Track can have multiple Sub-Tracks that can blend with or override its animations. Tracks can be collapsed to hide its Sub-Tracks by clicking the small triangle next to the Track's name.

13 Sub-Track
A Sub-Track has all the characteristics of a Track but is a child of a Track and any aniBlocks in it will affect the aniBlocks of its parent Track (if it is enabled).

14 Add/Delete Track
The add button (+) adds a new track for the currently selected scene object. If the currently selected scene object already has a Track it will add a Sub-Track. If you have a Track or Sub-Track selected this button will add another Sub-Track. The delete button (-) will delete the currently selected Track/Sub-Track

15 Active/Inactive
This button(s) allow you to make a Track inactive. When a track shows an "X" by it, it is inactive and will not be used when you play your animation.

16 Lock Track
This button(s) allow you to lock a Track so that it is protected from any changes.

17 Contextual Tool Area
This area will contain tools for whatever is selected in the UI. For instance, when you select an aniBlock, this area will fill with aniBlock editing tools.

18 Play Range Scroll Bar
Use this scroll bar to adjust what portion of the timeline you can see (and therefore what your Play Range is).

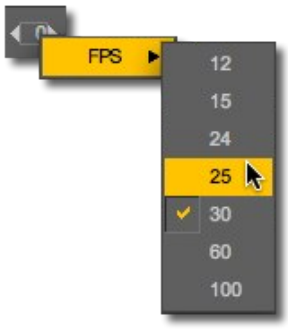
19 Move Track
Use these arrows to move Tracks and Sub-Tracks up

when playing.

and down in the stack.

9 Previous Frame
Moves the Scrubber to the previous frame.

10 Frame Counter/Frames Per Second
Shows you the frame number (of the current second) that the Scrubber is on. By right clicking on the Frame Counter you can change the frame rate of your animation. Frames Per Second (FPS) can be set to 12 15, 24, 25, 30, 60 or 100.



To Add a New Track:

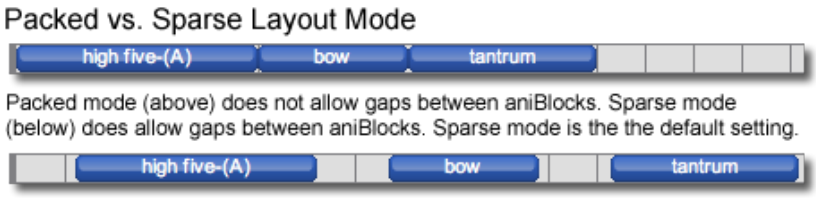
1. Select a new object via the scene tab or by selecting it in the main viewport.
2. Click on the "New Track/Sub-Track" button or right click anywhere on the aniMate2 tab (other than on the Timeline) and select "Add Track"

aniBlocks

What are aniBlocks?

AniBlocks are containers for animations of any length (from a one-frame pose to a lengthy dance) that can come from multiple sources and that are saved in a unique format. An aniBlock in the aniTimeline automatically blends with the aniBlocks that are next to it. AniBlocks made in aniMate2 can contain skeleton or bones animation for complex characters, animation for simple objects like cameras, lights and props and they can also contain morph based animation.

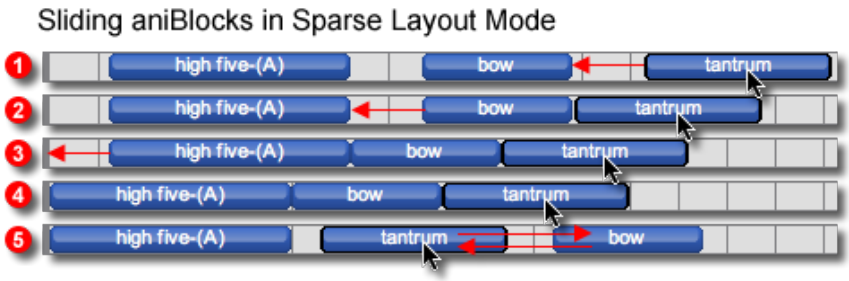
Moving aniBlocks Around on the Timeline



AniBlocks are moved by grabbing the middle of the block and dragging it along the timeline. Multiple aniBlocks can be moved at once by shift-clicking them and then dragging. There are two different "Layout Modes" that affect how aniBlocks interact when you move them around in the timeline. The default layout mode is "Sparse". In Sparse mode you can put aniBlocks anywhere you want along the timeline leaving gaps. The other mode is "Packed". In Packed mode the aniBlocks all stack together with no gaps starting with the beginning of the timeline. When dragging an aniBlock in Packed mode it assumes you want to switch the position of that aniBlock with another. You will see a red line appear where the aniBlock will be placed when you drop it. You can move aniBlocks between tracks by holding down the shift key. This is also the way to change the order of aniBlocks on their own track in Sparse mode.

If you have gaps between aniBlocks in Sparse mode 1 and you slide an aniBlock into another 2 it will push that aniBlock until it hits another 3 and so on and so on.When there are no more gaps 4 it will start switching places with aniBlocks as you push against them 5.

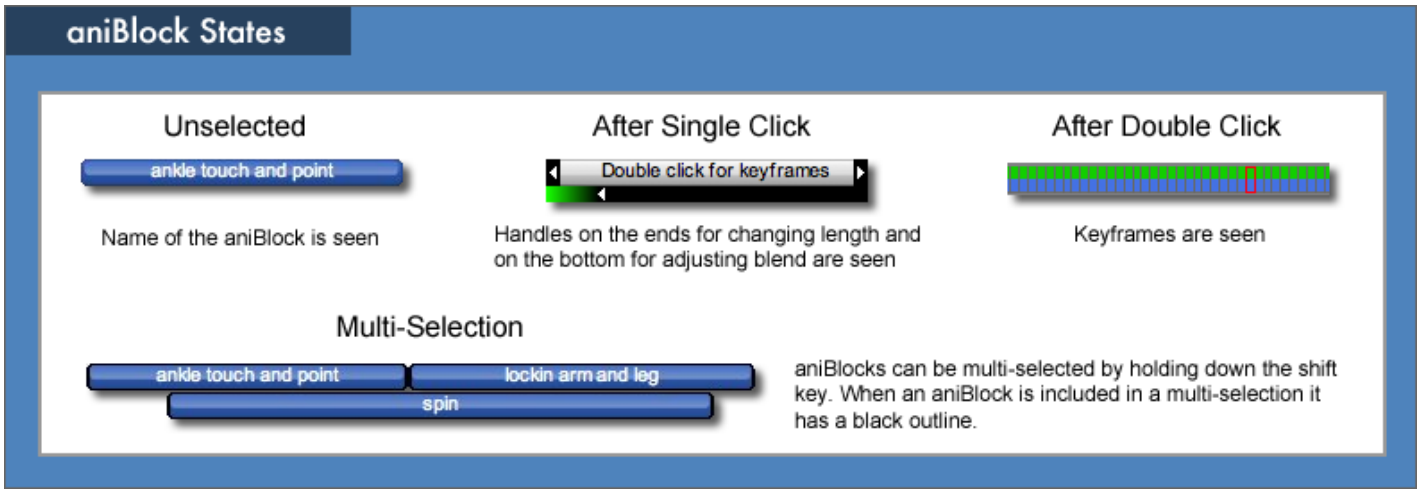
To change "Sparse" to "Packed", right click the track and choose Layout>Sparse or Packed.



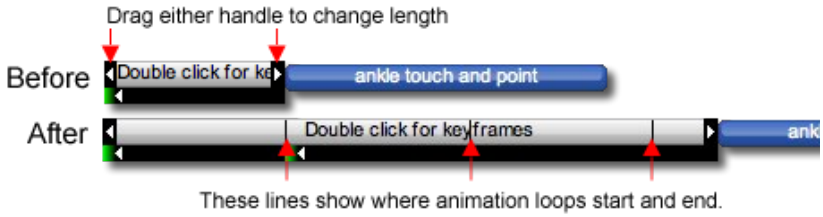
NOTE: The Parent/Base Track's default mode can be switched from "Sparse" to "Packed" mode by right clicking on any open space on the aniMate2 tab to access the Preferences Dialog Box and then checking the box next to "Base track defaults to packed layout". The default for sub-tracks is always "Sparse".

How are aniBlocks edited?

In order to edit an aniBlock it must be in the timeline and it must be selected. You select an aniBlock by clicking on it. When an aniBlock is selected, it's appearance changes as diagrammed in the image below. By shift-clicking, you can select multiple aniBlocks at the same time.



Editing Length and Blend



An aniBlock's length can be changed in a nondestructive way by grabbing a handle at either end and sliding it along the timeline. As you change its length, the aniBlocks to the right will move to adjust for its new length. When you lengthen an aniBlock past its default length it will loop back (and blend) to its animation's starting point. In order to help you keep track of how long the default length of an aniBlock's animation is, each loop is separated by a black vertical line.

When you shorten the length of an aniBlock you are not cutting the actual animation that the aniBlock contains but you are hiding a portion of the animation so that it is not played.

After single clicking an aniBlock it will look like this. 

The bar below the aniBlock with the green gradient and the white arrow is the aniBlock's blend adjuster. The new blending formula for aniMate2 is very good and will usually not need to be adjusted but you do have the option by dragging the arrow to lengthen or shorten the time it takes to completely blend from the previous block. You can turn blending completely off by sliding it all the way to the left (no green showing).

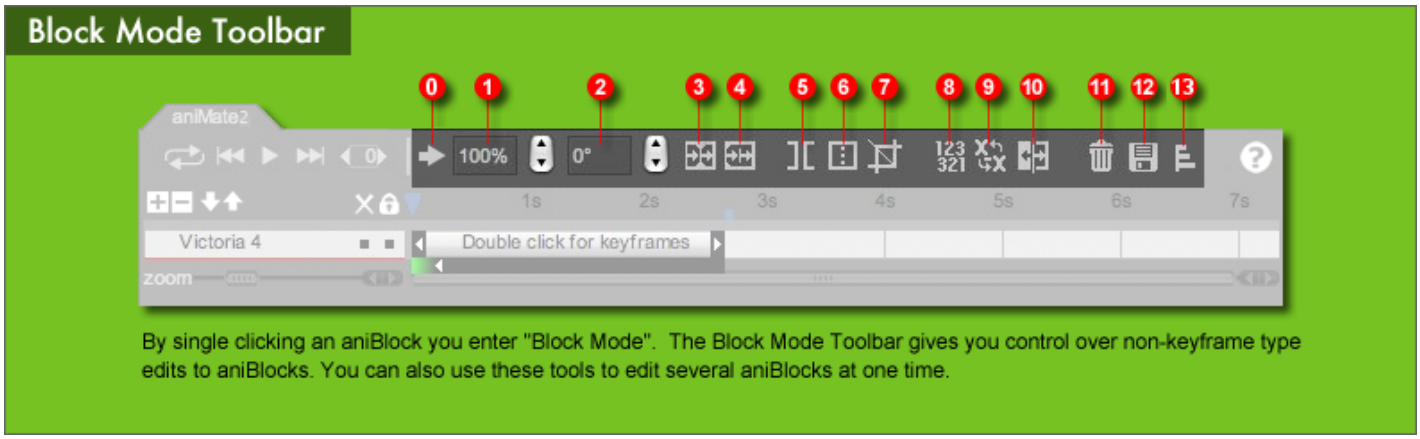
There is also a blend handle that shows up for internal loops. 

This handle controls all loops, so for instance, if you have an aniBlock that you stretched out to reveal 4 iteration (loops) of the animation, the first loop would have a blend handle that could be adjusted. That adjustment would be used for blending between each of the 4 loops.

Block Mode Editing

When you single click on an aniBlock you enter "Block Mode". A new set of tools show up directly above the timeline as illustrated below.

When you edit an aniBlock in "Block Mode" you are editing the aniBlock as a whole and not the individual keyframes inside it. While some of the tools described below certainly affect the keyframes (for instance "Reverse" switches the order of the keyframes) you are not "editing" individual keyframes. To edit individual keyframes you will need to be in "Keyframe Mode".



0 Keyframe Mode:
This allows you to enter keyframe mode of the

7 Crop aniBlock:
The Crop tool can be seen as doing two things. First,

currently selected aniBlock.

❶ Speed:
This tool allows you to adjust the speed the aniBlock will play. 50% would mean the aniBlock will animate the character at half speed and take twice as long to complete. You'll notice that as you adjust the speed, the aniBlock's length will adjust accordingly. If there is another aniBlock after it, that aniBlock may get pushed further down the timeline to make room for it if it's lengthened, or a gap may be created if the aniBlock is shortened.

NOTE: Grabbing the handle of an aniBlock and changing it's length is not the same as changing the length via the speed control.

❷ Facing Direction Offset:
This tool allows you change the facing direction (Y axis rotation) of your character at the beginning of an aniBlock. Let's say your character walks around a corner and now needs to open a door, but it's not lined up accurately to have the hand grab the doorknob. You can use this tool to change the facing direction of any of the aniBlocks along the sequence to get your character perfectly aligned.

❸ Reorient Block:
This toggle switch is on by default. When it is on, the horizontal position of the hips at the end of the prior aniBlock becomes the new starting point for this aniBlock. The facing direction of the hips at the end of the prior aniBlock also becomes the new orientation for this aniBlock. You may notice aniMate quantizes this facing direction to multiples of 45 degrees. Those that need finer control can offset this with the Facing Direction Offset.

❹ Reorient Loop:
This toggle switch is on by default. It acts exactly the same way as Reorient Block but does it for loops inside your selected aniBlock.

❺ Split aniBlock:
Press the split button when the playhead is above a selected aniBlock at the place were you want to split it. Your aniBlock will split into two pieces. Each piece still has the entire animation in it so if you stretched out the aniBlock it would be revealed. If you want to have an aniBlock that contains a cropped animation, you should use the crop tool next.

❻ Join aniBlocks:
The Join tool will make one aniBlock out of two or more adjacent aniBlocks. To use it, select two or more aniBlocks that are side by side and then click. The new "combined" aniBlock will be named the same as the first (earliest in the timeline) aniBlock in your selection. It might be a good idea to save your new aniBlock with a new name.

❼ Crop aniBlock:
Firstly, it will remove all keyframes from the selected aniBlock that are not visible. Secondly, it rebuilds the selected aniBlock to contain only the part that you want to keep. Just click the button after you have trimmed, stretched or split an aniBlock to the size you want it.

❽ Reverse aniBlock:
This reverses the order of keyframes in the selected aniBlock.

❾ Invert aniBlock:
Inverting an aniBlock changes all property values from positive to negative and vice versa. This will be more useful for morph aniBlocks. You should try it out on a full body aniBlock if you want to see some freaky effects. You can always hit the button again to change it back again.

❿ Mirror aniBlock:
This tool allows you to mirror the aniBlock across its X Axis. Example, a punch with the right hand, would become a punch with the left hand (see image at right). Click it again to switch back.

⓫ Delete aniBlock:
Probably no explanation needed here. Hit the button and the aniBlock goes bye-bye.

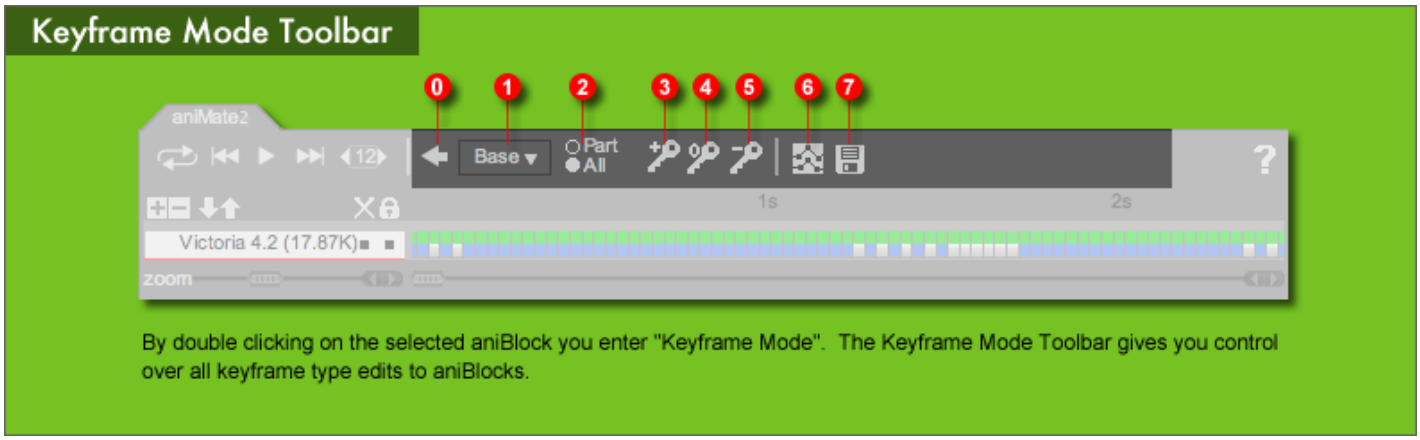
This would be a good place to mention that if you hit the delete key on your keyboard thinking that it will delete an aniBlock, you will probably see your character and the tracks associated with it disappear instead. This is because we cannot take control over certain keys from DAZ Studio (the delete key is one of them) and so the delete key removes the selected item from the scene. If you end up deleting your character just hit undo and your character and tracks will come back.

⓬ Save aniBlock:
Clicking this button gives you the standard "Save" dialogue box. Name your aniBlock, pick a location to save it and then click "Save".

⓭ Align aniBlocks:
This tool will align all the currently selected aniBlocks to the nearest guide. Guides are the inverted triangles found next to the zoom slider.

Keyframe Mode Editing

Double click on the selected aniBlock to enter Keyframe Edit Mode. In this mode you will see the keyframes of the selected block and have new tools to use. The new toolbar looks like this:



After you are in Keyframe Mode the aniBlock you double-clicked will look something like this... 

0 Exit Keyframe Mode: Click to get out of keyframe mode.

1 Level Picker: This dropdown lets you pick what level you want to see and/or edit. All prebuilt aniBlocks will have animation on the "Base" level. There are 14 other levels that you can use. Levels are keyframe layers that are used to offset the animation of the base keyframe layer/level. So let's say you have an aniBlock where the character kicks in the air about chest height and you want the kick to go well above the head. You can now go to "Level 1" and add a new keyframe at the peak of the kick that rotates the leg to it's new height. You didn't re-key the base level, you added an offset that can easily be adjusted or deleted altogether, leaving your original keyframes untouched. It's a very liberating way to edit animations without the fear of messing anything up. In the image to the right you will notice that the Base level has 95 keyframes, level 1 has 4 keyframes and level 1 is the currently selected level.

2 Part or All: There are two different modes you can keyframe in, "Part" and "All". "Part" Mode only shows you the keyframe information for the part you currently have selected. For instance, if you have the foot of your character selected, you only see keyframes for that foot and no other parts of the character. Also, when you add or delete a keyframe it only affects the selected part. "All" mode, on the other hand, shows you all the keyframe information for the whole character. For instance, if you have no keyframes set for the foot, but you do have keyframes set for the hip, you would still see the keyframes for the hip even though you have the foot selected. In other words, you will not be able to see which parts have keyframes because in "All" mode you will see

3 Add Key: This button adds a key to the frame of the scrubber's current location. Adding a key means that you are saving the current values of the selected part or parts at a certain point in time. aniMate2, like all animation software interpolates the values (i.e. rotation, translation and scale) of each part between keyframes. So if you have a key set on frame 1 for the foot, and the foot is placed on the ground and then on frame 10 the foot is off the ground about waist high, frames 2-9 will be filled in with new positions of the foot that move it smoothly from frame 1 to frame 10. Note – the Add key will only add keys for parts that are already in the aniBlock. It will not create keys for a part that has not already been keyed, even if that part is currently selected.

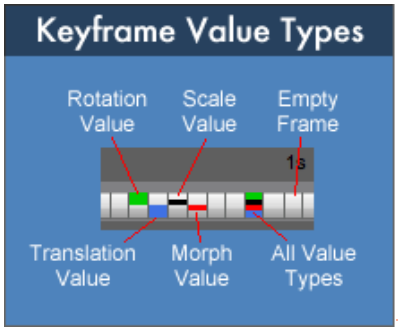
4 Zero Key: This button adds a "Zero" key to the frame where the scrubber is currently at. A Zero key sets the values of the keyframe on the current level to match the values of the "Base" level. This is very useful when you trying to adjust the animation on the base level but only for a short segment of the aniBlock. For instance, if you have an aniBlock of a kick and you want the kick to be higher, you would switch from the "Base" level to another level (like level 1), then you would find the frame where the foot reached the peak of the kick and raise it up to it's new height. The foot is now higher at the peak of the kick but it is also higher on every other frame of the aniBlock. This would not look good if when the foot returned to the ground after the kick it did not touch the ground, so you would add a "Zero" key at the point the foot should hit the ground and it will return to the same position(on the ground) it was on the "Base" layer. Using the Zero Key may take a little getting used to but it is extremely handy. Note: a Zero key only has an affect if you are a level other than the Base level.

5 Delete Key: This button deletes any keyframe information from the frame of the scrubber's current location.

that there is a keyframe set but it could be on just one part or on all parts...there is no way to know. When you add or delete keyframes in "All" mode, it affects every part of your character. Each mode has it's advantages and it will take you time to figure out which mode to use in different situations.

6 Graph Editor: This button toggles the Graph Editor on and off. The Graph Editor is explained in it's own section below.

7 Save aniBlock: This button brings up the standard "Save" dialog box where you can name and save your aniBlock.



There are 4 values types that have unique visual indicators in aniMate2 keyframes. (Illustrated at left)

1. Rotation
2. Translation
3. Scale
4. Morph. (Note: This actually represents any value other than the first 3 but is most often a Morph.)

When you are in Keyframe Mode (aniBlock's keyframes are visible) you will notice that any adjustment you make to your character will be reflected in the appearance of the current frame. If for instance, the current frame is empty and you rotated the arm of your character, the top half of the current frame will turn green. If the current frame already had a rotational value set, the value would be updated but you would see no visual change to the keyframe. Any combination of values can exist in a keyframe.

If you are in "Part" mode, some Studio properties can be adjusted on that part, but really exist on a different one and won't show up. "All" mode does not have this issue.

Keyframe Levels

In aniMate2, all aniBlocks have a base keyframe level and keyframe levels 1-14. Levels are similiar to sub-tracks in how they work. Levels allow for easy adjustments of existing aniBlocks.

Levels 1-14 are for adjustments to aniBlocks. Levels add in their effect. Each level is evaluated individually and then combined. So for example, if you have a walk aniBlock, you can add 15 degrees of bend to every keyframe in the base level by adding a single 15 degree rotational keyframe on level 1. The adjustment's influence can be limited/blended in by placing zero keys on both sides of the adjustment.

And good practice is to make all your adjustment to aniBlocks on level 2-14 and then flatten these adjustments to level 1. Thus you keep the original base level intact and all adjustments to that aniBlock are contained to the levels.

While making adjustment on levels 1-14, the "Zero" and "Key" buttons will only place keyframes on properties that already have keyframes at that level. For example, if you are on level 1 and you use the Studio dials to place a keyframe on the left arm to rotate 15 more degrees, the key and zero button will put rotational keys on the left arm, but not on the right arms. See below for the contrasting behavior.

The base keyframe level is meant for the creators of original aniBlocks. The "Zero" and "Key" buttons will place keys on every property in the aniBlock. Suppose you start with an empty aniBlock with all the motion properties. While you are on the base level, you use the Studio dials to place a keyframe on the left arm to rotate 15 more degrees, the key and zero buttons will put more than just a single rotational keyframe on the left arm. They will put a keyframe on every property contained in the aniBlock.

After watching a video demo once to see how it is done, we are confident anyone can use keyframe levels to make adjustments to existing aniBlocks.

Graph Editor

The graph editor allows the user introspection inside an aniBlock. In block mode you build, in keyframe mode you adjust, in the graph editor you understand. Adjustments can be made with the graph editor, but level keyframing is usually better for that task. The graph editor is excellent at understanding what is going on inside your aniBlock and to clean things up.

The graph editor is available from the Keyframe Mode Toolbar. Click the graph button to enter, click it again to exit. The graph editor will take as much vertical space as possible. The timeline tools (scrubber, zoom, play range scroll bar) will continue to work and are in the same horizontal scale as the tracks.

Arranged in a tree structure according the the skeletal hierarchy, the properties that are contained in the block can be seen on the left. Expand and collapse the parts as necessary. Selecting a property will display its graph. If you select a property or part and hit the delete key button, you will be asked if you want to remove entirely the respective properties from the aniBlock.

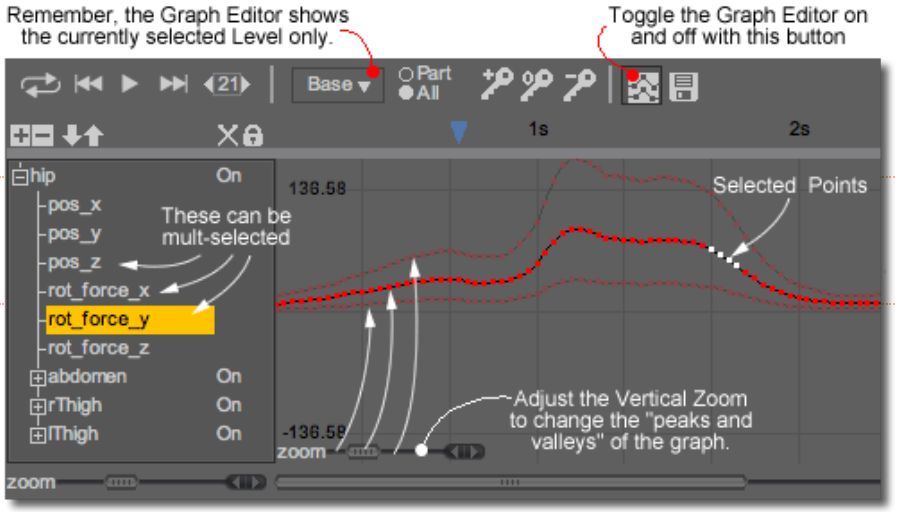
While in the graph editor, another zoom bar is shown. This corresponds to the vertical zoom of the graph. Adjust as necessary. The mouse wheel in the graph editor also controls the vertical zoom.

Also shown on the left is if that particular part/bone is turned on or off in the sub-track.. You can click on the setting to toggle the part on or off for the sub-track.

Select, Move, and adjust the points on the graph.

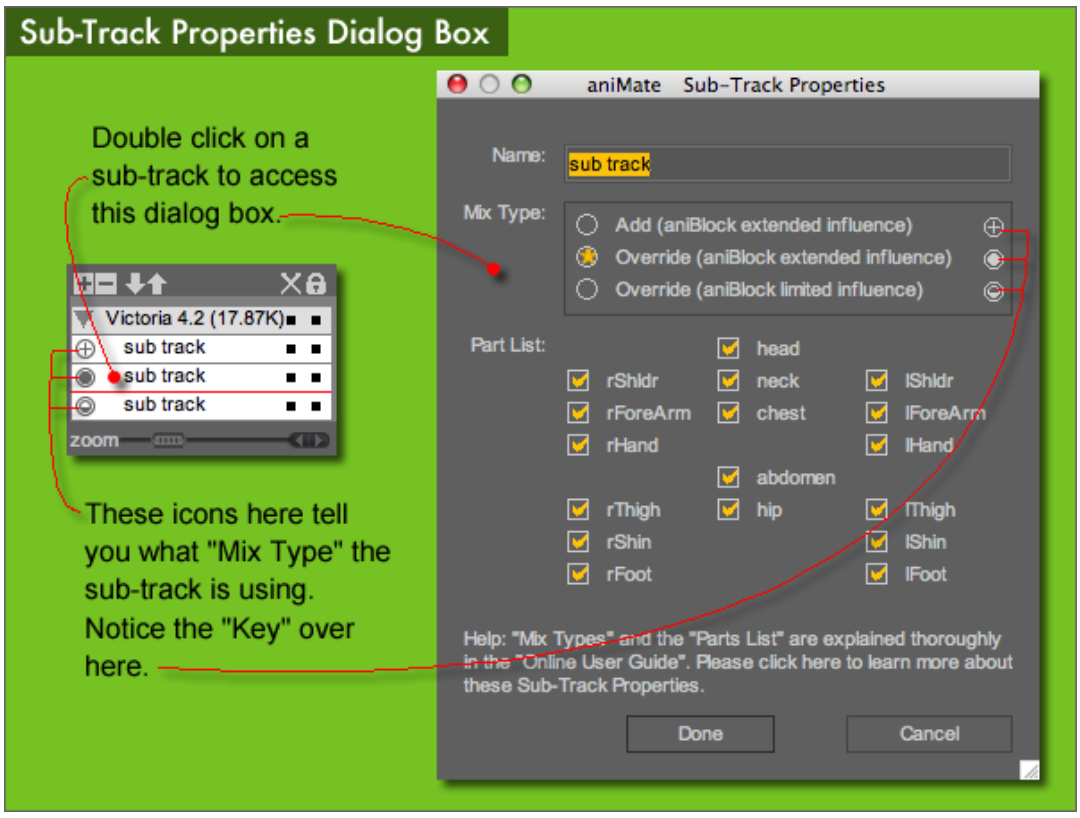
To select, click on an open area and drag across the points you want, then release the mouse. You can then click(need to hit at least one selected point) and drag all the points together or delete them. The zero key button will set all the values of the selected points to zero.

Note: When deleting or adjusting, the rotation properties are linked, so deleting a keyframe in the x rotation property will also delete the y and z.



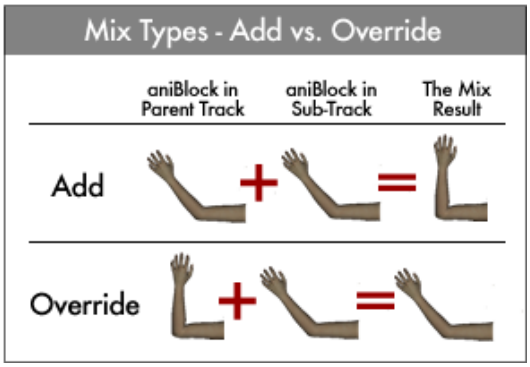
Tracks and Sub-Tracks

Sub-Track Properties



The Sub-Track Properties dialog box is accessed by double clicking on a sub-track.

Mix Types



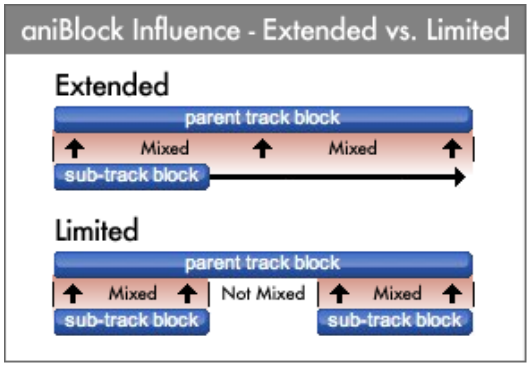
Sub-Tracks can be mixed with the Parent Track in 3 different ways.
Add (aniBlock extended influence)
Override (aniBlock extended influence)
Override (aniBlock limited influence)

Add
An "Add Sub-Track" combines the values of its aniBlocks with the aniBlocks of its parent-track. So, if an aniBlock in the the sub-track bends the elbow at a 45° angle and the aniBlock in the parent-track bends the elbow at a 45° angle the result will be an elbow bent at 90° angle. An Add Track uses "aniBlock Extended Influence", which is explained below.

Override
An "Override Track" tells its aniBlocks to ignore the parent-track altogether, so whatever you have in the sub-track overrides the parent-track animation.

aniBlock Influence Range

Extended



The influence of an aniBlock extends to the next aniBlock or to the end of the playrange. If the aniBlock is the first aniBlock of the sub-track its influence also extends to the beginning of the play range. A sub-track with extended influence is useful when you want to change the posture or positioning of your character over the length of the playrange without editing the aniBlocks on the parent track.

For instance, you may have a character with proportions that don't match the proportions of the character that the aniBlocks were targeted to. You can create a new aniBlock on a sub-track that corrects (offsets) the aniBlock's problems on the parent track.

Limited
The influence of an aniBlock is limited to the aniBlock's own length. This is very handy when you want to add an aniBlock for short or temporary changes from the parent track animation, like "give a thumbs up", or "flash a brief smile".

Parts List

The Parts List allows you to pick what parts of your character will be affected by the sub-track. For instance, you can turn off all of the parts of the lower body and only the upper body parts will mix with the animation of the parent track. A good example of how this would be useful is if you wanted to combine...a "standing wave" aniBlock and a "walk" aniBlock. You would put the "walk" aniBlock in the base/parent track and then drop the "standing wave" aniBlock in a sub-track set to "Override (aniBlock limited influence)". You would then turn off the lower body parts in the Parts List. With these setting your character would walk and wave at the same time.

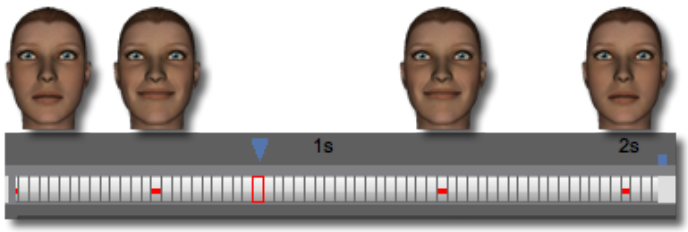
Audio aniBlocks

Audio aniBlocks are meant to help the user synchronize the movement of their characters to audio tracks. Click on the Audio aniBlock button, or right click "Add Audio Block". On Windows you can add a wav file, while on Mac a few more options are available. Choose your file and aniMate2 will create a green colored Audio aniBlock. You can move it around, copy, paste, change the speed, and do most things that are supported by aniBlocks in general. Actions that operate on keyframes are not supported and have no meaning, such as mirror, reverse, invert, etc.

Unfortunately, audio aniBlocks will not transfer to the result of a movie render in DAZ Studio. But many post processing tools are available for the user to accomplish this.

> **The following applys to versions of Daz Studio before 3.1**. If the wav file is saved (in your external audio converter) at a too high bitrate then in aniMate, no matter where the playhead is, the sound will play from the start, which makes lip sync difficult. Saving your wav files at a low bit rate, (like 6000hz, 16bits, stereo in WavePad), will work fine.

Morph aniBlocks



Morph aniBlocks are meant to increase expression and realism. Most are simple and can be created by anyone. As an example, "v4-smile" is an aniblock that contains one property(MouthSmile-Frown) with four keyframes. The first keyframe sets the property to 0, the second and third keyframe raise and sustain the property to 100%, while the fourth keyframe sets the property back down to 0. Note: this is very similiar to how adjustment to aniBlocks are often made.

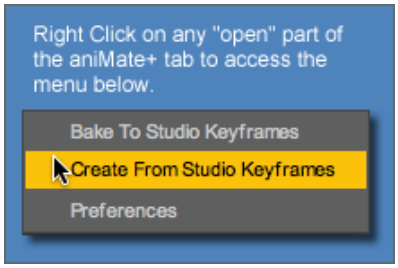
Some morph aniBlocks are meant to loop and some include a slight rotational aspect. "v4-breath nod" is an example of this. Drag the end of that aniBlock to make it loop and the character appears to breath (make sure you have the Inflate morph loaded). If the character is still, you will notice the head and body seems to "nod" like a real person would. For this and other reasons, morph aniBlocks are best put into sub-tracks that "add"(the default).

aniMate2 and Studio Keyframes

aniMate2 is a plugin to DAZ Studio and as such uses as many features as Studio has to offer. With that in mind it should be mentioned that aniMate2 is focused solely on animating things in the Studio environment, while letting Studio handle everything else, including rendering movies, importing and exporting. Studio has great features for importing BVH motions and exporting final animations in formats like Collada. In order to use these features we rely on DAZ Studio Keyframes. You cannot directly import or export from aniMate2. Your keyframe data must first take a quick trip to Studio keyframe land. For this reason we've included two tools in aniMate2:

Bake To Studio Keyframes:
When you complete an animation in aniMate2 that you want to export to another 3D software package, select "Bake to Studio Keyframes" and aniMate will flatten all the tracks in the aniTimeline and put them into Studio Keyframes. You can then export the animation by selecting "File>Export".

Create From Studio Keyframes:
When you import a BVH file it imports into Studio Keyframes. After it's imported, select "Create From Studio Keyframes" and a new aniBlock containing these keyframes will be added to your currently selected base track.



Saving, Rendering and Exporting Your Animation

The terms, Saving, Rendering and Exporting often get confused and are sometimes used interchangeably but the truth is, they are all different. Let's have a look at each one.

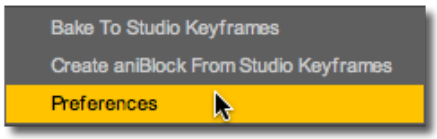
Saving is what you do when you have been working on your animation for a while and you want to keep it just the way it is so that you can work on it later. Do this by selecting "File>Save". This will save your DAZ scene including the current state of everything in the aniMate2 tab.

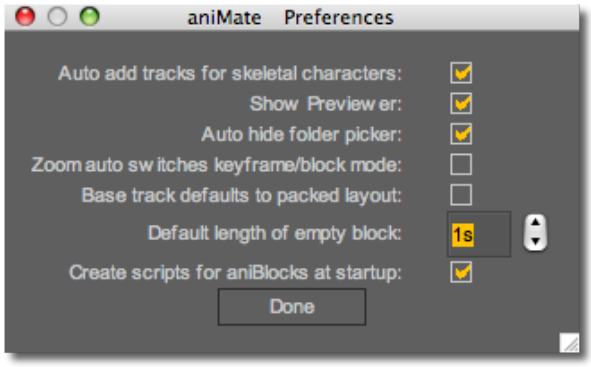
Rendering is what you do when you want to create a movie/video file that you can post on YouTube or send to a friend in an email. A rendered movie file cannot be edited anymore in Studio...it's a one-way trip. Do this by selecting "Render>Render Settings", then adjust the settings as desired (make sure you select "Make Movie") and then hit "Render". You will then be ask to name your movie and pick a location to save it (this is not the same as the "save" in the previous paragraph). For a complete description of how to render movies in Studio please refer to Studio documentation.

Exporting is what you do when you want to take the animation you have created in aniMate2 and work on it in another software package. You do this by first, selecting "Bake to Studio Keyframes" (right click on any open space on the aniMate2 tab) and aniMate2 will flatten all the tracks in the aniTimeline and put them into Studio Keyframes. You can then export the animation by selecting "File>Export". For a complete description on Studio's export options please refer to Studio documentation.

aniMate2 Preferences

The Preferences dialog box is made available by right clicking on any open space on the aniMate2 tab





Options:

"Auto add tracks for skeletal characters" - By default aniMate2 adds a new track for each skeletal character added to the scene. If you would like aniMate2 to not do this, disable this feature. You can still manually add a track for a skeletal character by double clicking on a character in the viewport and clicking the New-Track button.

"Show Previewer" - The previewer is on by default and shows up at the bottom of the scene. Most will want to leave this on, but in certain cases you might want to disable it. An example of this would be if you are working in Studio Keyframes or importing a bvh file and you do not want aniMate2 to take over the character by moving the mouse over an aniBlock in the previewer.

"Auto hide folder picker" - The previewer's folder picker will close itself when you select a folder or when you leave its area. If you would like it to remain open until you click on the button that opened it, disable this feature.

"Zoom auto switches keyframe/block mode" - If you would like aniMate2 to automatically switch to keyframe mode when you zoom in and exit keyframe mode when you zoom out, enable this feature. Even in zoom mode, double clicking is still available to switch the modes. Some will find that they often click on an aniBlock, double click for keyframe mode, and then zoom in to see the keyframes. They then zoom out when they are done and double click to exit keyframe mode. This mode shortcuts that process.

"Base track defaults to packed layout" - By default all tracks default to a sparse layout where each aniBlock is free to be moved and space can exist between aniBlocks. The base track is almost always used for full motion and packed tight with no space between aniBlocks. If you would like the base track to default to enforce this packed tight layout, enable this option. Note: this will not change any tracks that have already been added to aniMate2, only those that are later added.

"Default length of empty block:" - You can override the default length of an empty aniBlock when you create one, but if you always find yourself creating 10 second empty aniBlocks, the default length can be changed for your convenience. If you need sub second length, the crop tool is available. In most cases you will want to make the aniBlock larger than needed and then either crop or crop to keyframes when done.

"Create scripts for aniBlocks at startup" - To facilitate aniBlocks showing up in the Daz Content browser, scripts must be created for each aniBlock file. When first starting up Daz Studio, aniMate2 will check to see if all the aniBlocks under the aniBlock folder have a script file by the same name, for those that don't aniMate2 will create them. If you have many aniBlocks, this checking for each file could increase your startup time. Disable this if you do not use the Daz Content Browser, or if startup time is becoming too long.

aniMate2 file format

aniMate2 uses the same file format as aniMate+ and aniMate1.5. aniBlocks saved out from aniMate+ and aniMate1.5 will work in aniMate2. aniBlocks saved out from aniMate2 will work in aniMate+ and aniMate1.5. Features of aniBlocks specific to aniMate2 will simply be ignored.

Right click on block in keyframe mode

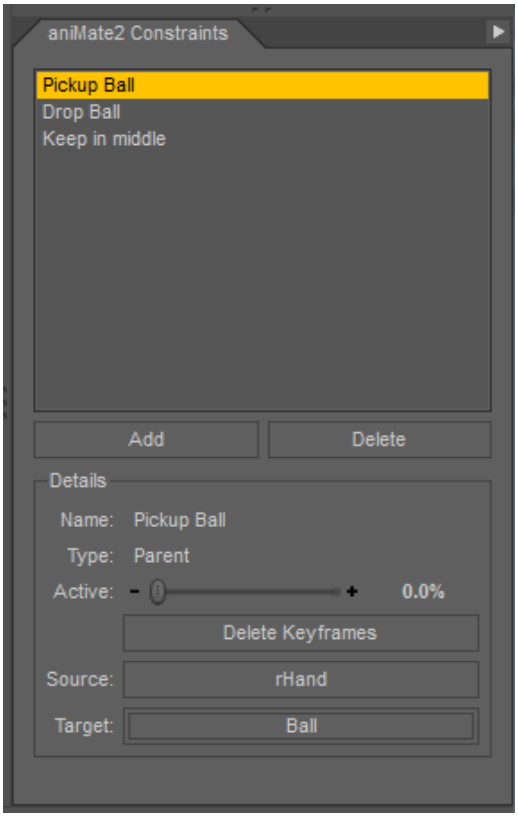
Copy - if you select an range of keyframes, this will show up and allow you to copy the keyframes.
Paste - if you had previously copied keyframes, this allows you to paste them starting at the current playhead position.
Crop To Keyframes - This finds the first and last keyframes in the block and adjusts the boundaries of the block. When creating an aniBlock it is often best to start with a block that is larger than needed and then crop to the boundaries of the keyframes.
Add Length - If you need more room for keyframes on an aniBlock, use this to add length.
Save as New - Save your aniBlock in aniMate2 format.
Save for legacy aniMate - This copies the information from an aniBlock and saves it in legacy aniMate format. See aniMate2 file format for a description.

Keyboard Shortcuts

SHIFT - D = aniMate2 Delete
SHIFT - C = aniMate2 Copy
SHIFT - V = aniMate2 Paste
SHIFT - Z = aniMate2 Zoom In
SHIFT - A = aniMate2 Zoom Out
SHIFT - S = animate2 Key
SHIFT - E = animate2 Zero Key

All these shortcuts can be customized using Edit > Customize, then choose aniMate2.

Constraints



Constraints use information from one or more objects in the scene to control another object in the scene. Certain dynamics can be achieve algorithmically without the need for explicitly keyframing the desired result. As an example, a ball which is picked up and held by a characters hand has a parented dynamic for a certain amount of time. Doing this explicitly with keyframes is tedious. Creating a parent constant and keyframing it on and then off is almost always much easier than keyframing the position and rotation to mimic a parent child relationship.

All constraints have at least one source and one target. The constraint, when active, will calculate information based on the source and alter the position and/or rotation of the target.

The following constraints are available

- Parent* – useful for picking things up. The position and rotation of the target will be altered as if it was a child of the source.
- Position – If one source, then the target will be put at the exact position of the target. If there are two sources, the target will always be at the midpoint. This is useful for when the sources would move during this time.
- Follow* – As if there was an invisible pole that connects the target to the source. It will always maintain the distance between the two when active.
- String* – Like follow, but instead of a pole between the two objects, a string attaches the two objects. As long as the source is less than the distance when activated, it the target won't move. When the source is further than the distance of the “string” then the target gets dragged along.

*Some constraints calculate offsets and as such are meant to be used once. So if you have a character pickup a ball and set it down using a parent constraint and you want to repeat this, you will want to add another parent constraint for the second pickup.

Tips and Tricks

In general you want all your lateral movement on the base track.

Rotations x y z are linked. Deleting or creating a key on x will create / delete on y z

Delete key in Keyframing mode:
Deletes selected keyframes on all nodes.

Delete key in Graph Editor
A. Deletes selected node from the block (together with all rotations for that node).
B. If a point is selected (white), then just that point (together with rotation points on the same node) are deleted.