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Changelog

1.3

- MoveTo: Following Target Feature Improvements
- Added an option for continuous rotation while following a target.
- Introduced an animated distance threshold curve that defines the stopping distance between the target and the camera based on the current height percentage.

1.2a

- Fixed rotation relative to the forward point before the first zoom change.
- Changed *'ZoomMinHeightXAngle'* and *'ZoomMaxHeightXAngle'* float properties to a *'heightXAngle'* animation curve property.
- Changed *'ZoomMinHeightForwardDistanceToTargetPoint'* and *'ZoomMaxHeightForwardDistanceToTargetPoint'* float properties to a *'heightForwardDistanceToTargetPoint'* animation curve property.
-

1.2

- Improved mouse swipe (movement and rotation) feature. It should now be much smoother and more user-friendly.

1.1

- *'ZoomSmoothness'* can now be edited at any time.
- Added reverse zoom option in *'RtsCameraControllerOldInputSystem.cs'*
- Introduced a preset feature for camera properties.
- Added a demo with overlay.
-

Getting started

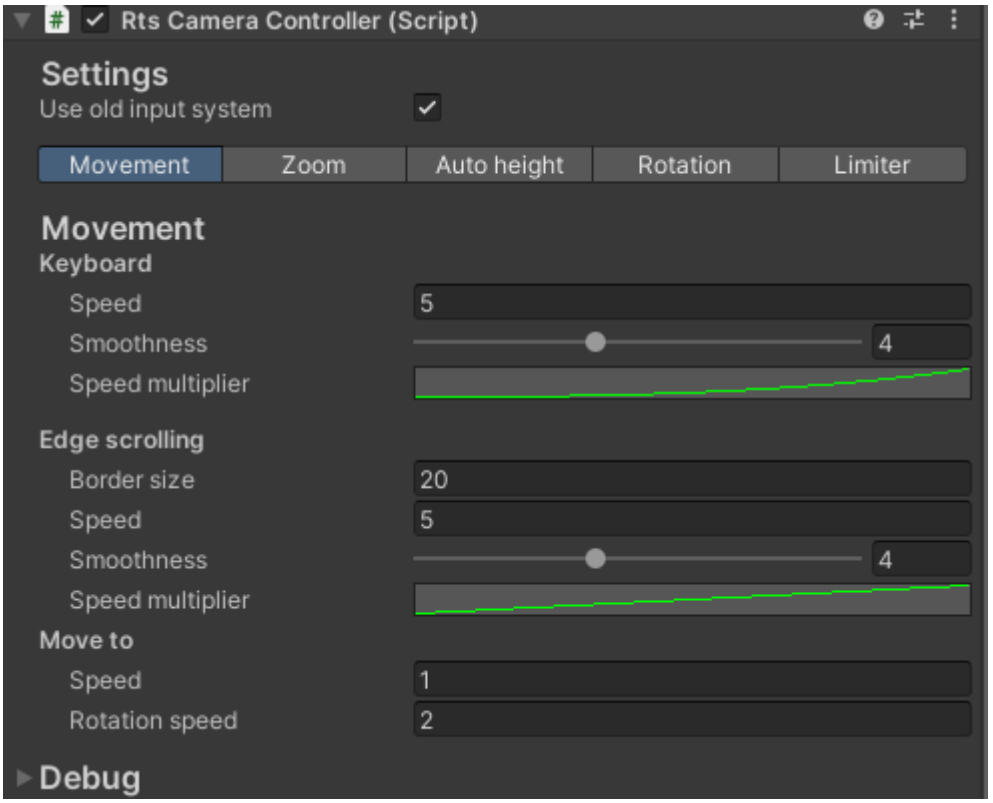
Using old input system

Using the old input system is the fastest and the simplest way to use the Rts Camera Controller. Add to your camera **RtsCameraController** component, and mark "**Use old input system**" checkbox.
It will add another component - **RtsCameraControllerOldInputSystem**, where you can customize keys and enable or disabled other features.

Using custom input system

You can easily implement **Rts Camera Controller** with any other input system (for example - new input system). You need to combine base **Rts Camera Controller** features (Movement, Zoom, Rotation) with your input system. You can also extend it by adding some other actions, like touch/mouse swiping actions, edge scrolling, move on mouse click - you can see some examples based on the old input system in the **RtsCameraControllerOldInputSystem** script.

Rts Camera Controller



Settings

Manual

Use old input system - check it, if you want to use the old input system. It will add/remove CameraControllerOldInputSystem component to object with CameraController. For more information go to CameraControllerOldInputSystem.

Scripting API

RTS Camera Controller Version 1.3 Changes:

Private variables

- Added float moveToDistanceDelta

Public variables

- Added bool MoveToIsActive
- Added bool MoveToRotateContinuously
- Added AnimationCurve MoveToDistanceThreshold

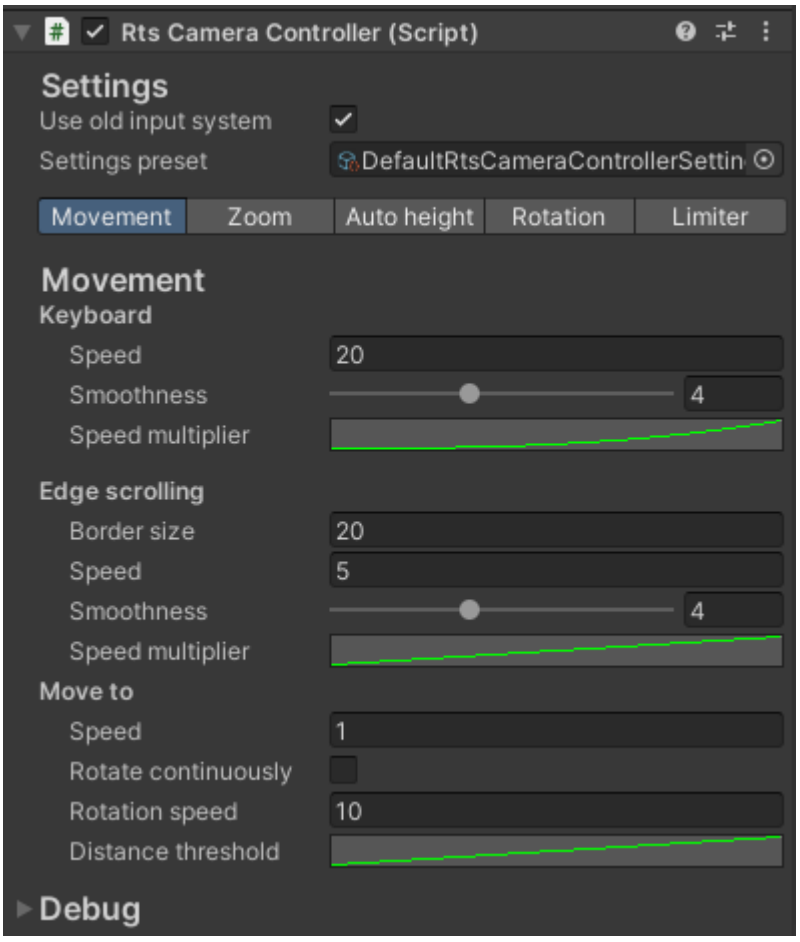
Public events

- Added MoveToFinishCallback OnMoveToFinish

Public methods

- Changed void MoveTo(Transform target, bool follow = false)

Movement



Manual

Keyboard

Speed - speed of camera movement using keyboard (Move() method).
Smoothness - smoothness of the movement direction changes.
Speed multiplier - curve to control movement speed over time.

Edge scrolling

Border size - size of borders to move camera.
Speed - variable for the speed of camera movement using screen borders (EdgeScreenMove() method).
Smoothness - smoothness of the movement direction changes.
Speed multiplier - curve to control movement speed over time.

Move to

Speed - speed of camera movement when following a target.
Rotate continuously - continuously rotate to target direction during following target.
Rotation speed - rotation speed of the camera when following a target.
Distance threshold - camera will stop movement if distance to the target is lower than specific value based on current height percentage.

Scripting API

Public variables

float MovementSpeed - speed of camera movement using keyboard (Move() method).
float EdgeScrollingMovementSpeed - variable for the speed of camera movement using screen borders (EdgeScreenMove() method).
float MoveToSpeed - speed of camera movement when following a target.
bool MoveToRotateContinuously - continuously rotate to target direction during following.
float MoveToRotationSpeed - rotation speed of the camera when following a target.
AnimationCurve MoveToDistanceThreshold- defines distance between target and the camera to stop movement based on current height percentage.

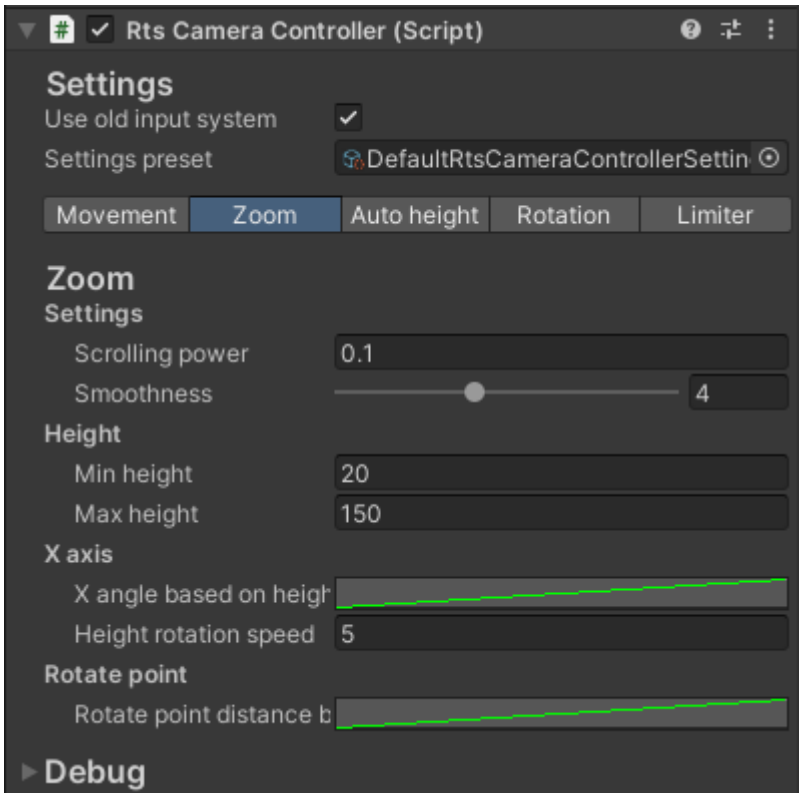
Public properties

float MovementDirectionSmoothness - smoothness of the movement direction changes.
float EdgeScrollingMovementDirectionSmoothness - smoothness of the movement direction changes.
bool MoveToIsActive - defines if move to feature is active.

Public methods

void Move(Vector2 direction) - move camera using keyboard in specific direction.
void EdgeScreenMove(Vector2 direction) - move camera using screen borders in specific direction.
void MoveTo(Vector3 target) - move to a specific position. Should be called once.
void MoveTo(Transform target, bool follow = false) - move to a specific transform if **follow** is false, otherwise the camera will follow target. Should be called once.

Zoom



Manual

Settings
Scrolling power - scrolling power of camera height change.
Smoothness - smoothness of camera height change.

Height

Min height - minimum height to ground.
Max height - maximum height to ground.

X axis

While changing the height of the camera the X axis of the camera will evaluate **X angle based on height** animation curve**.** Works only when the Auto-Height option is enabled.
X angle based on height - X angle of camera based on current height percentage.
Height rotation speed - rotation speed on X axis.

Rotate point

When rotating, the camera will rotate around a point a specified distance in front of the camera. While changing height of camera the distance will evaluate value based on **Rotate point distance based on height** animation curve**.** Works only when the Auto-Height option is enabled.

Rotate point distance based on height - distance to rotate point based on current height percentage.

Scripting API

Public variables

float ZoomScrollingPower - scrolling power of camera height change.
float ZoomMinHeight - minimum height to ground.
float ZoomMaxHeight - maximum height to ground.
float ZoomSmoothness (0.0f - 10.0f) - smoothness of camera height change.
float ZoomMinHeightXAngle - X angle of camera at minimum distance to ground.
float ZoomMaxHeightXAngle - X angle of camera at maximum distance to ground.
float ZoomMinHeightForwardDistanceToTargetPoint - distance to rotate point at minimum distance to ground.
float ZoomMaxHeightForwardDistanceToTargetPoint - distance to rotate point at maximum distance to ground.

Public properties

float HeightPercentage (0.0f-1.0f) - current percentage of camera height between ZoomMinHeight and ZoomMaxHeight.

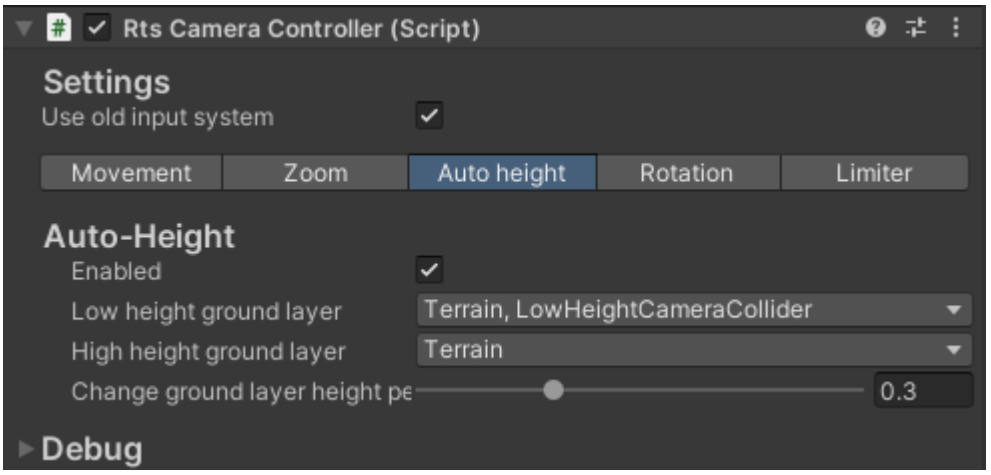
Public methods

void Zoom(float direction) - change camera height in specific direction. Should be called every frame (even with direction = 0.0f).

Events

CameraHeightChangeCallback OnCameraHeightChange(float percentage) - invoked on camera height change with argument - **percentage** as current height percentage.

Auto-Height



Manual

Auto-Height

Enabled - is auto-height feature enabled.

Low height ground layer - determine which layers are ground at a low height camera.

High height ground layer - determine which layers are ground at a high height camera.

Change ground layer height percentage - determines percentage height of camera to change ground layer.

Scripting API

Public variables

bool AutoHeightEnabled - is auto-height feature enabled.

LayerMask AutoHeightLowHeightGroundLayer - determine which layers are ground at a low height camera.

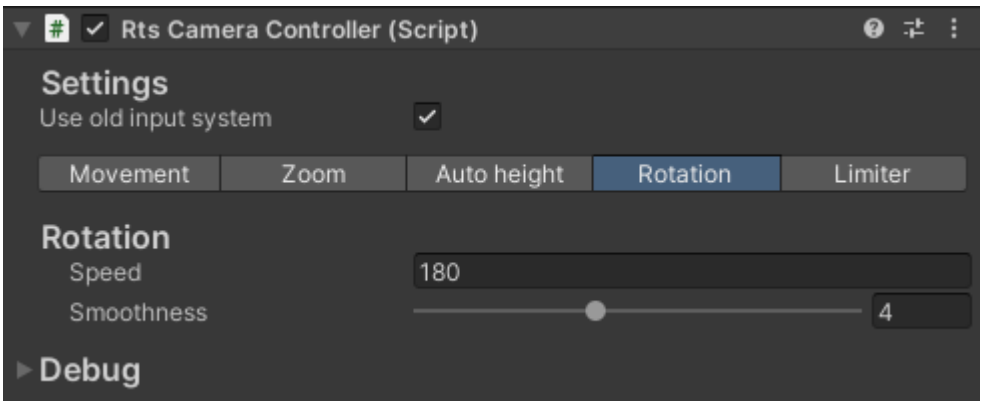
LayerMask AutoHeightHighHeightGroundLayer - determine which layers are ground at a high height camera.

float AutoHeightMaxPercentageForLowGroundLayer (0.0f - 10.0f) - determines percentage height of camera to change ground layer.

Public properties

bool AutoHeightLowHeight (readonly) - determines when AutoHeightLowHeightGroundLayer selected.

Rotation



Manual

Rotation

Speed - speed of rotation. (for example, 360 will rotate 360 degrees in ~1 sec.)
Smoothness - smoothness of rotation.

Scripting API

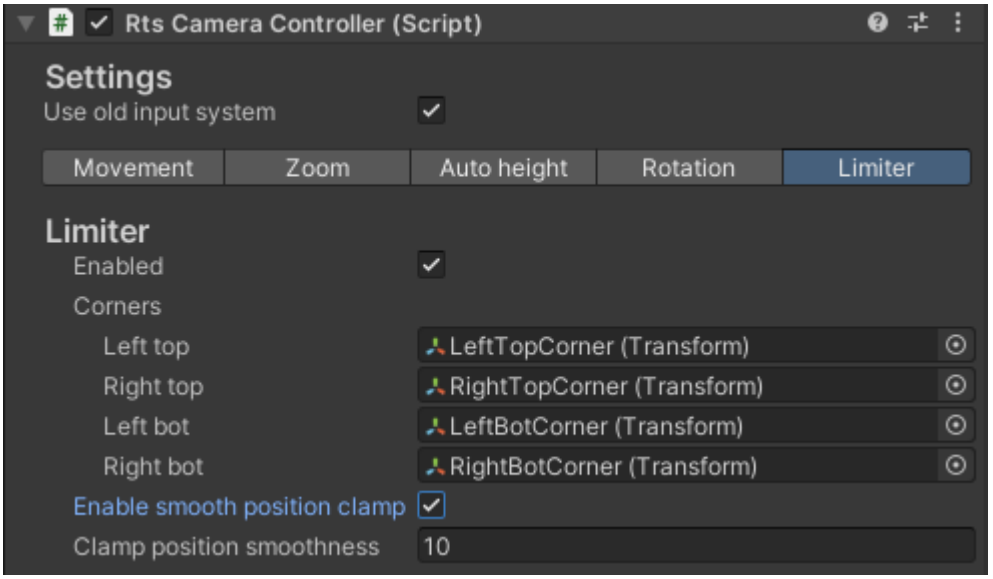
Public variables

float RotationSpeed - speed of rotation. (for example, 360 will rotate 360 degrees in ~1 sec.)

Public properties

float RotationSmoothness (0.0f-10.0f) - smoothness of rotation.

Limiter



Manual

Rotation

Enabled - is limiter feature enabled.

Corners - four transforms which determines four corners of camera movement limit.

Enable smooth position clamp - is smooth position clamp enabled.

Clamp position smoothness - smoothness of position clamp.

Scripting API

Public variables

bool LimiterEnable - is limiter feature enabled.

Transform LimiterLeftTopCorner - transform which determines the left top corner of camera movement limit.

Transform LimiterRightTopCorner - transform which determines the right top corner of camera movement limit.

Transform LimiterLeftBotCorner - transform which determines the left bot corner of camera movement limit.

Transform LimiterRightBotCorner - transform which determines the right bot corner of camera movement limit.

bool LimiterEnableSmoothClamp - is smooth position clamp enabled.

float LimiterClampPositionSmoothness - smoothness of position clamp.

Rts Camera Controller Old Input System

Movement

Manual

Movement - Keyboard
Move forward key - which key is used to move the camera forward.
Move left key - which key is used to move the camera left.
Move backward key - which key is used to move the camera backward.
Move right key - which key is used to move the camera right.
Move direction - debug information about current move direction.

Movement - Edge scrolling
Enabled - is edge scrolling feature enabled.
Edge scrolling direction - debug information about current edge scrolling direction.

Movement - Mouse swipe
Enabled - is move on mouse swipe feature enabled.
Key - which key is used to move the camera on mouse swipe.
Speed - speed of camera movement on mouse swipe.

Movement - Move on click
Enabled - is move on click feature enabled.
Key - which key is used to move the camera on mouse click.

Scripting API

Public variables

bool EdgeScrollingEnabled - is edge scrolling feature enabled.
bool SwipeMoveEnabled- is move on mouse swipe feature enabled.
bool ClickMoveEnabled- is move on click feature enabled.

Zoom

Manual

Enabled - is zoom feature enabled.
Reverse zoom - reverse direction of zoom.

Scripting API

Public variables

bool ZoomEnabled - is zoom feature enabled.
bool ZoomReverse - reverse direction of zoom.

Rotation

Manual

Rotation - Keyboard
Rotate left key - which key is used to rotate the camera left.
Rotate right key - which key is used to rotate the camera right.

Rotation - Mouse swipe
Enabled - is rotate on mouse swipe feature enabled.
Key - which key is used to rotate the camera on mouse swipe.
Speed - speed of rotation on mouse swipe.

Scripting API

Public variables

bool SwipeRotateEnabled - is rotate on mouse swipe feature enabled.