

# SteadyCAMPROv3.1 R12.028+ REFERENCE

Uppsala Sweden 2006-2010 Copyright [tcastudios](http://tcastudios.com). No re-distribution allowed without written permission.

SteadyCAMPRO brings you the tools to enhance and speed up your Camera work in Cinema4D by [Maxon](http://maxon.net). It adds precision, flexibility and most important, the editing of Camera animation is extremely fast.

Very few keyframes are needed so the timeline is not cluttered with loads of recordings.

In many cases only a start- and a end keyframe is needed and the behavior of the Camera is set in the Tag controllers not adding any, or very few, extra keyframes.

Having almost all of the settings in a few Tags instead of animating several objects and their settings makes your work smoother and faster.

You can make a perfect "take" in little time while still have room for experimentation and quick adjustments.

A demo of SteadyCAMPROv3 that can be used in [Cinema R12 DEMO](#) can be dloaded from [tcastudios](http://tcastudios.com) There you will also find QT previews/tutorials about SteadyCAMPRO and its functions.

News about SteadyCAMPROv3 can be found at the SteadyBLOG at [tcastudios](http://tcastudios.com).

Enjoy!

Lennart Wåhlin - tcastudios

<a href="#">1.0 General Info Install.....</a>	<a href="#">page 2</a>
<a href="#">2.0 UserData Controllers .....</a>	<a href="#">page 2</a>
<a href="#">3.0 SCPROv3 The Main Camera animation Tool.....</a>	<a href="#">page 3</a>
<a href="#">3.1 NAVIGATE Tag 1.....</a>	<a href="#">page 4</a>
<a href="#">3.2 SPLINES Tag 2.....</a>	<a href="#">page 8</a>
<a href="#">3.3 CAMERARIG Tag 3.....</a>	<a href="#">page 10</a>
<a href="#">3.4 DYNAMICS Tag 4.....</a>	<a href="#">page 12</a>
<a href="#">3.5 TRIM Tag 5.....</a>	<a href="#">page 15</a>
<a href="#">3.6 ORBIT Tag 6.....</a>	<a href="#">page 17</a>
<a href="#">4 SteadyGLIDEv3 The Camera Morphing Tool.....</a>	<a href="#">page 19</a>
<a href="#">5 SteadyGOALv3 Damping device.....</a>	<a href="#">page 22</a>
<a href="#">6 SteadyRIGv3 Create a visual feedback rig.....</a>	<a href="#">page 24</a>
<a href="#">7 SteadyLOADv3 Load SteadyObjects / Tags and Lib.....</a>	<a href="#">page 24</a>
<a href="#">8 SteadyTARGETv3 .A TargetTag with extra settings and control.....</a>	<a href="#">page 25</a>
<a href="#">9 SteadyBANKv3 .A AlignToSpline Tag with extra settings and control.....</a>	<a href="#">page 28</a>

## 1.0

### General information Install

NOTE. SCPROv3.1 needs Cinema R12.028+ to be installed.

SteadyCAMPRO is a collection of COFFEE expressions and Menu plugins for Cinema4D R11 to R12. Cinema R12 is recommended for full support of all SteadyCAMPRO functions.

-SCPROv3. The Main Camera Animation Tool.

-SteadyGLIDEv3. A 16-way camera morphing plugin.

-SteadyGOALv3. A Target/Object damping utility.

-SteadyRIGv3. A Menu plugin to create a visual rig for SCPROv3 and guides for other SteadyTAGs  
Select a SteadyOBJECT, camera/object that have a SteadyTAG and run the Plugin

-SteadyLOAD To load SteadyObject/Tags into the scene.

-SteadyTARGETv3. A alternative Target Tag with "syncing" option. It can use other SteadyTARGET Tags as targets.

-SteadyBANKv3. A alternative AlignToSpline Tag. Make "Autobanking" using a single Spline for example.

### INSTALL R12

SteadyCAMPRO is using a license provided by tcastudios when buying it.

Place the "SCPROv3Plugins" folder inside Cinema and NET/SERVER "plugins" folder.

It is recommended to use a "plugins" folder in the User Preferences of Cinema, found via Edit -> Preferences -> "Open Preferences Folder".

Start / re-start Cinema and type your license number.

You can now load Steady Objects/Tags from Object Manager:

-> "Load Object Preset" and -> "Load Target Preset" (RightClick an Object),

or, use SteadyLOAD itself. It is recommended to add a shortcut to it for faster access.

Go, Window -> Layout -> Command Manager -> Search "SteadyLOAD".

Type a Shortcut and then "Assign".

## 2.0

### UserData Controllers.

The common thing is that none of these expressions (Tags) have their own GUI.

Instead standard UserData Controllers are used.

The use of Cinemas own UserData Controllers means that the user easily can re-name and/or change any values by right clicking the Controller name > Edit Entry.

This is recommended in many cases to have ranges or resolution of the Controllers to suit the animation.

Just be careful not to "Delete Entry" or to change the type (Degrees, Reals, Meters etc, but you can Undo)

As a rule of thumb the default settings should cater for a normal animation.

### 3.0

#### SCPROv3 | The Main Camera Animation Tool.

The Controllers for SCPROv3 are placed on the six Tags attached to the Camera object.



The Tags are:

**-NAVIGATE Tag 1:**

Here you put Objects, Splines and Point Selections from the Object Manager into the TARGET and RIG POINT fields and navigate the Camera using the T (Pan) and R (Move) sliders.

**-SPLINES Tag 2:**

Here you move the Camera and the Target point along splines.

**-CAMERARIG Tag 3:**

Here you adjust the cameras settings globally (FOV, TargetLength etc) and using offset parameters creating various rigs.

**-DYNAMICS Tag 4:**

Adding different kinds of shaking and damping of the Camera.

**-TRIM Tag 5:**

Here you have unique trim options per Target- and Rig Point.

**-ORBIT Tag 6:**

Move the camera to a Orbit position around the Target Objects.

Here we also find the ON/OFF settings for the Camera and the visual rig.

### 3.1 NAVIGATE Tag

Base Tag [ NAVIGATEv31R12 ]

Basic NAVIGATE

NAVIGATE

☐ TARGET-1 ☐ ☐

☐ TARGET-2 ☐ ☐

☐ TARGET-3 ☐ ☐

☐ TARGET-4 ☐ ☐

☐ RIG POINT-1 ☐ ☐

☐ RIG POINT-2 ☐ ☐

☐ RIG POINT-3 ☐ ☐

☐ RIG POINT-4 ☐ ☐

☐ MOVE-T .... 1 ☐

☐ MOVE-R .... 1 ☐

☐ MODE ..... SPLIT (Default) ☐

▼ T & R

☐ T1<>T2 1 ☐

☐ T12<>T34 0 ☐

☐ T3<>T4 3 ☐

☐ R1<>R2 1 ☐

☐ R12<>R34 0 ☐

☐ R3<>R4 3 ☐

▼ Vector Navigate

☐ Use T-Nav 0 ☐

☐ T-Navigate ☐ X 0 ☐

☐ Y 1 ☐

☐ Use R-Nav 0 ☐

☐ R-Navigate ☐ X 0 ☐

☐ Y 1 ☐

► FreeTarget

▼ Adjust

☐ T-Soft Pan .. 1 ☐

☐ R-Soft Move 1 ☐

☐ T-Jump ..... 0 \* ☐

☐ R-Jump ..... 0 cm ☐

☐ R-CLOSEUP 0 ☐

☐ R-AutoTilt .. 1 ☐

☐ T<TRACK>R 0 ☐

☐ C-CLOSEUP 0 ☐

☐ C-AutoTilt .. 1 ☐

Reset Select ☐

Default values in brackets. ( if X, any value can be used)

### 3.1.1

#### TARGET-1 to 4

Put any Object, Spline or Point Selection in these link fields. SCPRO uses these objects to look at. If Field is empty it will use the the calculated position from the link above.

### 3.1.2

#### RIG POINT-1 to 4

Put any Object, Spline or a Point Selection in this link fields. SCPRO uses these objects to move the Camera. If Field is empty it will use the the calculated position from the link above.

### 3.1.2

#### MOVE-T (1 <> 4)

Pan thru all 4 TARGET positions or TARGET and RIG POINTS positions as well as a master fader to Links in the SPLINES and ORBIT Tags.

### 3.1.3

#### MOVE-R (1 <> 4)

Move the camera thru all 4 RIG POINTS positions as well as a master fader to Links in the SPLINES and ORBIT Tags.

### 3.1.4

#### MODE

Sets how to control T and R movement.

They can always be used as Link masters for SPLINES and ORBIT.

- T&R: The regular T and R faders are used to Pan and Move the Camera.
- T&R | T is MASTER: The T faders are driving the corresponding R faders. If you move the T1<>T2, the R1<>R2 position will follow (The actual R faders will not move).
- T&R | R is MASTER: The R faders are driving the corresponding T faders.
- ALL | MOVE T is Master: MOVE-T will pan/move thru all T and R points in sync.
- T only | MOVE-T is Master: MOVE-T will pan thru all T points.
- R only | MOVE-T is Master: MOVE-R will move thru all R points.
- SPLIT [Default]: MOVE-T and R are used separately.

### 3.1.5

#### T1 <> T2 ( 1 <> 2 )

Pans the camera between these two Objects. Can be used as Masterfader (See MODE)

### 3.1.6

#### T12<> T34 ( 0 <> 1 )

Pans the camera between the T1-2 pair and the T3-4 pair. Can be used as Masterfader (See MODE)

### 3.1.7

#### T2 <> T4 ( 3 <> 4 )

Pans the camera between these two Object. Can be used as Masterfader (See MODE)

### 3.1.8

#### R1 <> R2 ( 1 <> 2 )

Moves the camera between these two Objects. Can be used as Masterfader (See MODE)

### 3.1.9

#### R12<> R34 ( 0 <> 1 )

Moves the camera between the R1-2 pair and the R3-4 pair. Can be used as Masterfader (See MODE)

#### 3.1.10

R2 <> R4 ( 3 <> 4 )

Moves the camera between these two Objects. Can be used as Masterfader (See MODE)

#### 3.1.11

Use T-Nav(igate) ( 0 <> 1 )

Mix to using Vector navigation of Target panning.

#### 3.1.12

T-Navigate.

Pan between Targets using a Vector Fader. Navigates clockwise: T1 > T2 > T3 > T4.

#### 3.1.13

Use R-Nav(igate) ( 0 <> 1 )

Mix to using Vector navigation of Camera movement.

#### 3.1.14

R-Navigate.

Move the Camera between RIG POINTS using a Vector Fader. Navigates clockwise: R1 > R2 > R3 > R4

#### 3.1.15

FREETARGET ( 0 <> 1 )

Pans the Camera to a point at a circle around the current RIG POINT.

#### 3.1.16

Free Dist(ance) ( -X <> X in meters/units)

Sets the Radius of the FreeTarget circle.

#### 3.1.17

Free Dir(ection) (-X <> X in Degrees)

Sets the position if the FreeTarget point on the circle. 0 = Global Z direction.

#### 3.1.18

Free UpDown ( -X <> X in meters/units)

Moves the FreeTarget circle up and down.

#### 3.1.19

T-Soft Pan ( 0 <> 1 )

Adds a ease in/out for T panning

#### 3.1.21

R-Soft Move ( 0 <> 1 )

Adds a ease in/out for R movement

#### 3.1.22

T-Jump. (-X <> X in degrees )

Rotates the Camera up or down while panning.

#### 3.1.23

R-Jump. (-X <> X in meters/units )

Moves the Camera up or down while moving between RIG POINTS.

#### 3.1.24

R-CLOSEUP ( -X <> X in Reals)

Moves the Camera rig towards/from the Target along a Track. "Dollying"

### 3.1.25

R-AutoTilt. ( 0 < > 1 )

If the Camera Rig should point at the Target regardless of the Rig-XYZ settings (See CAMERARIG Tag).

0 = Normal targeting,

1 = Full targeting.

### 3.1.26

T<TRACK>R. ( -1 < > 1 )

Normally the Track is a path between the RIG POINT and TARGET ( 0 ).

By using the T or R ( -1 or 1 ) setting the Track can be flat and set to the height of the TARGET or RIG POINT

### 3.1.27

C-CLOSEUP ( -X < > X in Reals )

Moves the Camera towards/from the Target in relation to the Rig..

### 3.1.28

C-AutoTilt. ( 0 < > 2 )

If the Camera should point at the Target regardless of the Rig- and Cam XYZ settings

(See CAMERARIG Tag).

0 = No full targeting and Local Radial panning. The Camera will be parallel to the Rig.

1 = Targeting and Global Radial panning.

(When using Cam XYZ (See CAMERARIG Tag), the target point will be parallel in the X-axis)

2 = Full targeting and linear panning.

### 3.1.29

Reset.

Options to reset all or parts of the Navigate tag to defaults

### 3.2

#### SPLINES Tag 2

Base Tag [ SPLINESv31R12 ]

Basic **SPLINES**

**SPLINES**

☐ T1 Pos 0 ☐ T2 Pos 0 ☐ T3 Pos 0 ☐ T4 Pos 0

☐ sT1 1 ☐ sT2 1 ☐ sT3 1 ☐ sT4 1

☐ Slave T1 to << OFF >> ☐ Slave T2 to << OFF >> ☐ Slave T3 to << OFF >> ☐ Slave T4 to << OFF >>

☐ T-Modulo ☒

☐ R1 Pos.... 0 ☐ R2 Pos.... 0 ☐ R3 Pos.... 0 ☐ R4 Pos.... 0

☐ sR1 1 ☐ sR2 1 ☐ sR3 1 ☐ sR4 1

☐ Slave R1 to << OFF >> ☐ Slave R2 to << OFF >> ☐ Slave R3 to << OFF >> ☐ Slave R4 to << OFF >>

☐ R-Modulo ☒

☐ T-Soft Pos 1 ☐ R-Soft Pos 1

☐ T-Natural 1 ☐ R-Natural 1

Reset..... Select

##### 3.2.1

T1 T2 T3 T4 Pos ( X <> X in Reals)

When Spline Objects are used in the Target Link fields, these faders move the Target points along the splines.

##### 3.2.2

sT1 sT2 sT3 sT4 ( 1 <> X )

Select the segment of a multi segment spline object.

##### 3.2.3

Slave T1 T2 T3 T4 to

Each Spline position can be slaved to one of the Master faders in the drop down menu.

The “inv” options reverse the direction along the spline. The “Center” option will place the Target position at the object center of the Spline.



#### 3.2.4

##### T-Modulo

T Pos values outside 0 and 1 will repeat if Modulo is On. Other wise they are clamped.

#### 3.2.5

##### R1 R2 R3 R4 Pos ( 0 <> X in Reals)

When Spline Objects are used in the RIG POINT Link fields, these faders move the Rig point along the splines.

#### 3.2.6

##### Slave R1 R2 R3 R4 to

Each Spline position can be slaved to one of the Master faders in the drop down menu.

The “inv” options reverse the direction along the spline.

The “Center” option will place the Rig Point position at the object center of the Spline.

#### 3.2.7

##### R-Modulo

R Pos Values outside 0 and 1 will repeat if Modulo is On. Other wise they are clamped.

#### 3.2.8

##### T-Soft Pos(ition) ( 0 <> 1 )

Adds a small ease in/out of the position along the Splines in the Target fields.

#### 3.2.9

##### R-Soft Pos(ition) ( 0 <> 1 )

Adds a small ease in/out of the position along the Splines in the Rig Point fields.

#### 3.2.10

##### T-Natural ( 0 <> 1 )

Mix between an Uniform and Natural movement along the splines in the Target Fields.

The interpolation settings in the Spline object itself is not used by SCPRO.

#### 3.2.11

##### R-Natural ( 0 <> 1 )

Mix between an Uniform and Natural movement along the splines in the Rig Point Fields.

The interpolation settings in the Spline object itself is not used by SCPRO.

#### 3.2.12

##### RESET.

Chose any part of the Tag to be reset to default values..

### 3.3

#### CAMERARIG Tag 3

Base Tag [ CAMERAv31R12 ]

Basic CAMERA

**CAMERA**

☐ CAM Mode ..... SCPRO Default

☐ FOV ..... 53.13 °

☐ AutoZoom ..... 0

☐ FOV Free Target .. 0 °

☐ Auto<FOCUS>Man 0

☐ Manual FOCUS... 2000 cm

☐ Offset FOCUS..... 0 cm

☐ SHARP ZONE ..... 0

☐ BLUR ZONE..... 0

☐ Use BackBlur ..... ☐

☐ Use FrontBlur..... ☐

☐ RIG - XYZ ..... 0 cm 0 cm 0 cm

☐ R-Heading ..... 0 °

☐ R-Pitch ..... 0 °

☐ R-Bank ..... 0 °

☐ Rig -> CamTilt... 0

☐ CAM - XYZ ..... 0 cm 0 cm 0 cm

☐ C-Heading ..... 0 °

☐ C-Pitch ..... 0 °

☐ C-Bank ..... 0 °

☐ C-Local Heading.. 0 °

☐ C-Local Pitch..... 0 °

Reset..... Select

#### 3.3.1

##### CAM Mode

SCPRO Default. SCPRO will use the target position of a Camera put in a TARGET Link field.

GLIDE Mode. SCPRO will additionally use the internal settings for FOV of a Camera in a RIG POINT Link field. The position will also be “locked” so no trimming can be added. Shaking can still be used.

#### 3.3.2

FOV. ( 0.2 < > 174 in Degrees )

Sets the general Field Of View.

#### 3.3.3

PanZoom ( -1.5 < > 1.5 , typically -1 < > 1, in Reals , lower and higher values are “interesting”)

Sets an automatic zoom in or out while panning.

#### 3.3.4

FOV Free Target (-X < > X in Degrees, typically -45 < > 45)

Trims the field of view for the FREETARGET.

### 3.3.5

Auto<FOCUS>Man(ual ). ( 0 < > 1 )

Mix between automatic Target Length and Manual Target Length.

### 3.3.6

Manual FOCUS. ( 0 < > X in Meters/units)

Sets the Manual Target Length.

### 3.3.7

Offset FOCUS. ( -X < > X in Meters/units)

Trims the Target Length.

### 3.3.8

SHARP ZONE ( 0 < > 1)

For DOF and Z-buffer use. A multiply value of the BLUR ZONE. Sets the "Start" value of the Depth settings. (0.1 is for example one tenth of the BLUR ZONE (End Value))

### 3.3.9

BLUR ZONE ( 0 < > X in Reals)

For DOF and Z-buffer use. Sets the "End" value of the Depth settings. A value of "1" is equal to the Target Length.

### 3.3.10

Use BackBlur.

Turnes Back blur on and off.

### 3.3.11

Use FrontBlur

Turnes Front blur on and off.

### 3.3.12

RIG - XYZ. (-X < > X in Meters/units)

Offsets the Rig for tripod and crane behavior.

### 3.3.13

R-Heading / Pitch / Bank ( -X < > X in Degrees)

Rotates the RIG.

### 3.3.14

Rig -> CamTilt. ( 0 < > 1)

Transfers the Rig rotation to the Camera

### 3.3.15

CAM - XYZ ( -X < > X in Meters/units )

Offsets the Camera from the Rig.

### 3.3.16

C-Heading / Pitch / Bank ( -X < > X in Degrees)

Rotates the Camera. Not in use when C-AutoTilt is set to "2" (Full Target)

### 3.3.17

C-Local Heading / Pitch (-X < > X in Degrees)

Rotates the Camera in its Local space,

### 3.3.18

RESET.

Chose any part of the Tag to be reset to default values.

### 3.4

#### DYNAMICS Tag 4.

The screenshot shows a software interface for the 'DYNAMICS' tag. At the top, there's a 'Base Tag [ DYNAMICSv31R12 ]' header and two tabs: 'Basic' and 'DYNAMICS'. The 'DYNAMICS' tab is selected. Below the tab, the 'DYNAMICS' section contains various parameters, each with a checkbox, a numerical value, and a slider bar. The parameters are: SHAKE MAIN (0), SHAKE SPEED (1), Wave<>Noise (0.75), Seed Noise (0), Shake X (-50 cm), Shake Y (10 cm), Shake Z (-15 cm), XYZ Speed (0.5, 1.5, 1), Shake H (2 °), Shake P (-5 °), Shake B (2 °), HPB Speed (1.5, 1, 0.5), Shake FOV (0), Shake Speed FOV (1), Wave<FOV>Noise (0.7), MAIN Pos DAMP (0), XZ Damp (0.7), Y Damp (0.7), MAIN Rot DAMP (0), HPB Damp (0.7, 0.7, 0.7), Damp FOV (0), Damp FOCUS (0), LockFrame (0, -1, -1), and a Reset button with a 'Select' dropdown menu.

Parameter	Value
SHAKE MAIN	0
SHAKE SPEED	1
Wave<>Noise	0.75
Seed Noise	0
Shake X	-50 cm
Shake Y	10 cm
Shake Z	-15 cm
XYZ Speed	0.5, 1.5, 1
Shake H	2 °
Shake P	-5 °
Shake B	2 °
HPB Speed	1.5, 1, 0.5
Shake FOV	0
Shake Speed FOV	1
Wave<FOV>Noise	0.7
MAIN Pos DAMP	0
XZ Damp	0.7
Y Damp	0.7
MAIN Rot DAMP	0
HPB Damp	0.7, 0.7, 0.7
Damp FOV	0
Damp FOCUS	0
LockFrame	0, -1, -1

##### 3.4.1

SHAKE MAIN. ( -1 <> 1)

Master fader for the Position and Rotation shaking. Negative values inverts the shaking.

##### 3.4.2

SHAKE SPEED ( 0 <> X in Reals (shakes per second)

The speed setting for Position and Rotation shake.

##### 3.4.3

Wave <>Noise ( 0 <> 1)

Mix between Sinus and Noise Position and Rotation shaking.

##### 3.4.4

Seed Noise. ( 0 <> X in Reals)

Noise variation.

#### 3.4.5

Shake X / Y / Z ( -X <> X in Meters/units)  
Sets the amount of shake position per axis.

#### 3.4.6

XYZ Speed. ( 0 <> X in Reals)  
Multiplies the position shake speed per axis.

#### 3.4.7

Shake H / P / B (-X <> X in Degrees)  
Sets the amount of rotation shake per axis.

#### 3.4.8

HPB Speed. ( 0 <> X in Reals)  
Multiplies the rotation shake speed.

#### 3.4.9

Shake FOV ( -1 <> 1 )  
Sets the amount of FOV shaking. Negative value inverts the shake.

#### 3.4.10

Shake Speed FOV ( 0 <> X in reals ( shakes per second)  
Sets the speed of FOV shaking.

#### 3.4.11

Wave<FOV>Noise. ( 0 <> 1)  
Mix between Sinus and Noise FOV shaking.

#### 3.4.12

Main Pos(ition) DAMP. ( 0 <> 1 )  
Sets the overall damping of the position.

#### 3.4.13

XZ Damp ( 0 <> 1 )  
Multiplies the damping in the XZ ( horizontal) plane.

#### 3.4.14

Y Damp ( 0 <> 1 )  
Multiplies the damping the Y (vertical) plane.

#### 3.4.15

MAIN Rot DAMP. ( 0 <> 1 )  
Sets the overall damping of rotation.

#### 3.4.16

HPB Damp ( 0 <> 1 )  
Multiplies the rotation damping per axis

#### 3.4.17

Damp FOV ( 0 <> 1 )  
Damps the FOV movement.

#### 3.4.18

Damp FOCUS ( 0 <> 1 )  
Damps the Target Length movement.

#### 3.4.19

LockFrame. (-X < > X in Reals, typically -1 < > length of animation.)

The first value disables damping at the frame with this number.

I.e. if set to "0", any positioning is repeatable at the start of a scene ( if start frame 0 )  
when using damping.

The second value disables damping at the frame with the same number for the duration of the third value.

Also, at FrameLock the SCPRO is "re- rotated" to a minimum angle. This way repeatable rotation  
over the scene is possible that is important for i.e. SteadyGLIDE reading.

#### 3.4.20

RESET.

Chose any part of the Tag to be reset to default values.

### 3.5

#### TRIM Tag 5.

Base Tag [ TRIMv31R12 ]

Basic TRIM

**TRIM**

☐ MAIN T Trim 0 cm

☐ MAIN R Trim 0 cm

☐ Glob->LocTilt 0

**▼ TARGET TRIMS**

☐ T1-Trim 0 cm

☐ tR1-X 0 cm

☐ tR1-Y 0 cm

☐ tR1-Z 0 cm

☐ T1-FOV 0°

☐ T1-Tilt 0° 0° 0°

☐ T2-Trim 0 cm

☐ tR2-X 0 cm

☐ tR2-Y 0 cm

☐ tR2-Z 0 cm

☐ T2-FOV 0°

☐ T2-Tilt 0° 0° 0°

☐ T3-Trim 0 cm

☐ tR3-X 0 cm

☐ tR3-Y 0 cm

☐ tR3-Z 0 cm

☐ T3-FOV 0°

☐ T3-Tilt 0° 0° 0°

☐ T4-Trim 0 cm

☐ tR4-X 0 cm

☐ tR4-Y 0 cm

☐ tR4-Z 0 cm

☐ T4-FOV 0°

☐ T4-Tilt 0° 0° 0°

**► RIG TRIMS**

☐ FREE Tilt 0° 0° 0°

Reset... Select

##### 3.5.1

MAIN T Trim ( -X <> X in Meters/units )

Global trim in world Y of the Target points.

##### 3.5.2

MAIN R Trim ( -X <> X in Meters/units )

Global trim in world Y of the Rig Points.

### 3.5.3

Glob(al)<>Loc(al)Tilt. ( 0 <> 1 )

Mix between rotating the camera in Global and Local space using the trim Tilt controllers.

### 3.5.4

T1 / 2 / 3 / 4-Trim ( -X <> X in Meters/units )

Trims the Target position in global Y space per T-position.

### 3.5.5

tR1 / tR2 / tR3 / tR4 - XYZ ( -X <> X in Units )

Trim the RIG Position per T-position.

### 3.5.7

T1 / 2 / 3 / 4 FOV ( -X <> X in Degrees )

Trim the FOV per T-position.

### 3.5.8

T1 / 2 / 3 / 4-Tilt. ( -X <> X in Degrees)

Trim the rotation of the camera per Target-position.

### 3.5.9

R1 / 2 / 3 / 4-Trim ( -X <> X in Units )

Trims the RIG POINT position in global Y space per R-position.

### 3.5.10

R1 / R2 / R3 / R4 - XYZ ( -X <> X in Units )

Trim the RIG Position per R-position.

### 3.5.11

R1 / 2 / 3 / 4 FOV ( -X <> X in Degrees )

Trim the FOV per RIG POINT.

### 3.5.12

R1 / 2 / 3 / 4-Tilt. ( -X <> X in Degrees)

Trim the rotation of the camera per RIG POINT.

### 3.5.13

FREE Tilt ( -X <> X in Degrees )

Trim the rotation of the Camera for the FreeTarget position.

### 3.5.14

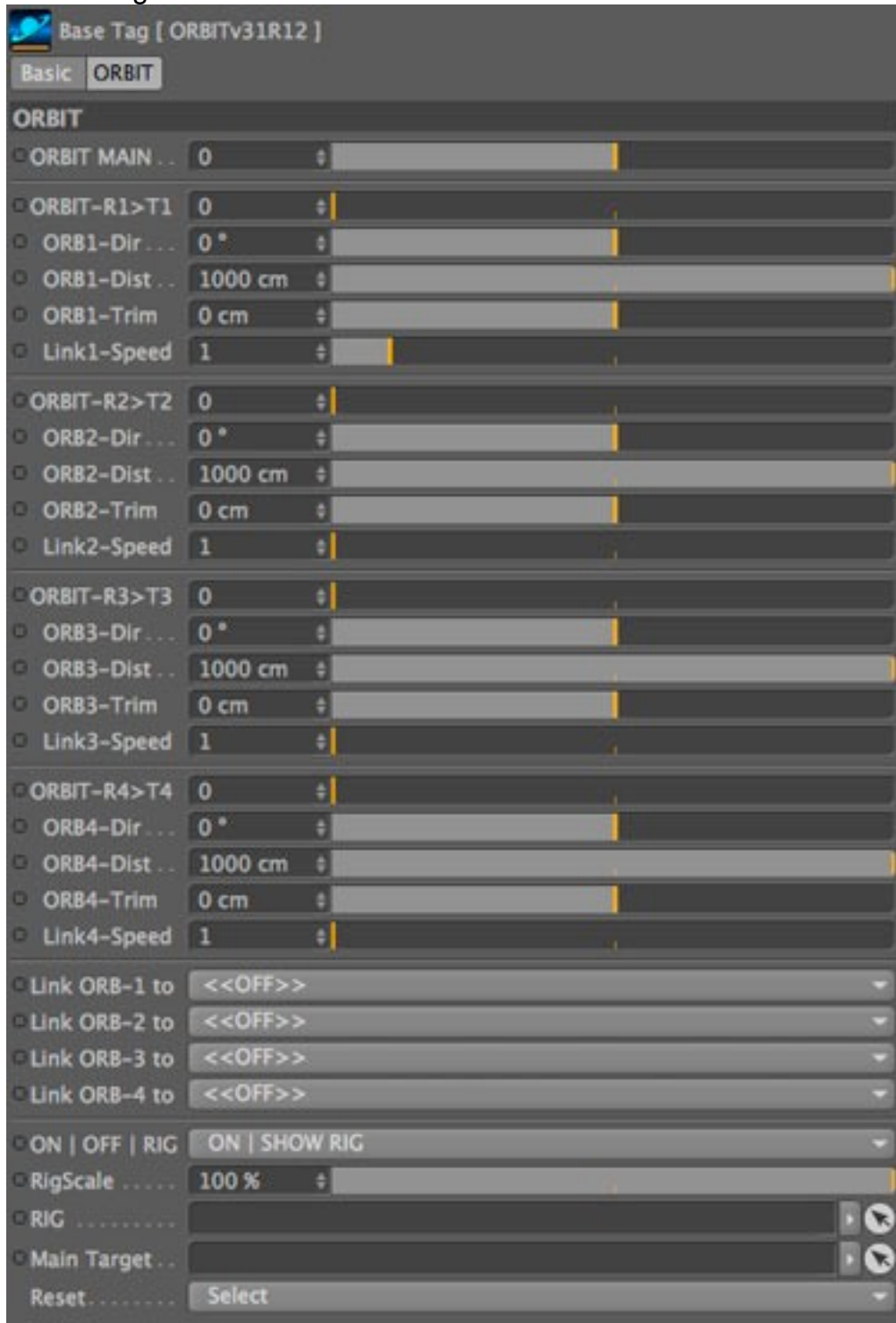
RESET.

Chose any part of the Tag to be reset to default values.



### 3.6

#### ORBIT Tag 6.



#### 3.6.1

##### ORBIT MAIN ( -1 <> 1 )

-1, No orbit. (Over rides the separate Orbit settings).

0 Default, Orbit is set per Target.

1 All targets used for orbit. (Over rides the separate Orbit settings).

### 3.6.2

ORBIT-R1>T1 ( 0 <> 1 )

ORBIT-R2>T2 ( 0 <> 1 )

ORBIT-R3>T3 ( 0 <> 1 )

ORBIT-R4>T4 ( 0 <> 1 )

Move Rig to Orbit Point (Target) .

### 3.6.3

ORB1, 2 , 3 ,4 -Dir(ection) ( -X <> X in Degrees )

Move the Orbit point along the circle around the Target. 0 = Global Z direction

### 3.6.4

ORB1, 2, 3, 4 -Dist(ance) ( -X <> X in Meters/units)

Sets the Radius of the Orbit circle. Negative value will reverse the rotation direction.

### 3.6.5

ORB1, 2, 3, 4-Trim. ( -X <> X in Meters/units)

Trim the orbit circle in global Y space.

### 3.6.6

Link1, 2 ,3 ,4 -Speed ( -X <> X in Reals)

Multiplies the orbit rotation speed by the value of a linked masterfader

Negative values reverse the direction.

### 3.6.7

Link ORB-1, 2, 3 ,4 to

The drop down menu choses a master fader to drive the rotation of the Orbit.

### 3.6.8

ON | OFF | RIG

Turn SCPRO on and off. Show or hide the visual Rig

### 3.6.9

Rig Scale

Scale the visual Rig to fit the scene size

### 3.6.10

RIG.

The Link field where the visual rig is placed by default. (No other function)

Create a visual rig by selecting the SCPROv3 Camera and use the SteadyRIG plugin.

### 3.6.11

Main Target.

The Link field where the visual Main Target Guide is placed by default

### 3.6.12

RESET.

Chose any part of the Tag to be reset to default values.

## 4.0

### SteadyGLIDEv3.

SteadyGLIDE is a tool to morph the SteadyGLIDE Camera/Object thru 16 other cameras/objects put in the CAM Link fields. SteadyGLIDE will use the position and rotation as well as the internal settings from the linked cameras. While SteadyGLIDE is meant for camera work, regular objects can be used in the Link fields as well as the SteadyGLIDE Tag can be put on any other object for effects.

NOTE. If using Target Tags for the objects, please use the SteadyTARGETv3 instead of the regular Cinema4D Target Tag. SteadyTARGET not only adds options but makes the CenterRotation option of SteadyGLIDE to work fully.



#### 4.1

##### CAM-1 to 16

Put the cameras/objects to use for morphing/moving in these Link fields  
If a link field is empty it will use the values of the Link field above.

#### 4.2

##### Move ( 1 <> 16 )

Moves the SteadyGLIDE camera thru the up to 16 linked cameras/objects  
Values between 16 and 17 will move SteadyGLIDE back to the CAM-1.

#### 4.3

##### Soft ( 0 <> 1 )

Adds a small ease in/out for each linked camera/object move.

#### 4.4

Use the Position values of the linked cameras/objects.  
Use the Scale values of the linked cameras/objects.  
Use the Rotation values of the linked cameras/objects.  
Use the Points of the linked cameras/objects. (Point Objects only)

#### 4.5

##### Mode.

Minimize Angles (Default). SteadyGLIDE will rotate between the linked cameras/objects using the smallest angle between them.

Force Rotation. SteadyGLIDE will rotate between the linked cameras/objects using the real rotation values.  
When using Force Rotation, Linked cameras/objects must be in Global space or under a Parent set to World origin  
(Position/Rotation 0,0,0 )for this to work correct.

#### 4.6

Autocenter. Automatically sets the rotation to Panning or Orbiting depending on the distance differences of Cameras and Targets.

#### 4.7

##### PAN <> ORBIT ( 0 <> 1 )

"PAN". SteadyGLIDE will use the center of the Linked cameras to rotate. Best for Panning.

"ORBIT". SteadyGLIDE will use the Target Length point of the linked cameras to rotate. Best for orbiting.

This setting acts as a virtual Null object eliminating the need to add Null objects to the scene for navigating.  
Using SteadyTARGETv3 instead of the regular TargetTag on any CAM object is recommended.

#### 4.8

##### LockFrame ( -X <> X, in Reals, Typically -1 <> to the end frame value)

The first value disables damping at the frame with this number. If set to "0" any positioning is repeatable at the start of a scene when using damping.

The second value disables damping at the frame with the same number for the duration of the third value.

Also, at FrameLock the SCPRO is "re- rotated" to a minimum angle. This way repeatable rotation over the scene is possible that is important for i.e. SteadyGLIDE reading.

#### 4.9

GlideCenter. The Center guide is placed here when using SteadyRIGv3.

#### 4.10

##### SHAKE (-1 <> 1 in Reals, negative values reverse the shaking)

Main shake fader for Rotation.

#### 4.11

##### Shake HPB (-X <> X in Degrees)

Separate amount of shake per axis. Negative values reverse the shaking.

4.11

SPEED ( 0 < > X , in Reals)

Sets the main shake per second.

4.12

Speed HPB (0 < > X in Reals)

Multiplies the shake speed per axis.

4.13

WaveNoise ( 0 < > 1 in Reals)

Mix between Sinus and Noise shaking.

4.14

Seed Noise ( 0 < > X , in Reals)

Selects different Noise.

4.15

DAMP Pos(ition) ( 0 < > 1 in Reals)

Main position damping.

4.16

(Pos) XYZ ( 0 < > 1, in Reals)

Multiplies the position damping per axis.

4.17

DAMP Rot(ation) ( 0 < > 1 in Reals)

Main rotation damping.

4.18

(Rot) HPB ( 0 < > 1, in Reals)

Multiplies the rotation damping per axis.

4.19

DAMP FOV ( 0 < > 1 , in Reals)

Damps the Field of View changes.

4.20

Damp FOC(us) ( 0 < > 1 in Reals)

Damps the Target Length changes.

4.21

RESET.

Chose any part of the Tag to be reset to default values.

## 5.0

### SteadyGOALv3.

SteadyGOAL is a “follow me” item. If the SOURCE is also a camera SteadyGOAL can transfer the Camera settings from the SOURCE.

The screenshot shows the SteadyGOAL control panel with the following sections and settings:

- SOURCE:** A dropdown menu with a play button icon.
- Spline:**
  - SplinePosition:** 0 %
  - Segment:** 1
  - Loop [MODE]:** Auto
  - Natural:** 1
  - Ease:** 1
- Trim:**
  - Trim-X:** 0
  - Trim-Y:** 0
  - Trim-Z:** 0
  - Trim-H:** 0 °
  - Trim-P:** 0 °
  - Trim-B:** 0 °
- Damping:**
  - MAIN DAMP:** 0.7
  - X-DAMP:** 0
  - Y-DAMP:** 0
  - Z-DAMP:** 0
  - Rot-DAMP:** 0
- Settings:**
  - Use Position:** ☒
  - Use Rotation:** ☒
  - Use Camera Settings:** ☒
  - LockFrame:** 0, -1, -1
- Reset:** Select

## 5.1

### SOURCE.

Put an Object here for SteadyGOAL to follow.

## 5.2

### SplinePosition. ( X < > X)

If the Source is a Spline Object

## 5.3

Segment. Select the segment of a multi segment spline.

If set to “0”, the position will jump to next segment when SplinePosition is higher than 100%.

#### 5.4

Loop [MODE]

OFF : Clamp Spline position (0-100%)

ON : Loop the Spline position

AUTO: An open Spline is clamped, a closed spline is looped.

SplineAsObject: Use the center of the object

#### 5.5

Natural. ( 0 <> 1)

Mix between the Uniform and Natural position along the spline.

(The interpolation in the Spline Object itself is not used.)

#### 5.6

Ease. ( 0 <> 1 )

A small Ease in/out along the spline.

#### 5.7

Trim ( X <> X , in units and degrees)

#### 5.8

MAIN DAMP ( 0 <> 1)

Master trim.

#### 5.9

X / Y / Z -DAMP ( 0 <> 1, in Reals)

Damp the position of SteadyGOAL per axis.

#### 5.10

Rot-DAMP ( 0 <> 1 in Reals)

Damp the Rotation of SteadyGOAL.

#### 5.11

Use Position.

Turns using the position of the SOURCE on and off.

#### 5.12

Use Rotation.

Turns using the rotation of the SOURCE on and off.

#### 5.13

Use Camera Settings.

If the SOURCE is a Camera and SteadyGOAL Tag is placed on a Camera, the SOURCE Camera settings will be transferred to this Camera.

#### 5.14

LockFrame ( -X <> X, in Reals, Typically -1 <> to the end frame value)

The first value disables damping at the frame with this number. If set to "0" any positioning is repeatable at the start of a scene when using damping.

The second value disables damping at the frame with the same number for the duration of the third value.

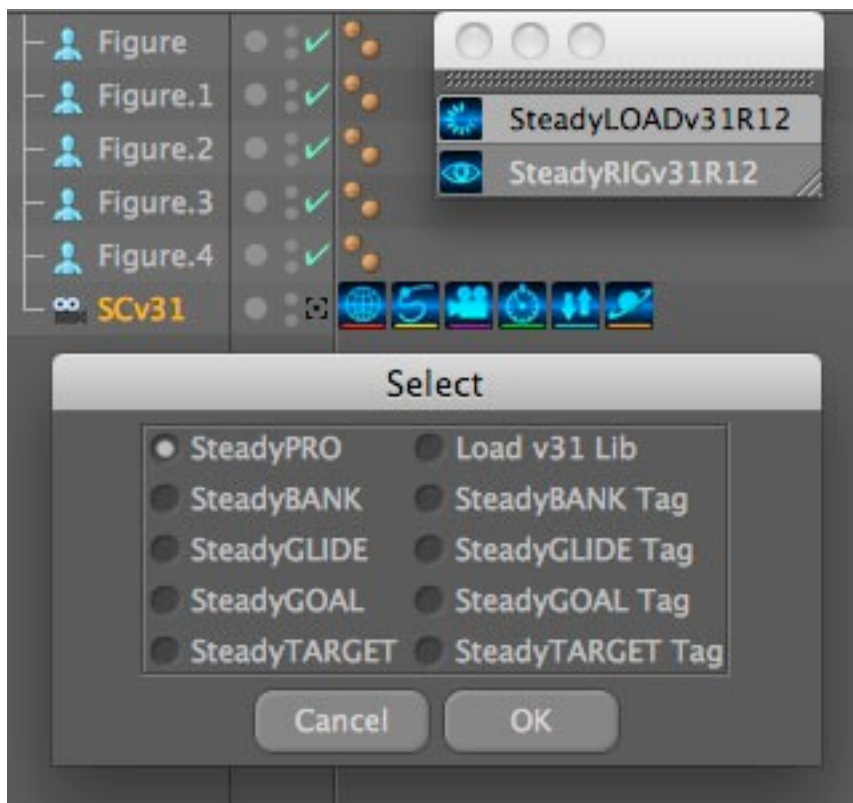
Also, at FrameLock the SCPRO is "re- rotated" to a minimum angle. This way repeatable rotation over the scene is possible that is important for i.e. SteadyGLIDE reading..

#### 5.15

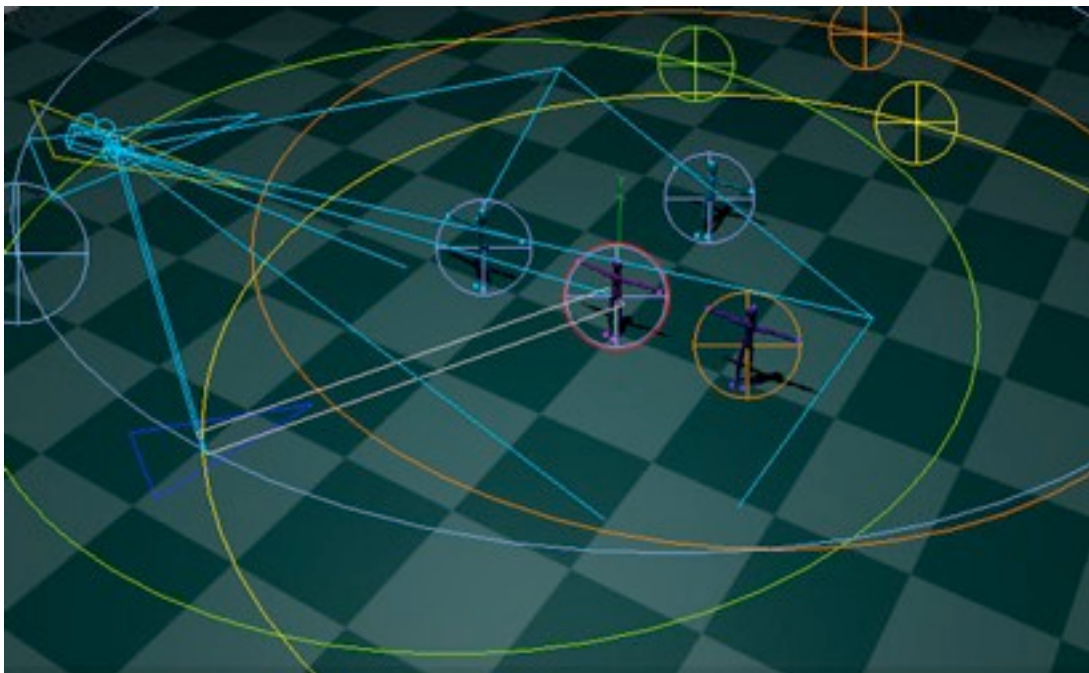
RESET. Choose any part of the Tag to be reset to default/pre-set values.

6

## SteadyRIGv3 Menu Plugin



To create a visual feedback rig for SCPROv3 as well as Guides for all other SteadyTAGs except SteadyGOAL.  
 Select a SCPROv3 Camera and run the plugin. A visual Rig will be added to the scene  
 Select a SteadyGLIDEv3 camera/object and a "Center" Null guide is created.  
 Select a SteadyBANKv3 object and Guides will be added.  
 Select a SteadyTARGETv3 Camera and the two Target Guides will be added



7

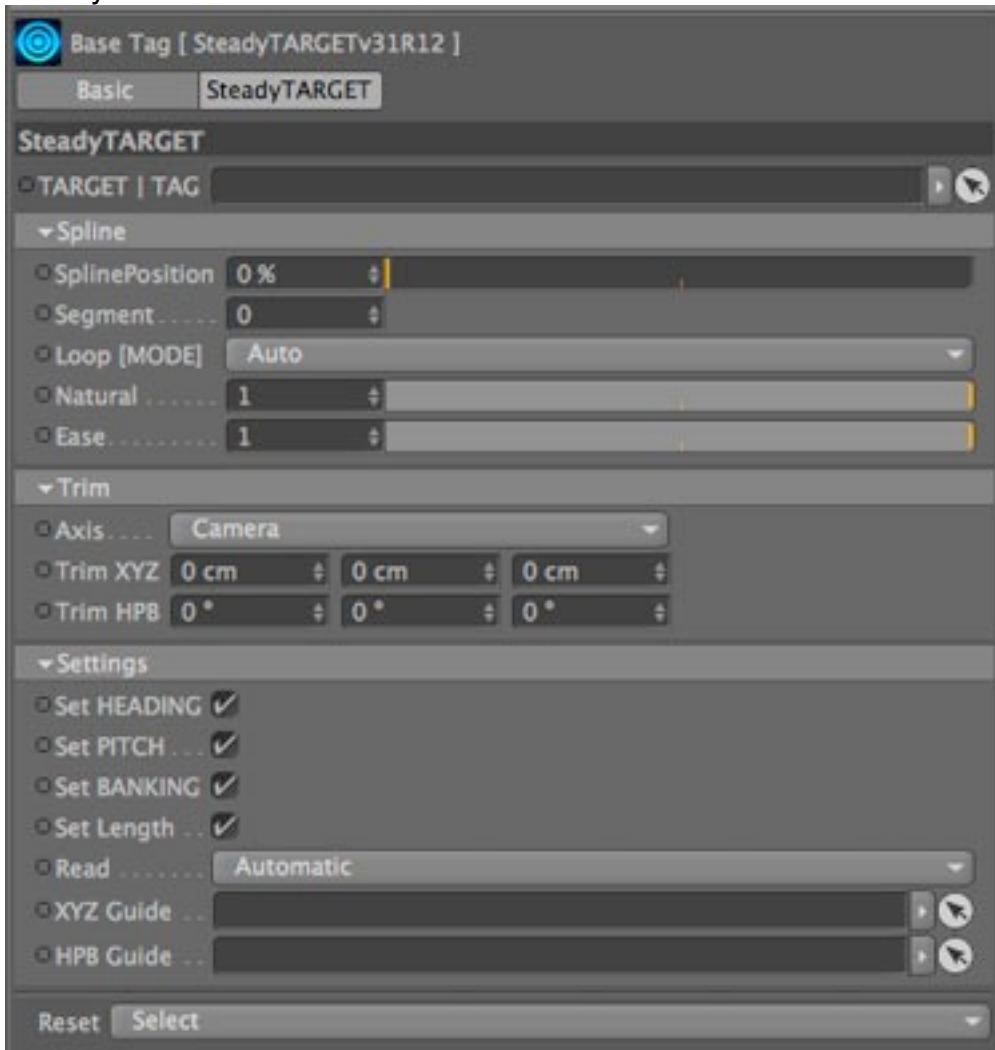
## SteadyLOADv3 Menu Plugin

To Load SteadyObjects / Tags from the Plugins Menu.



## 8

### SteadyTARGETv3



SteadyTARGETv3 is an alternative Target Tag with some extra options. Most notable options are the ability to choose all three axis for targeting and the possibility to add or subtract multiples of 360 degrees(full turns). This is important for SteadyGLIDE using “Force Rotation”. SteadyTARGET also adds a “virtual” null for targeting, so no extra Null object(s) have to be added and/or animated in most cases. Also worth a note is the ability to use other SteadyTARGET Tags as Targets to use the same target object -and- settings for “syncing” several Cameras and or Objects.

#### 8.1

##### Target/Tag

Place an object in this Linkfield to be used as the Target

You can also put -another- SteadyTARGET Tag here to be used as a “MasterTargetTag”

#### 8.2

##### SplinePosition. ( X < > X)

If the Target is a Spline Object

#### 8.3

##### Segment.

Select the segment of a multi segment spline.

If set to “0”, the position will jump to next segment when SplinePosition is higher than 100%.

#### 8.4

Loop [MODE]

OFF : Clamp Spline position (0-100%)

ON : Loop the Spline position

AUTO: An open Spline is clamped, a closed spline is looped.

SplineAsObject: Use the center of the object

#### 8.5

Natural. ( 0 < > 1 )

Mix between the Uniform and Natural position along the spline.

(The interpolation in the Spline Object itself is not used.)

#### 8.6

Ease. ( 0 < > 1 )

A small Ease in/out along the spline.

#### 8.7

Axis.

1. "Camera". Will trim the Target point as seen thru the Camera.

2. "Object" Will trim the target point in the TargetObjects local space. (Similar to adding a Null as a child of the Target object).

3. "World" Will trim the target point in the World space.

#### 8.8

Trim XYZ.

Used for trimming the target point using "absolute" units. Can be seen as the Yellow smaller Guide.

#### 8.9

Trim HPB.

Used for trimming the rotation of the Camera using "relative" degrees. Can be seen as the bigger Orange Guide. The rotation is added to the XYZ trimming.

#### 8.10

Set HEADING

Make the object use the H axis towards the Target. If ON you can trim heading using "TrimXYZ"

#### 8.11

Set PITCH

Make the object use the P axis towards the Target. If ON you can trim pitch using "TrimXYZ"

#### 8.12

Set BANKING

If set to "ON" you set the Banking in the Tag using TrimXYZ. If "OFF" Make the object use the Z axis (Banking) of a Linked driver object (I.E a SteadyBANK object) or the object will keep its banking as it was before adding the Target in SteadyTARGET

#### 8.13

Set Length

Sets the TargetLength if the SteadyTARGET object is a Camera.

#### 8.9

XYZ Guide.

The linkfield where the XYZ Guide is placed by default when using SteadyRIG. Other object can be used as well.

#### 8.10

HPB Guide.

The linkfield where the HPB Guide is placed by default when using SteadyRIG.

#### 8.11

##### Settings.

1. "FromThisTag". All settings are done in the tag itself, even if a MasterTag is used as Target.
  2. "FromMasterTag". All settings are done in the MasterTag.
  3. "Automatic" (Default) If a regular object is used as a Target , all settings are done within the Tag.
- If a "MasterTag" (Another SteadyTARGET Tag) is put in the the Target linkfield, all settings will be done in the "MasterTag".

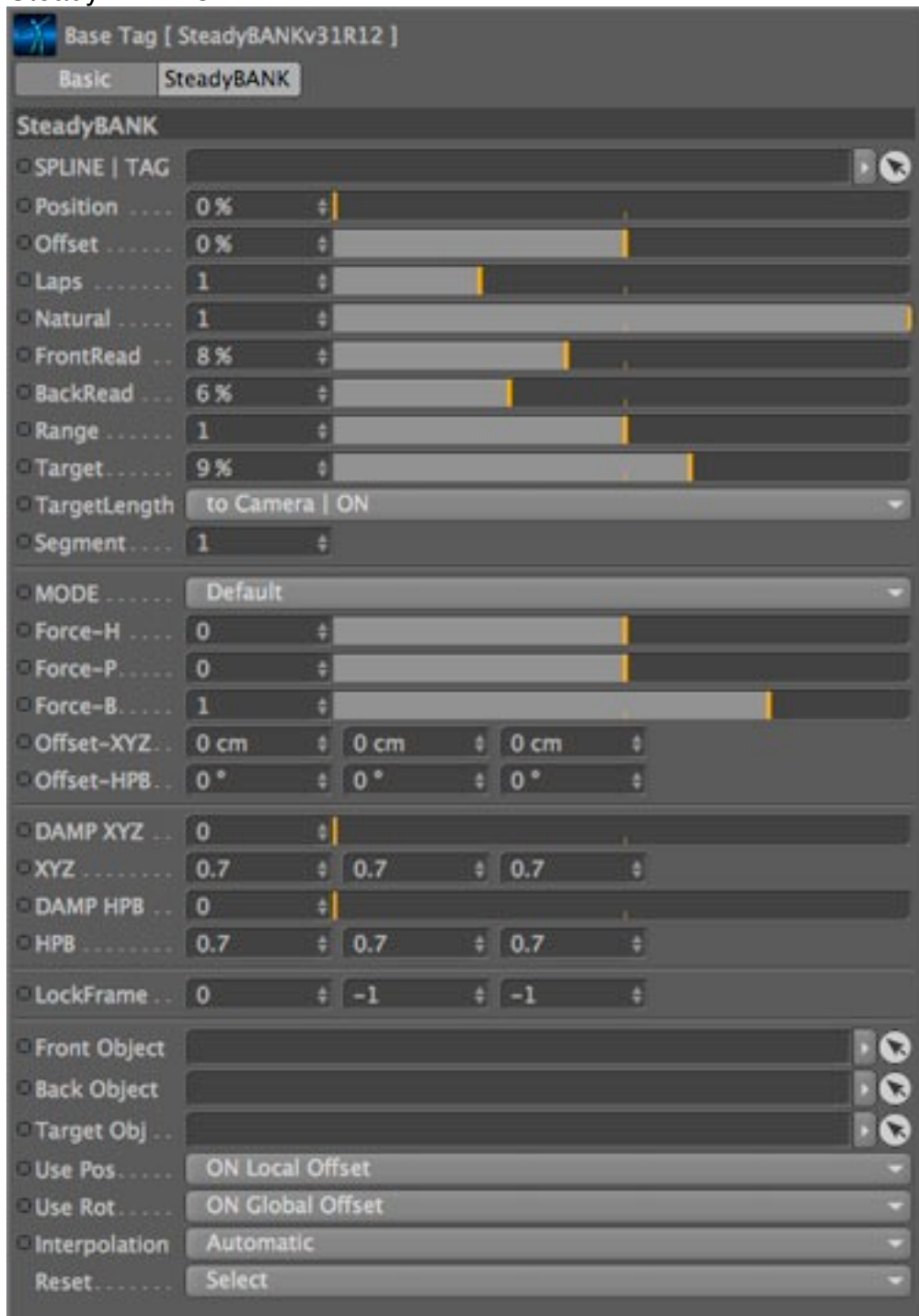
#### 8.12

##### Reset.

Choose any part of the Tag to be reset to default values.

Also Copy settings from a MasterTag is included

## 9. SteadyBANKv3



SteadyBANKv3 is an advanced alternative to the AlignToSpline Tag. It uses splines to move objects or another SteadyBANKv3 Tag to “sync” objects along splines with additional off-settings and behaviors. A typical use would be “Autobanking” along a single spline. SteadyBANKv3 also have a automatic “Modulo” function. If the spline is closed any position value outside 0 to 100 will “loop”, including using the Offset and Laps settings. An open spline will stop movement at the splines ending(s).

### 9.1 SPLINE | TAG

Place a spline in this linkfield to make the object follow it. If a “MasterTag” (Another SteadyBANKv3 Tag) is placed here, it will use the MasterTags splineobject, and its “Position”.

## 9.2

### Position.

Sets the position along the spline. Not used if a MasterTag is present.

## 9.3

### Offset.

Sets a offset of the Position, even if the position is animated

## 9.4

### Laps.

Will multiply the Position value for speeding up or down movement. Not used if a MasterTag is present

## 9.5

### Natural.

Will mix from Uniform to Natural interpolation along the spline.

SteadyBANKv3 does not use the interpolation set in the spline object itself.

## 9.6

### FrontRead.

How much in front of the Camera/object that should be "read" of the spline.

## 9.7

### BackRead.

How much behind of the Camera/object that should be "read" of the spline.

## 9.8

### Range.

Multiply the Front- and BackRead values. The Front- and BackRead positions should typically cover the smallest curve of the spline to work as expected.

## 9.9

### Target.

How far away along the spline the Target (that sets the secondary rotation of the Camera/object) should be placed.

A good rule of thumb would be to have the Front-, BackRead and Target at different values to have as smooth movement as possible. Also very small values are not recommended and very big values can make the Camera/object "flip"

## 9.10

### TargetLength.

If the Object is a Camera it will set the TargetLength to the distance to the Target.

## 9.11

### Segment.

Select the segment of a multi segment spline.

## 9.12

### MODE

Sets how the "FORCE" sliders will work.

#### -1. Default.

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will add or subtract Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

#### -2. One WayPitch. (Experimental, might need damping to look ok)

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will -only- add or -only-subtract Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

-3. FLAP-Curve to Pitch. (I.e for wingparts to "flap")

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will use the curve Heading to add Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

-4. -ALL OFF-

Turns SteadyBANK functions off.

-5. Is CHILD Default. Does not use the Position. Used if the object is a Child. I.e a rodder of a boat or an aeroplane.

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will add or subtract Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

-6. Is CHILD OneWay Pitch. (Experimental, might need damping to look ok)

Does not use the Position. Used if the object is a Child. I.e a rodder of a boat or an aeroplane.

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will -only- add or -only-subtract Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

-7. Is CHILD FLAP-Curve to Pitch. (I.e for wingparts to "flap")

Does not use the Position. Used if the object is a Child. I.e a rodder of a boat or an aeroplane.

FORCE-H(eading) will add or subtract Heading according to a curve of a spline.

FORCE-P(itch) will use the curve Heading to add Pitch according to a curve of a spline.

FORCE-B(ank) will add or subtract Banking according to a curve of a spline.

9.13

Offset-XYZ.

Will offset the object as set in the "Use Pos" setting.

9.14

Offset-HPB

Will offset (add) rotation to the object.

9.15

DAMP-XYZ

Master damping for position.

9.16

(Damp) XYZ.

Damp settings per axis.

9.17

DAMP-HPB

Master damping for rotation.

9.18

Damp settings per axis.

9.19

LockFrame.

The first value disables damping at the frame with this number. I.e if set to "0" any positioning is repeatable at the start of a scene when using damping.

The second value disables damping at the frame with the same number for the duration of the third value.

Also, at FrameLock the SCPRO is "re- rotated" to a minimum angle. This way repeatable rotation over the scene is possible that is important for i.e. SteadyGLIDE reading..

#### 9.20

##### Front Object Guide

This is the linkfield where the "FrontGuide" is placed using SteadyRIG. Other object can be used.  
The front object is targeting the main object.

#### 9.21

##### Back Object Guide

This is the linkfield where the "BackGuide" is placed using SteadyRIG. Other objects can be used.  
The Back Object is Targeting the Main object.

#### 9.22

##### Target Object Guide

This is where the "TargetGuide" is placed using SteadyRIG. Other objects can be used.  
The main object is targeting the Target object when no FORCE is used.

#### 9.23

##### Use Pos(ition)

OFF. Object stays in place but can use rotation.  
ON Global Offset. Offset the object regardless off i.e Banking.  
ON Local Offset. Offset the object using i.e Banking.

#### 9.24

##### Use Rot(ation).

OFF No rotation but position can be used.  
ON. Use the rotation.(Global only).

#### 9.25

##### Interpolation.

###### 1. Automatic.

Will use the interpolation ("Natural" setting) from either a used Spline or a "MasterTag"  
(Another SteadyBANK Tag).

###### 2.FromThisTag.

Use the "Normal" setting from this tag itself to have a different interpolation using the same Splineobject.

#### 9.26

##### Reset.

Reset selected or all parts of the Tag.

If you want to add any shaking to SteadyBANK, drop it in either a SteadyGLIDE (It has rotational shaking) or in a SCPRO camera. Drag the SteadyBANK camera/object into e.i the T1 and R1 linkfield.

SCPRO have both rotation and position shaking. Have SteadyGLIDE or SCPRO -under-(that is lower, but not as a child) the SteadyBANK in the ObjectsManager for better performance.

That is a general rule, have any object that is dependent of another object lower in the ObjectsManager.

Cinema "reads" from top of the OM and "reads" Tags, starting with the first on each object.