

BLInformatique — TelescopeView

TEAM VICTOR & BORIS
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Table of Contents

Introduction

 Overview

Optional Sections (1)

 Main Features

Components (4)

 Components Overview

 BLInformatique.TelescopeView (4)

- TelescopeDatabase
- TelescopeHUD
- TelescopeTargetInfo
- TelescopeView

Overview

Telescope View

Bring realistic telescope, binocular, sniper scope, or observation camera effects to your Unity projects in just a few minutes.

Telescope View is a complete and easy-to-use system designed for the Universal Render Pipeline (URP). It allows you to create immersive optical devices with smooth zoom, customizable overlays, realistic lens effects, and dynamic focus.

Whether you're creating a military simulator, wildlife observation game, pirate adventure, astronomy application, or exploration experience, Telescope View provides everything needed to deliver a professional viewing experience.



Optional Sections



Main Features

- Smooth adjustable zoom.
- Multiple built-in overlay styles (Scientific, Military, Pirate, Classic).
- Dynamic Depth of Field.
- Automatic focus based on zoom level.
- Optional vignette effect.
- Radial Blur support for enhanced realism.
- Fully customizable reticles and overlays.
- Runtime target information system.
- Easy setup with editor tools.
- Inspector buttons for quick component creation.
- Automatic menu integration inside Unity.
- Lightweight and optimized for runtime.
- Clean and well-commented C# source code.
- Compatible with Unity 6000+.
- Designed exclusively for URP.

CONTENTS



Filter components...



Table of Contents



Overview



Main Features



Components (4)

BLINFORMATIQUE.TELESCOPEVIEW

TelescopeDatabase

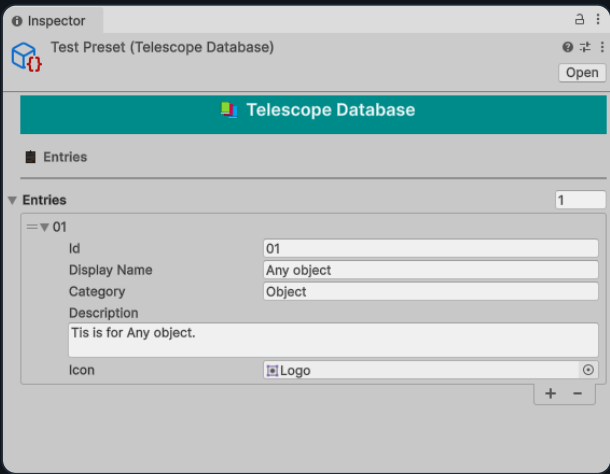
TelescopeHUD

 Components

Tooltips are in **English**. Missing tooltips can be completed automatically from field names. Tables list documented fields. Optional notes (Markdown) and images are shown below each component when present.

▼ **TelescopeDatabase** ScriptableObject

BLInformatique.TelescopeView



Field	Type	Tooltip	Hints
↓			
entries	TelescopeDatabaseEntry[]	Reusable target entries used by compatible Telescope View systems.	List / Array

↑ Back to top

Telescope HUD (Script)

Telescope TMP HUD

Target TMP References

Target Name Text

Target Category Text

Target Description Text

Target Icon Image

TargetNameText (Text Mesh Pro UGUI)

CategoryText (Text Mesh Pro UGUI)

DescriptionText (Text Mesh Pro UGUI)

Targeticon (Image)

Target Only UI Objects0

Instrument TMP References

Distance Text

Compass Text

Coordinates Text

Altitude Text

Observation Progress Text

DistanceText (Text Mesh Pro UGUI)

CompassText (Text Mesh Pro UGUI)

CoordinatesText (Text Mesh Pro UGUI)

AltitudeText (Text Mesh Pro UGUI)

ObservationText (Text Mesh Pro UGUI)

Display Settings

Hide Target Texts When No Target

Hide Distance When No Target

No Target Label

Distance Format

Compass Format

Coordinates Format

Altitude Format

Observation Progress Format

☒

☒

NO TARGET

DIST {0:0.0} m

{0} {1:000}°

X {0:0.0} Y {1:0.0} Z {2:0.0}

ALT {0:0.0} m

OBS {0:0}%

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Field	Type	Tooltip	Hints
↓			
targetNameText	TMP_Text	TMP text used to display the observed target name.	Object Reference
targetCategoryText	TMP_Text	TMP text used to display the observed target category.	Object Reference
targetDescriptionText	TMP_Text	TMP text used to display the observed target description.	Object Reference
targetIconImage	Image	Image used to display the observed target icon.	Object Reference
targetOnlyUIObjects	GameObject[]	Optional parent objects that contain target-only UI elements and must be hidden when no target is visible.	List / Array
↓			
distanceText	TMP_Text	TMP text used to display target distance.	Object Reference
compassText	TMP_Text	TMP text used to display compass heading.	Object Reference
coordinatesText	TMP_Text	TMP text used to display world coordinates.	Object Reference
altitudeText	TMP_Text	TMP text used to display altitude.	Object Reference
observationProgressText	TMP_Text	TMP text used to display observation progress.	Object Reference
↓			
hideTargetTextsWhenNoTarget	Boolean	If enabled, target text fields are disabled when no observable target is detected.	—
hideDistanceWhenNoTarget	Boolean	If enabled, the target distance text is disabled when no observable target is detected.	—
noTargetLabel	String	Text displayed when no observable target is detected if target texts are not hidden.	—
distanceFormat	String	Distance display format.	—
compassFormat	String	Compass display format.	—

Field	Type	Tooltip	Hints
coordinatesFormat	String	Coordinates display format.	—
altitudeFormat	String	Altitude display format.	—
observationProgressFormat	String	Observation progress display format.	—
↑ Back to top			



Telescope Target Info (Script)

Telescope Target Info

Database Source

Use Database Entry

☐

Database

None (Telescope Database)

Database Entry ID

Refresh From Database On Start

☒

Refresh From Database On Validate

☒

Target Data

Target Name

Capsule Target

Target Category

Object

Target Description

Test Green Capsule Target

Target Icon

Capsule

Observation Settings

Required Observation Time

3

Trigger Only Once

☒

Reveal Only When Observed

☐

Events

On Target Observed ()

List is Empty

+ -

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Field	Type	Tooltip	Hints
↓			
useDatabaseEntry	Boolean	Use a Telescope Database entry to fill this target information automatically.	—
database	TelescopeDatabase	Database containing reusable telescope target entries.	Object Reference
databaseEntryID	String	Unique entry ID to read from the selected Telescope Database.	—
refreshFromDatabaseOnStart	Boolean	Automatically refresh target data from the database when the scene starts.	—
refreshFromDatabaseOnValidate	Boolean	Automatically refresh target data from the database when values change in the Inspector.	—
↓			
targetName	String	Name displayed when this target is observed.	—
targetCategory	String	Category displayed under the target name.	—
targetDescription	String	Optional description displayed by compatible HUD layouts. • TextArea	TextArea
targetIcon	Sprite	Optional icon displayed by compatible HUD layouts.	Object Reference
↓			
requiredObservationTime	Single	Minimum time required before the target is considered observed.	—
triggerOnlyOnce	Boolean	If enabled, this target can trigger the observation event only once.	—
revealOnlyWhenObserved	Boolean	If enabled, the target name and category are displayed only after the required observation time.	—

Field	Type	Tooltip	Hints
↓			
onTargetObserved	UnityEvent	Called when this target has been observed long enough.	UnityEvent
↑ Back to top			

Inspector

Telescope View (Script)

Telescope View

Input Settings

Use New Input System ☐

Toggle Zoom Key S

Toggle Zoom Action

Scroll Action

Zoom Settings

Player Camera Main Camera (Camera)

Normal FOV 60

Max Zoom FOV 20

Zoom Speed 10

Progressive Zoom ☒

Instrument Preset

Instrument Preset Military Scope

Apply Preset On Start ☒

Overlay Style

Overlay Style Military

Simple Overlay

Pirate Overlay

Military Overlay

Scientific Overlay

Binoculars Overlay

TMP HUD

TMP HUD

Telescope HUD TelescopeHUD (Telescope HUD)

Hide HUD When Inactive ☒

Extra Telescope UI Objects 1

Element 0 CompassText

Target Detection

Enable Target Detection ☒

Detection Range 1000

Detection Mask Default, Target

Target Detection Mask Target

Obstacle Mask Default

Show Distance To Non Targets ☐

Ignore Trigger Colliders ☒

Minimum Zoom Ratio For Target Info 0.15

Instrument Data

Instrument HUD Mode Full

Show Distance ☒

Show Compass ☒

Show Coordinates ☒

Show Altitude ☒

Post Processing

Zoom Blur Volume ZoomBlurVolume (Volume)

Debug Options

Show Debug Logs ☐

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Field	Type	Tooltip	Hints
↓			
useNewInputSystem	Boolean	Enable support for the new Input System using InputActions.	—
toggleZoomKey	KeyCode	Key used to toggle zoom when using the old Input System.	Enum
toggleZoomAction	InputAction	Input Action used to toggle zoom with the new Input System.	—
scrollAction	InputAction	Input Action used to control zoom in and out with the mouse scroll wheel.	—
↓			
playerCamera	Camera	Camera used by Telescope View.	Object Reference
normalFOV	Single	Default camera field of view when Telescope View is disabled.	—
maxZoomFOV	Single	Maximum zoom field of view. Lower values create a stronger zoom.	—
zoomSpeed	Single	Speed used to interpolate the camera field of view.	—
progressiveZoom	Boolean	If enabled, zoom speed becomes smoother near the strongest zoom level.	—
↓			
instrumentPreset	TelescopeInstrumentPreset	Preset used to quickly configure	Enum

Field	Type	Tooltip	Hints
		Telescope View behavior.	
applyPresetOnStart	Boolean	Apply the selected preset automatically at runtime start.	—
↓			
overlayStyle	OverlayStyle	Choose the visual style for the telescope overlay.	Enum
simpleOverlay	GameObject	Simple overlay GameObject.	Object Reference
pirateOverlay	GameObject	Pirate-style overlay GameObject.	Object Reference
militaryOverlay	GameObject	Military-style overlay GameObject.	Object Reference
scientificOverlay	GameObject	Scientific-style overlay GameObject.	Object Reference
binocularsOverlay	GameObject	Binoculars-style overlay GameObject.	Object Reference
↓			
telescopeHUD	TelescopeHUD	TMP HUD used to display target and instrument information.	Object Reference
hideHUDWhenInactive	Boolean	If enabled, the HUD is hidden when Telescope View is disabled.	—
extraTelescopeUIObjects	GameObject[]	Extra UI objects that must follow the telescope active state, such as an external compass text.	List / Array
↓			

Field	Type	Tooltip	Hints
enableTargetDetection	Boolean	Enable raycast detection for TelescopeTargetInfo components.	—
detectionRange	Single	Maximum distance used by the telescope raycast.	—
detectionMask	LayerMask	Layer mask used by the physical raycast. Include both target layers and obstacle layers here.	—
targetDetectionMask	LayerMask	Layer mask used to validate visible telescope targets after the first raycast hit.	—
obstacleMask	LayerMask	Layer mask used by objects that block the telescope line of sight, such as walls, buildings, terrain and rocks.	—
showDistanceToNonTargets	Boolean	If enabled, distance is displayed even when the telescope hits a non-target object or obstacle.	—
ignoreTriggerColliders	Boolean	If enabled, triggers are ignored by the telescope raycast.	—
minimumZoomRatioForTargetInfo	Single	Minimum zoom ratio required before target information is displayed. • Range [0..1]	Range
↓			
instrumentHUDMode	InstrumentHUDMode	Controls how much information is displayed by the TMP HUD. None disables the complete HUD.	Enum

Field	Type	Tooltip	Hints
showDistance	Boolean	Display target distance in the TMP HUD.	—
showCompass	Boolean	Display compass heading in the TMP HUD.	—
showCoordinates	Boolean	Display world coordinates in the TMP HUD.	—
showAltitude	Boolean	Display altitude in the TMP HUD.	—
↓			
zoomBlurVolume	Volume	Volume used to apply zoom blur and focus effects.	Object Reference
↓			
showDebugLogs	Boolean	Enable debug logs in the console for troubleshooting.	—
↑ Back to top			