

Hair Department

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A Plug-In for
CINEMA 4D
SPROCKELING & ASSOCIATES & PARTNERS

Hair Department[©] Manual for Version 1.7

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Contents

INTRODUCTION	3
1. PREPARATIONS AND REQUIREMENTS.....	4
1.1. WHAT'S NEW?.....	4
1.2. WHY POLYGONS?.....	4
1.3. IMPORTANT NOTES.....	4
1.4. SYMBOL EXPLANATIONS	4
2. MAIN PARAMETERS.....	5
2.1. STARTING UP HAIR DEPARTMENT	5
2.2. DISTANCE	5
2.3. LENGTH.....	6
2.4. RADIUS	6
2.5. SECTIONS	6
2.6. GRAVITY	7
2.7. LENGTH OFFSET	7
2.8. DIRECTION OFFSET	8
2.9. ANGLE OFFSET	8
2.10. ... TO VERTICALS.....	9
2.11. RANDOM	9
3. HAIR FORM	10
3.1. SIDEFACES.....	10
3.2. FORM.....	11
3.3. DEPTH VALUES	11
3.4. MIDDLE	11
3.5. WIDTH VALUES	11
4. PROGRESS BAR.....	12
5. HOORAY HAIRS... AND A SKELETON?	13
5.1. THE DUTY OF THE HAIR SKELETON	13
6. ADDITIONAL FEATURES	14
6.1. WHY ADDITIONAL FEATURES?	14
6.2. HAIR DEPT. VOLUME	14
7. SAVING AND LOADING PREFERENCES	15
7.1. HAIR DEPT. SAVE.....	15
7.2. HAIR DEPT. LOAD.....	15
8. ANIMATING THE HAIR.....	16
8.1. CREATING AN ANIMATION TRACK.....	16
8.2. ANIMATION PARAMETERS	16
8.3. STRENGTH	16
8.4. HEADING- / PITCH ANGLES	17
8.5. SPEED	17
8.6. WAVE LENGTH.....	18
8.7. FUNCTION	18
8.7.1. FUNCTION TYPES.....	19
8.7.2. SUBTYPES.....	22
8.7.3. OPTIONS	25
8.7.4. ADDITIONAL FUNCTIONS	25
8.8. OFFSET.....	26
8.9. HAIR STABILITY	26
SUPPORT.....	27

Introduction

Welcome to Hair Department – the successor of CineHair SE. But Hair Department is much more than a simple Plug-In. With Hair Department you can expand the modelling and animation possibilities of CINEMA 4D in an incredible way. You can easily create grass, brushes or any other similar object. The extensive list of parameters in Hair Department lets you control every detail of your actions. Equipped with a lot of powerfull new animation functions, Hair Department now even allows you to create stunning and complex hair motions. Unfortunately the plug-in interface of CINEMA 4D is still restricted to fixed requesters and therefore it sometimes may become difficult to keep all parameters in mind at the beginning. To avoid irritations, read this manual carefully and keep it handy when you're performing your first experiments with Hair Departmen.

We wish you a lot of fun with Hair Department! Your...

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1. Preparations and Requirements

1.1. What's new?

Many things have changed since CineHair SE and a lot of new features have found their way into Hair Department. One of the most important innovations in Hair Department are the new animation features. With over 60 functions you can now push your hair objects into the fourth dimension by assigning various motion effects. Using the new „2-sided hair“ feature you can save 2/3 of polygons and therefore create more hairs with the same system resources. Hair Department now also remembers your last settings and recalls them at the next start-up. Only the parameters of distance, length and radius will be recalculated with every new object. Once you have worked out your settings for a special kind of hair object, you can now save these settings and load them again at any time. Hairs can be modified afterwards, without needing to create them all over again from the beginning. Another new invention is the possibility to create hairs with different forms and at a specified area using a random value. Also very usefull is the new progress bar, which will show you the status of Hair Department while it's calculating something.

1.2. Why polygons?

Hair Department needs polygon based objects to create hairs. The reason for this is, that Hair Department has to calculate the position and alignment of the hairs using so called „normals“. NURBS or splines don't possess these informations and therefore can't be used with Hair Department

1.3. Important notes

If you are importing objects from another 3D software, it can happen that the normals of the object aren't aligned in a constant direction. This side effect can also occur with extruded objects in CINEMA 4D (usually at areas with holes). If you encounter this problem, you can fix it by aligning the normals automatically by choosing „Tools > Structure > Align normals“ in the CINEMA 4D menu. You can also try to fix the problem by selecting the polygons in the structure manager of CINEMA 4D and choosing „Structure Manager > Object > Invert normals“. You can find detailed information about normals in your CINEMA 4D reference manual. As Hair Department assumes you are going to create hairs on organic objects, the surface will be calculated using a technique similar to phong shading. If you are going to create hairs on an angular object (e.g. a cube), Hair Department tries to smooth the edges. And just like the internal smoothing feature of CINEMA 4D, this can lead to some strange effects which is not a bug but a general problem. Another important thing to note is the detail level (number of polygons) of the used objects, which will directly affect the calculation time needed by Hair Department

1.4. Symbol explanations



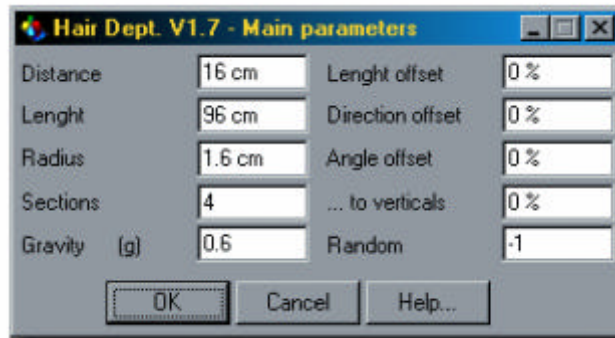
This symbol marks important notes, which will help you avoiding mistakes and problems while using Hair Department



Text passages marked with this symbol are containing useful hints, which will explain special techniques and help you to get the most out of Hair Department

2. Main parameters

When you start Hair Department, you will be prompted with the first of two requesters containing parameter fields. In the first requester you can define the amount of hair to be created, the length and thickness as well as the growing direction and detail level.



„Main parameters“ requester

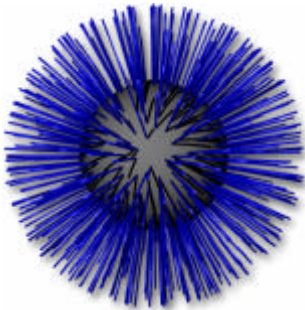
2.1. Starting up Hair Department

1. Activate the object you want to edit in the object manager so it is highlighted red.
2. Now choose „Tools > Plug-Ins > Hair Department“ from the CINEMA 4D main menu. The „Main parameter“ requester will pop up.

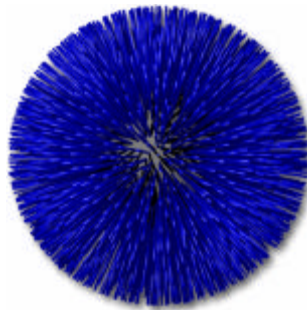
2.2. Distance

Default value = **Object dependent**

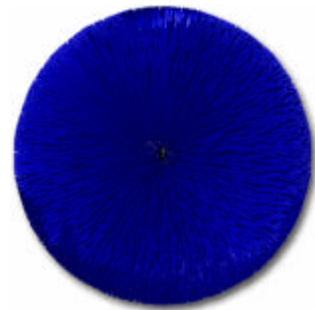
The distance defines the space between the single hairs. Hair Department calculates a base distance depending on the size of the object. The smaller you define the distance, the more hair you will get.



„Distance=default“



„Distance =8“



„Distance =4“

IMPORTANT!



Please keep in mind that for example bisecting the distance will create 4 times more hair and therefore will heavily slow down the calculation of Hair Department. Smaller distance values also cause higher memory usage, which is another critical topic. Try to use the „2-sided-hair feature“ of Hair Department (Chapter 3.0) if possible.



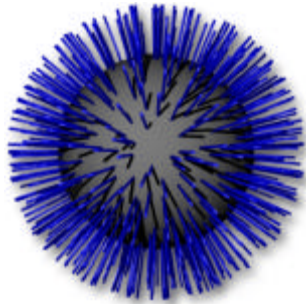
HINT:

It is advisable to force test calculations with all other default values before choosing the final distance value.

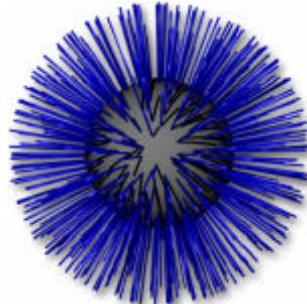
2.3. Length

*Default value = **Default distance** x 6*

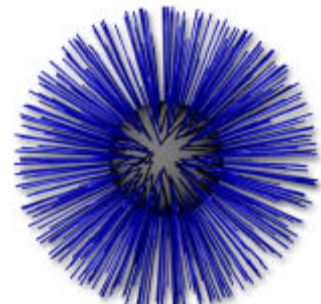
This parameter defines the length of the hair. Hair Department calculates a default value by multiplying the default distance with 6. The length has a tight relation to the „Sections“ (Chapter 2.4) and the „Gravity“ parameters (Chapter 2.5).



„Length = 50“



„Length = default“



„Length = 150“

2.4. Radius

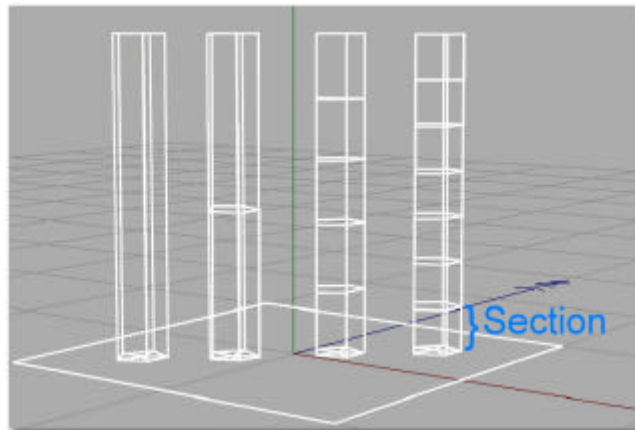
*Default value = **Default value** / 10*

You can define the thickness of the hair using the „Radius“ parameter. Hair Department calculates a default value for the radius by dividing the default distance through 10. The radius also predefines the depth and width values (Chapter 3.3 and 3.5) of the hair form.

2.5. Sections

Default value = 4

This parameter defines the number of sections the hair will be divided into. The sections value should be chosen depending on the deformation of the hair (e.g. „Gravity“ Chapter 2.6, „Direction offset“ Chapter 2.7 or „Form“ Chapter 3.1) to avoid disturbing edges in your hair objects (the higher the value, the rounder your hair will become).



„Sections“



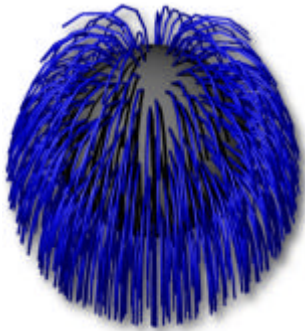
IMPORTANT!

Keep in mind that raising the amount of sections once again results in a higher memory usage and slower longer calculations.

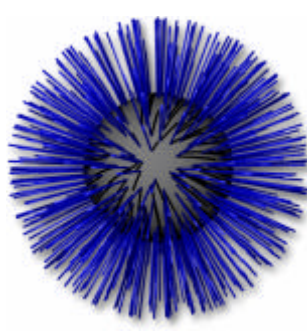
2.6. Gravity

Default value = **0.6**

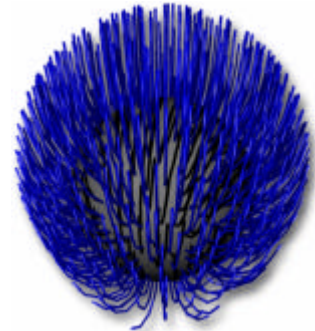
In nature every object is affected by gravity – even your hairs. Depending on the length and stability, hairs can stick out or hang down. With the gravity value you can tell Hair Department how the created hairs should grow. The gravity works along the global Y-axis. If you enter a negative value, the hairs will hang „upside down“. Note that the hair needs at last two sections (Chapter 2.5) to be affected by gravity. This will also avoid the hairs showing inside the base object.



„positive gravity“



„without gravity“



„negative gravity“

If you want to use gravity, you should use segment values between 4 and 14 (Chapter 2.5).



IMPORTANT!

High gravity values (>2) can cause the hair to hang inside the object.



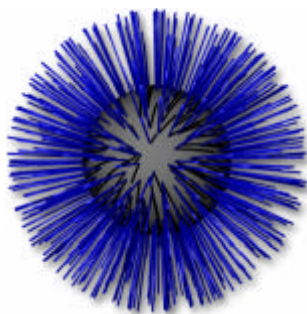
HINT:

Negative gravity is very useful, if you want to create grass or grain on a 3D terrain (e.g. generated by using a height map).

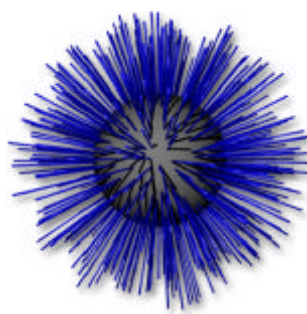
2.7. Length offset

Default value = **0%**

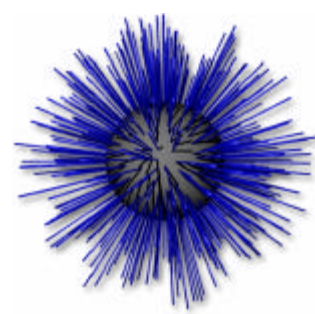
The length offset generates random length variations depending on the given percentage value. E.g.: A value of 25% combined with a length of 100 would generate hairs within a length range of 75 and 125 (+/- 25%). The higher you set the length offset, the more irregular the created hair will become.



„0% Length offset“



„25% Length offset“

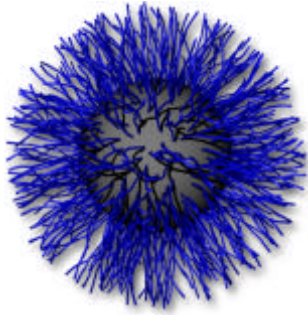


„50% Length offset“

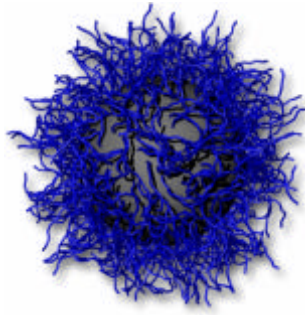
2.8. Direction offset

Default value = 0%

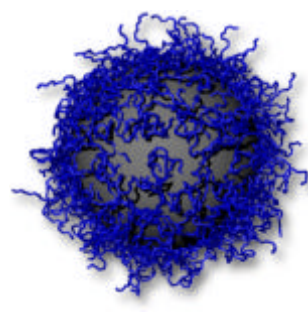
This parameter tells Hair Department how „curly“ the hair should be. Hair Department calculates the polygon normals (see Chapter 1.1) and deviates randomly from the original direction by the given value after every hair segment. Therefore you need at least two sections to recognize a deviation. High direction offset values (20 – 50%) require a high sections value. We recommend values between 10 and 20 sections. VERY high direction offsets can cause strange but also useful effects (e.g. to create worms, metal shavings, ...)



„20% Direction offset –
6 Segments“



„40% Direction offset -
12 Segments“



„60% Direction offset -
18 Segments“



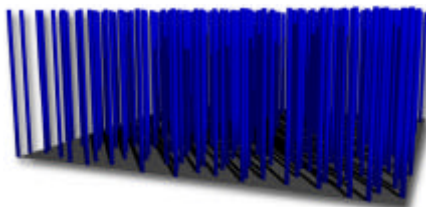
IMPORTANT!

High direction offset values can cause the hairs intersecting themselves and the base object!

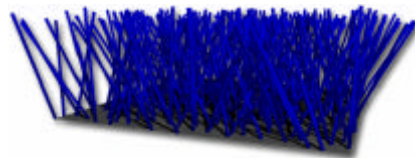
2.9. Angle offset

Default value = 0%

This parameter defines an additional, random angle variation for every single hair. Depending on the base object, the hairs usually grow up in many different angles. You can add a natural, random touch to your hair objects using this feature. The base point for the angle offset is the hair root.



without „Angle offset“

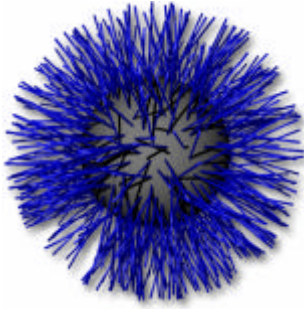


with „Angle offset“

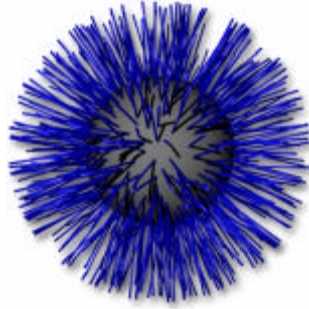
2.10. ... to verticals

Default value = **0%**

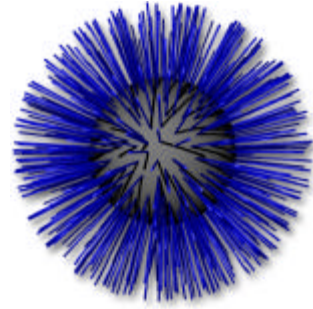
The parameter „... to verticals“ is another way to specify the hairs affected by the angle offset. The given value weakens the angles of all hairs, except (!) the ones with a nearly vertical angle. A value of 50% „... to verticals“ causes an angle lessening of all hairs that are nearly vertical and half the angle offset at all other hairs. A value of 100% „... to verticals“ causes only all nearly vertical hairs to be affected by the angle offset.



„... to verticals = 0%“



„... to verticals = 50%“



„... to verticals = 100%“



HINT:

The parameter „... to verticals“ can be quite useful, if you're using gravity. This is because the gravity doesn't affect hairs which are exactly vertical. These hairs would normally stick off the object. If you want to avoid this, you can define an angle offset and restrict it with this parameter to the vertical hairs.

2.11. Random

Default value = **-1**

With the random parameter you can control the position of the hair. If this value stays the same, the hairs will always be generated at the same positions. The default value „-1“ generates a random value at the start-up, which will be taken at every restart of Hair Department Alternatively you can choose an own value at the start, which will be used further on. The advantage of creating the hairs at a constant position is, that you can use different hair forms (chapter 3) and gravity parameters (chapter 2.5) to generate similar morph targets.



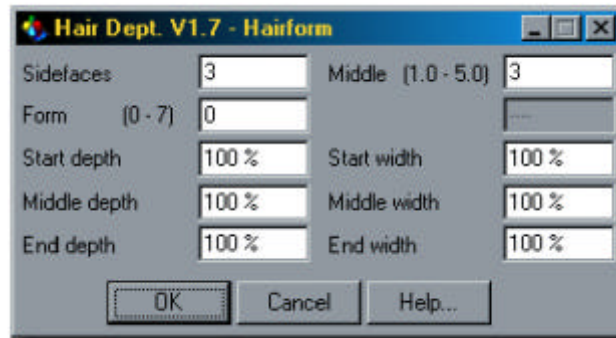
HINT:

The random parameter also allows you to put hairs on objects with a changing shape. The only condition is, that the animation has to be a morph sequence (bone animations for example have to be turned into a morph animation first). Simply create the hairs on the different morph key and use the same default value. After that, copy the morph sequence to the hair object and voilà ... the hairs move perfectly together with the object (it's a good idea to group your base object with the hair object, so you don't have to care about other sequences like position or rotation).

If you have set all parameters, click the „OK“-button or finish your entries by pressing ENTER or RETURN.

3. Hair form

After having set up the main parameters of the hair, you can now define the hair form. In this section, you get the chance to give your hair objects an even more individual look!

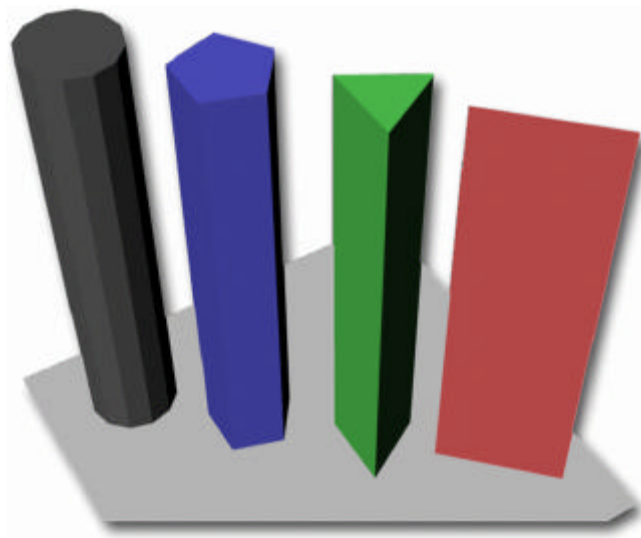


„Hairform“ requester

3.1. Sidefaces

Default value = 2

The sidefaces parameter defines the roundness of every single hair. The default value of 2 creates a simple, flat hair. A value of 3 would generate a triangular hair, 4 would cause a cubic one and so on. If you want to make use of the different available hair forms, you should at last enter a value of 5, so the hairs can be rounded smoothly.



„12, 5, 3, 2 Sidefaces“



IMPORTANT!

Once again keep in mind, that more sidefaces mean more memory usage. A well rounded hair might look great, but can easily eat up your last RAM resources.

3.2. Form

Default value = 0

Well, if you have thought you wouldn't get a chance to change the shape of every single hair, you have been wrong. With the „Form“ parameter, you can choose one of eight different forms. The default value of 0 tells Hair Department to connect the start, middle and end divisions in a linear way (chapter 3.3 – 3.8). The image below explains the 8 available hair forms.



„The 8 different forms“

The forms shown above can vary, depending on the different values set for sections, sidefaces, radius as well as the start, middle and end widths/depths. Changing this values can lead to very interesting results – the possibilities are infinitive.

3.3. Depth values

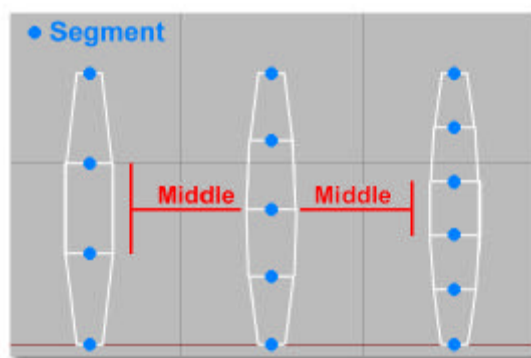
Default value = 100%

Hair Department usually assumes that you are going to create an evenly shaped hair, depending on the radius which represents 100%. By varying the depth values, you can change the look of the single hairs. You could halve the start depth, leave the middle depth at 100 % and double the end depth to get a hair form which is growing bigger at the top like an upside down cone. At a horizontal plane and a view from top onto the object, the Z-axis defines the depth.

3.4. Middle

Default value = Depends on the number of sections

The middle of the hair is not defined by it's length, but the number of sections given (chapter 2.4). A segment value of 4 therefore results in a middle value of 3. Obviously this seems to yell for an explanation. Let's say the hair has got 4 sections. This would result in 5 segment points (see illustration below). The third segment point is representing the middle of the hair. But what happens, if there are 3 or 5 segment? Wouldn't that result in a fraction? No problem. At a value of 3 and a logical middle of 2.5 Hair Department simply sets the second and the third segment point to the same depth/width. You can force the middle to move up or down by changing the value.



„Middle“

3.5. Width values

Default value = 100%

The width parameters work exactly the same way as the depth parameters. In this case the 100% represent the full radius (chapter 2.3). At a horizontal plane and a view from top onto the object, the X-axis defines the width.

4. Progress bar

If you have set all parameters, click the „OK“-button or finish your entries by pressing ENTER or RETURN. Now you can lean back and watch Hair Department doing it's job. A progress bar similar to the one used by CINEMA 4D indicates the current state of calculations in the lower left corner of the editor window.

„Preparing *object name*“ First of all the surface will be calculated.

„Calculate hairs of *object name*“ After that the hairs are calculated.

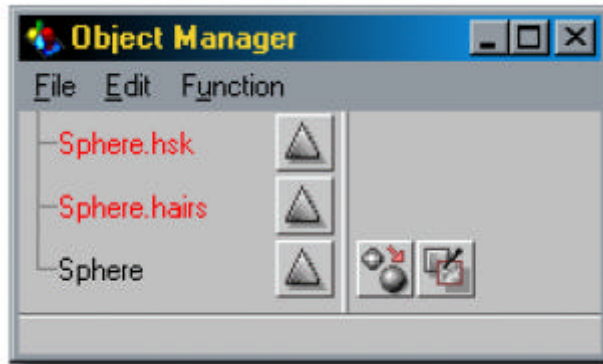
„Calculate faces of *objekt name*.....“ And last but not least the polygons for the hairs are being created.

Every point next to the text entry represents 10% of the calculation progress.



5. Hooray hairs... and a skeleton?

After the calculation of the hairs, Hair Department generates two objects. First there is the hair itself called „Object name.hairs“ and a hair skeleton named „Object name.hsk“.



„Hairs and a Hair skeleton“

5.1. The duty of the hair skeleton

You may ask yourself, what this skeleton thing is good for. The skeleton is needed for several reasons. First of all its shape is used for creating the final hairs. On the other hand you can modify and deform the hair skeleton using CINEMA 4D's integrated tools and create new hairs based on this changed skeleton (see also chapter 6.2). And last but not least the skeleton is a great way to preview all complex actions performed on the hair like animations as it is calculated much faster as the complete hair object. This is one good reason for not deleting the hair skeleton immediately after the creation. You'll never know what it might be good for...



HINT:

You can also save the hair skeleton separately and load it anytime you need it.

6. Additional Features

The additional features of Hair Department can be found in the menu entry „Tools > Plug-Ins >“ – just like Hair Department itself. All Hair Department extensions start with the expression „Hair Dept.“ followed by the name of the function. Simply select them from the menu to start them up.

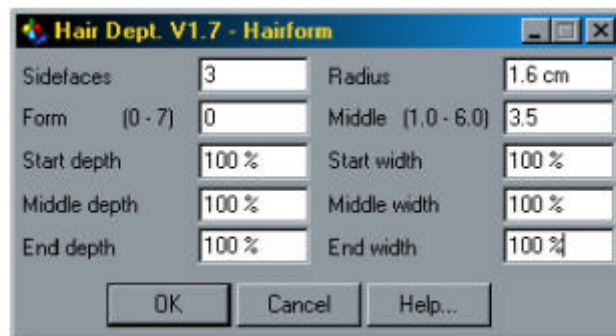
6.1. Why additional features?

It's not guaranteed, that you will be able to realize all your plans with the functions explained so far. Sometimes it's just not enough to modify the skeleton using CINEMA 4D's internal tools (e.g. the magnet) or by changing the base object. This was the reason, why we have thought it would be good idea to equip Hair Department with a few extensions. Currently there is only one extension implemented, but others are planned and will follow in one of the next updates.

6.2. Hair Dept. Volume

If you don't like the look of the created hair polygons, you can simply delete the hair object and create a new one using the old hair skeleton by selecting „Hair Dept. Volume“ from the Plug-Ins-menu. For example you could modify and deform the hair skeleton with tools like the magnet and create a new hair mesh using „Hair Dept. Volume“. This ensures, that you're only modifying the shape of the whole hair form without changing the internal structure of the hair object.

Activate the hair skeleton in the object manager and select „Hair Dept. Volume“. Once more you will be prompted with the „Hair form“ requester, where you can change the parameters (see chapter 3). The only difference to the standard „Hair form“ requester in here is, that you can also redefine the radius.



The hair form requester of „Hair Dept. Volume“

7. Saving and loading preferences

The possibility of saving and loading preferences helps you to store settings you have once made, so you can use them again at any time you like. You can build up a complete „hair database“ or share your settings with others. You can recognize saved H.D-preferences files by the prefix „.hdv“.

7.1. Hair Dept. Save

To save your Hair Department preferences and settings, choose „Hair Dept. Save“ from the CINEMA 4D-Menu „Tools > Plug-Ins“. A file requester will appear, where you can define a path and name for the preferences file.



IMPORTANT!

Currently Hair Department is not able to add the prefix „.hdv“ automatically. This is no problem, as Hair Department also recognizes and loads files without the prefix.



HINT:

We recommend to create a directory for your Hair Department preferences files, so you can find them easily.

7.2. Hair Dept. Load

To load your Hair Department preferences and settings, choose „Hair Dept. Load“ from the CINEMA 4D-Menu „Tools > Plug-Ins“. A file requester will appear, where you can define the path and name of the preferences file to be loaded.

8. Animating the hair

You can create complex hair motions using the animation features of Hair Department. Currently there is one major animation type, which allows the creation of waves and oscillations. This allows the simulation of motions like wind and many other natural moves.

8.1. Creating an animation track

Activate the hair skeleton or object you'd like to edit in the „Timeline“-Window of CINEMA 4D and select „Hair Dept. Animation“ from the local menu „Function > New Track > Hair Dept. Animation“. Hair Department will now create a new track next to the object name entry.

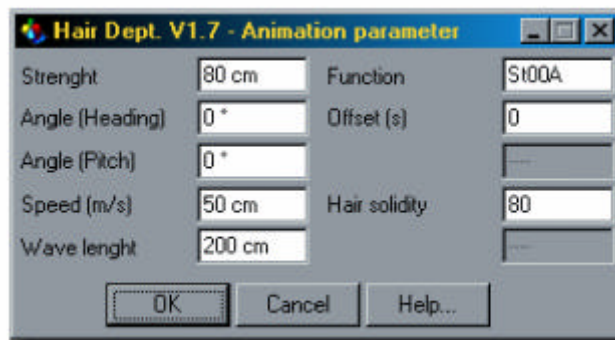


HINT:

Creating animations for detailed hair objects can take a while – especially on „slow“ machines. We recommend you to create a preview animation using the hair skeleton. This is done quite fast and if you're happy with the results, simply drag the whole track onto the hair object (for more details about copying or dragging sequences and tracks as well as creating sequences or keys in the Timeline, check out your CINEMA 4D reference manual).

8.2. Animation parameters

After creating a sequence and a new key, you can double click the key to open the „Animation parameters“ requester. This is the place where you can define up most of the important settings of your animation.

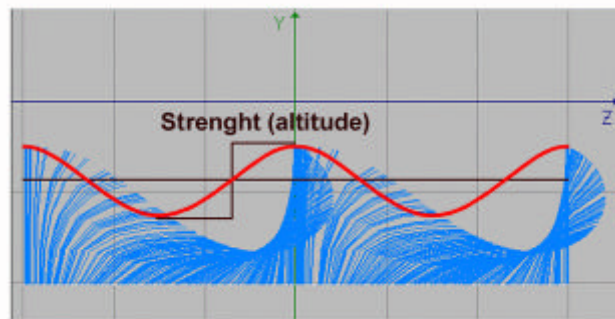


„Animation parameters“ Requester

8.3. Strength

Default value = „80“

The strength defines the amplitude (height or strength of the dormation) of the waves, which will be created on the hair plane.



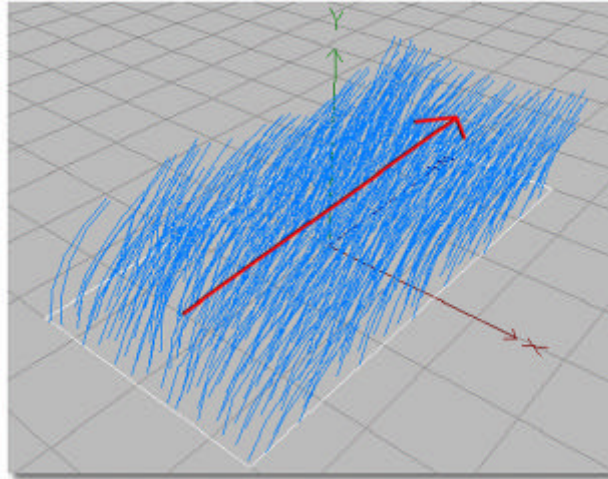
„Strength“

8.4. Heading- / Pitch angles

Default values = „0°“ / „0°“

This parameters define the direction of the wind and therefore change the heading and motion direction of the hairs. Depending on the function type (chapter 8.7) the wind direction and motion direction of the hairs will be the same or divergent. Check out the descriptions of the different function types for details.

If you leave the default values at 0, the wind direction will go along the Z-axis of the object. The heading and pitch values work the same way as in CINEMA 4D.



Wind direction with „heading / pitch“ set to „0 / 0“



HINT:

If you should have problems, defining a specific wind direction using these two values, you can use an empty axis in CINEMA 4D to find a suitable direction (the Z-axis defines the wind direction). Simply note the values shown in the coordinates manager and enter them in the heading / pitch fields of the animation settings requester of Hair Department

8.5. Speed

Default value = „50“

This parameter defines at which speed the waves defined by the wave length (see chapter 8.6) should move along the hair object. The speed is also directly involved with the wave length value and the duration of the animation. This is important if you're going to create a motion sequence with loops. In this case you should follow the steps below to determine a suitable speed value!

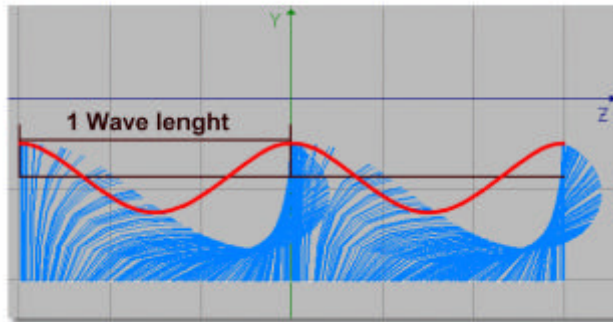
If you want to create a wave with a length of 200 units, which should restart seamlessly after the end of a 1 second animation cycle, the speed value has to be the same as the wave length (200). If the animation cycle has a duration of 2 seconds, you need a speed value of 50% of the wave length. Using a value of 100% would cause the wave motion to repeat two times within the animation cycle. To determine the speed value, you can generally use the physical formula „ $v=s/t$ “. In our case this would mean the following:

$$\text{Speed} = \text{Wave length} / \text{Time of one repeat cycle}$$

8.6. Wave length

Default value = „200“

This parameter defines the length of the wave moving along the hair object.



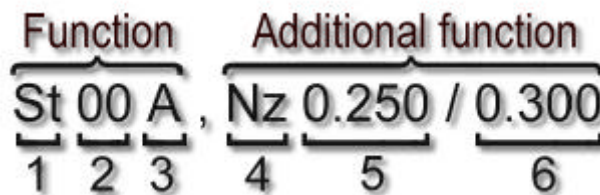
„Wave length“

8.7. Function

Default function = „St00A“

The functions are the most complex part of Hair Department Read the following explanations carefully if you're going to make intensive use of the hair animation features!

As there is no graphical user interface in CINEMA 4D's plug-in technology at the moment, you have to enter the parameters using your keyboard. Currently there are 6 types with 11 subtypes available. These 66 functions can be also modified using 2 further options and one additional function. The default value only defines a simple function which is represented using the first five characters. The additional functions can be added after a comma.



„Function syntax“

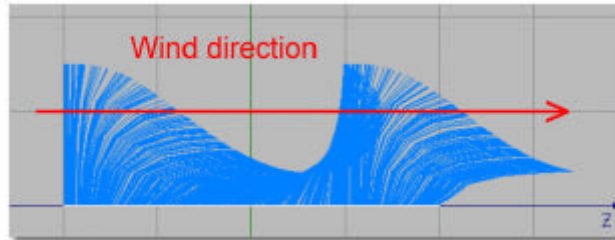
Function:	1. Function type:	„St“, „Ax“, „Rd“, „Ci“, „Tw“, „Nz“
	2. Subtype:	„00“ – „10“
	3. Option	„A“, „F“

Add. function:	4. NOISE:	„Nz“
	5. Strength	Percent value in relation to the original wave strength
	6. Length	Percent value in relation to the original wave length

8.7.1. Function types

„St“ – *Standard = Default*

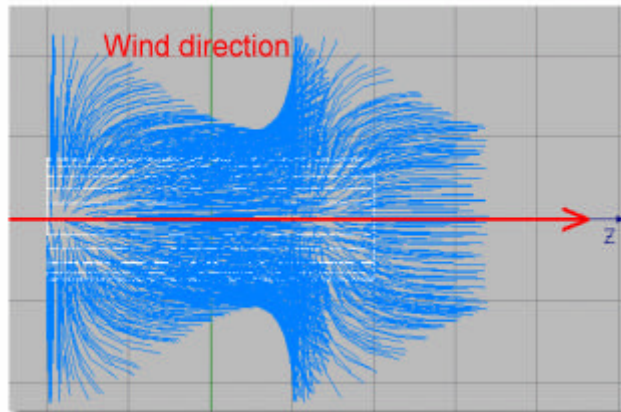
The „Standard“ function type oscillates the hairs using a mathematical function and creating linear waves on a flat plane. The direction of the hairs is defined by the horizontal plane of the wind direction.



„Standard“

„Ax“ – *Axial*

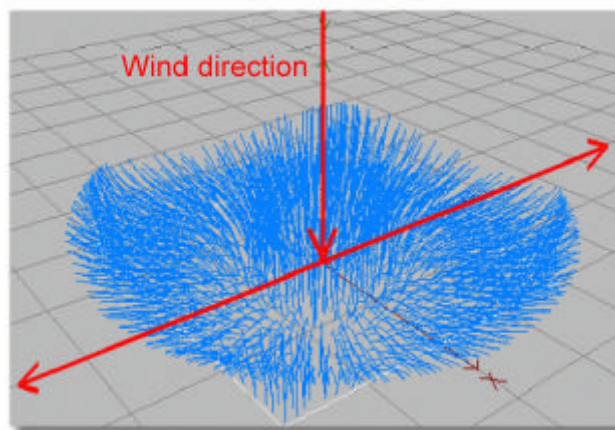
The „Axial“ function type is similar to the „Standard“ function type and creates linear waves along the hair object. The difference is, that the direction of the hairs is defined by the axis of the wind direction.



„Axial“

„Rd“ – *Radial*

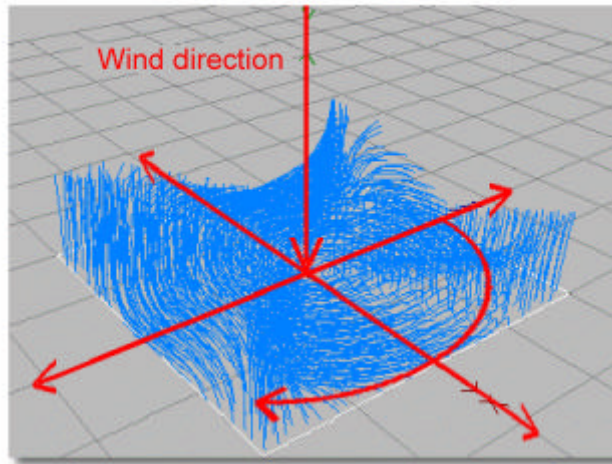
The „Radial“ function type creates concentric waves along the hairs. The direction of the hairs is defined by the plane vertical to the wind direction. A pitch value of 90° on a vertical hair plane would generate a result like shown in the example below.



„Radial“

„Cf“ – Circular

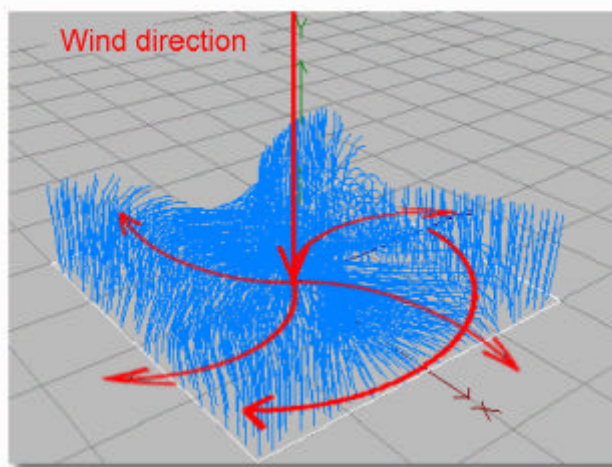
The „Circular“ function type creates radial waves which move around a central point. . The direction of the hairs is defined by the plane vertical to the wind direction. A pitch value of 90° on a vertical hair plane would generate a result like shown in the example below.



„Circular“

„Tw“ – Twister

The „Twister“ function type creates waves similar to the „Circular“ function type, which rotate around a central point like a whirl pool or „eddy“. The direction of the hairs is defined by the plane vertical to the wind direction. A pitch value of 90° on a vertical hair plane would generate a result like shown in the example below.



„Twister“

IMPORTANT!



As it is very difficult to determine the wave length on hair planes with „Circular“ or „Twister“ function types, we have invented the following rule. On a radius which is defined by the strength value, the wave length is equal to the entered value. To determine a wave length, which generates a specific number of visible waves, use the following formula:

$$\text{Wavelength} = \text{Strength} * 2\text{PI} / \text{Number of waves}$$

(2PI = 6,283...)

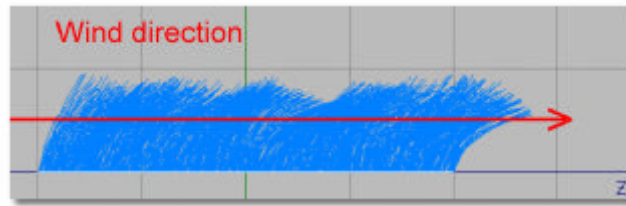


HINT:

As it can be quite irritating and time consuming to find a suitable strength, we recommend to „guess“ a good value and fine-tune the result by changing the hair strength value. .

„Nz“ – Noise

The „Noise“ function type creates a random wave field along the hairs. The direction of the hairs is defined by the horizontal plane of the wind direction.

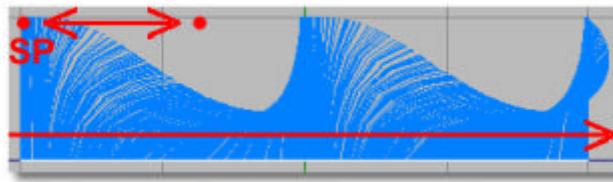


„Noise“

8.7.2. Subtypes

„00“ = Default

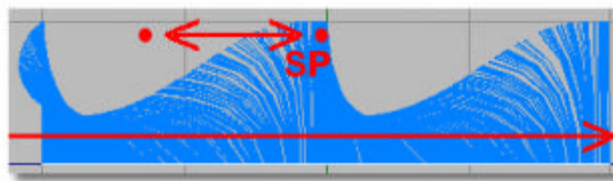
The hairs swing from side to side beginning at the starting position (**SP**) and along with the wind direction (**WD**).



„Subtyp 00“

„01“

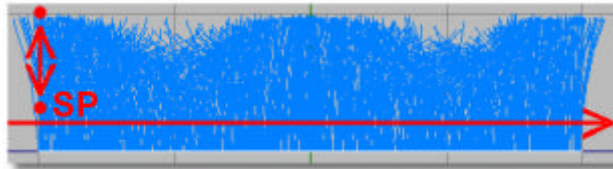
The hairs swing from side to side beginning at the **SP** and against the wind direction **WD**.



„Subtyp 01“

„02“

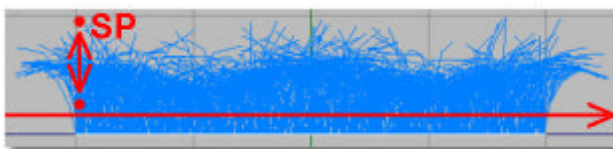
The hairs are pulled up along from the **SP** and along the wind direction **WD**. This effect is best used with hairs which have been created using gravity.



„Subtyp 02“

„03“

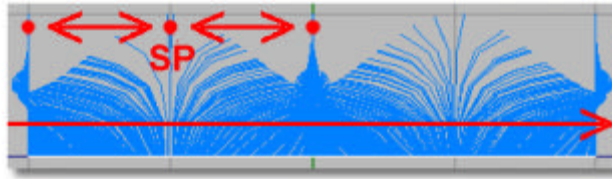
The hairs are pushed down along from the **SP** and along the **WD**. This effect is best used with hairs which have been created using gravity.



„Subtyp 03“

„04“

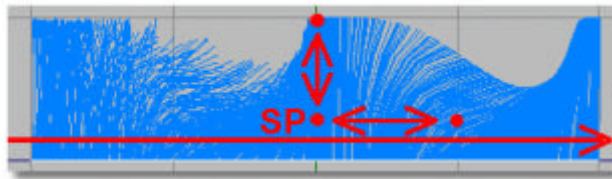
The hairs swing from the **SP** along and against the **WD**.



„Subtyp 04“

„05“

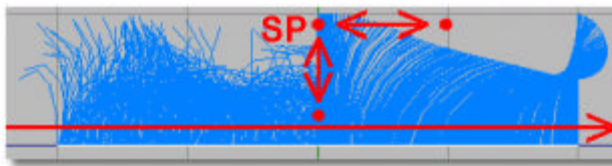
The hairs swing from side to side beginning at the **SP** and along the **WD** and are also pulled up. This effect is best used with hairs which have been created using gravity.



„Subtyp 05“

„06“

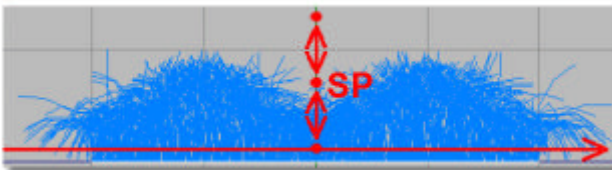
The hairs swing from side to side beginning at the **SP** and along the **WD** and are also pulled down. This effect is best used with hairs which have been created using gravity.



„Subtyp 06“

„07“

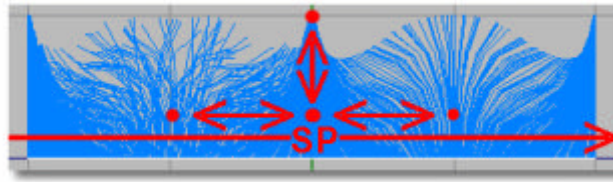
The hairs are pulled up and down beginning at the **SP** and along the **WD**. This effect is best used with hairs which have been created using gravity.



„Subtyp 07“

„08“

The hairs swing along and against the **WD** beginning at **SP** and are also pulled up. This effect can be used both on hairs which have been created with or without gravity.



„Subtyp 08“

„09“

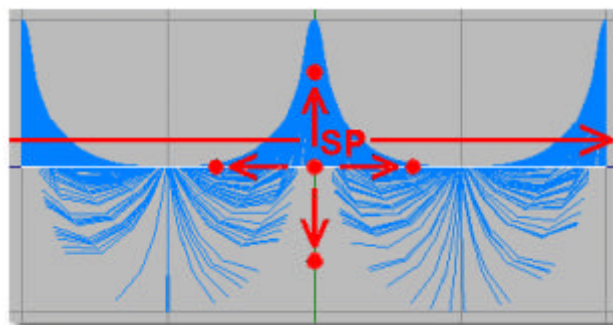
The hairs swing along and against the **WD** beginning at **SP** and are also pulled up and down.



„Subtyp 09“

„10“

The hairs are first pulled down beginning at the **SP** along the **WD**, then against the **WD** and then back up again.



„Subtyp 10“

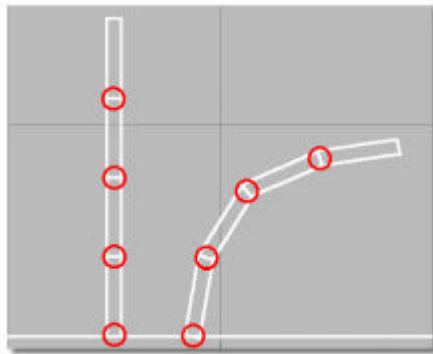
8.7.3. Options

„**A**“ – All = Default

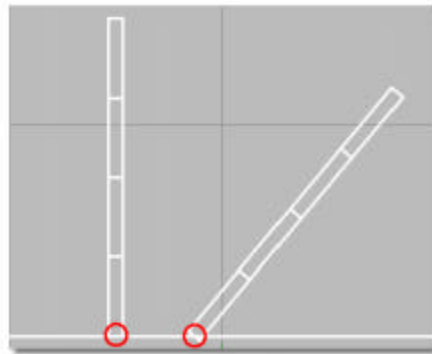
Use this option to align the hairs along all sections (chapter 2.4) while animated.

„**F**“ – Foot

Use this option to align the hairs only at their root points while animated.



„Option A“

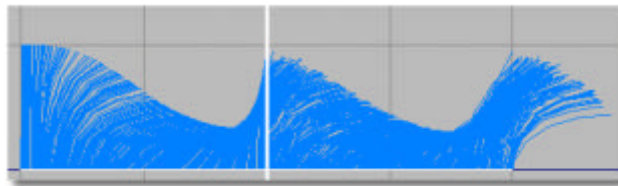


„Option F“

8.7.4. Additional functions

„**Nz**(Value Strength)/(Value Length) - Noise“

With the additional „Noise“ function you can generate a second, random wave over the main wave. This somehow „breaks up“ the main wave which is running along the hairs.



„with out Noise / with Noise“

The additional function „Noise“ / „Nz“ can be entered separated from the first values by a comma. The following value defines the strength of the noise in percent. Here's an example: If the main wave has a strength of 80, the value 0.250 (25%) will lead to a strength of 20. The next value to be entered after a slash is the length of the noise wave. This value also depends percentually on the length of the main wave. This values have to be entered using points and no spaces.

Additional functions
Nz 0.250 / 0.300

Syntax of the additional „Noise“ function

8.8. Offset

Default value = „0“

With the offset value you can shift the motion of the wave within the animation. The entered value equals the number of seconds in the animation. You can enter negative values as well as floating point values.

8.9. Hair stability

Default value = „80“

This option can be used to define the stability of the hair when affected by wind. The higher you set this value, the less will the hairs bend in the wind.

Support

We have tried to do our best to make it as easy as possible for you, to work with Hair Department. If you should still encounter any problems, bugs or simply can't get the results you wanted, we will try to give you as much support as possible.

Describe your problem with a few sentences and send us – if possible – the object or scene as a ZIP or SIT archive. You can also send us screenshots if you think that it may help us, solving the problem.

Please give us information about which Version Type and Number of CINEMA 4D you are using (e.g. CINEMA 4D XL, V 5.29 – Please DON'T send us any registration numbers!), the computer brand (PC, MAC, Alpha, etc.), operating System and the installed hardware. Send your support requests by eMail to the address:

Support@bgs-group.de