InputMaster

v6.5.4

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  A single instance of this exists in the application. Updates and maintains all Control states.
- class KeyControl

  Used for all Keyboard and Mouse Button controls. Any binding present in Unity's KeyCode enumeration is valid here.
- class ModifierKey

  Represents a Modifier for a control.

Enumerations

- enum ControlState {
  Positive = 1 $<<$ 0, **Negative** = 1 $<<$ 1, **Neither** = Positive & Negative, **Both** = Positive $|$ Negative,
  Either = Positive $^\wedge$ Negative }

  Describes the current state of a control's specific state. Use (control.Down/Held/Up & flag) != 0 for Positive & Negative. Use == for Neither, Both, and Either.

4.2.1 Enumeration Type Documentation

4.2.1.1 enum BSGTools.IO.ControlState

Describes the current state of a control's specific state. Use (control.Down/Held/Up & flag) != 0 for Positive & Negative. Use == for Neither, Both, and Either.

4.3 Package BSGTools.IO.Tools

Classes

- class InputManagerWizard

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Classes

- interface IXboxControl

  Used for type constraints. Contains nor enforces any functionality.
- class XboxControl< T >
- class **XboxUtils**

  A static utility class for minimal required updates for XboxControls.
- class XButtonControl

  Used for integrating Xbox 360 controller digital buttons/inputs into InputMaster's Control system.
- class XStickControl

  Used for integrating Xbox 360 controller analog sticks into InputMaster's Control system.
- class XTriggerControl

  Used for integrating Xbox 360 controller triggers into InputMaster's Control system.

Enumerations

- enum XButton {
  None, **A**, **B**, **X**,
  Y, **Back**, **Guide**, **Start**,
  StickLeft, **StickRight**, **ShoulderLeft**, **ShoulderRight**,
  DPadUp, **DPadDown**, **DPadLeft**, **DPadRight** }

  Represents all of the digital buttons of an Xbox 360 Controller.
- enum XStick { **StickLeftX**, **StickLeftY**, **StickRightX**, **StickRightY** }

  Represents the two analog sticks of an Xbox 360 Controller.
- enum XTrigger { **TriggerLeft**, **TriggerRight** }

  Represents the two triggers of an Xbox 360 Controller.

4.4.1 Enumeration Type Documentation

4.4.1.1 enum BSGTools.IO.Xbox.XButton

Represents all of the digital buttons of an Xbox 360 Controller.

4.4.1.2 enum BSGTools.IO.Xbox.XStick

Represents the two analog sticks of an Xbox 360 Controller.

4.4.1.3 enum BSGTools.IO.Xbox.XTrigger

Represents the two triggers of an Xbox 360 Controller.

Chapter 5

Class Documentation

5.1 BSGTools.IO.CombinedOutput Class Reference

Allows for easy combination of multiple controls' outputs.

Public Member Functions

- CombinedOutput (params Control[] controls)

    Creates a new CombinedOutput.

Properties

- float FixedValueF `[get]`
- sbyte FixedValue `[get]`
- float Value `[get]`
- bool AnyDownPositive `[get]`
- bool AnyDownNegative `[get]`
- bool AnyHeldPositive `[get]`
- bool AnyHeldNegative `[get]`
- bool AnyUpPositive `[get]`
- bool AnyUpNegative `[get]`
- Control[] Controls `[get]`

5.1.1 Detailed Description

Allows for easy combination of multiple controls' outputs.

5.1.2 Constructor & Destructor Documentation

5.1.2.1 BSGTools.IO.CombinedOutput.CombinedOutput (params **Control**[] *controls*)

Creates a new CombinedOutput.

Parameters

controls	The controls to combine into a single output.

5.1.3 Property Documentation

5.1.3.1 bool BSGTools.IO.CombinedOutput.AnyDownNegative `[get]`

Are any controls in a Down- state?

5.1.3.2 bool BSGTools.IO.CombinedOutput.AnyDownPositive `[get]`

Are any controls in a Down+ state?

5.1.3.3 bool BSGTools.IO.CombinedOutput.AnyHeldNegative `[get]`

Are any controls in a Held- state?

5.1.3.4 bool BSGTools.IO.CombinedOutput.AnyHeldPositive `[get]`

Are any controls in a Held+ state?

5.1.3.5 bool BSGTools.IO.CombinedOutput.AnyUpNegative `[get]`

Are any controls in a Up- state?

5.1.3.6 bool BSGTools.IO.CombinedOutput.AnyUpPositive `[get]`

Are any controls in a Up+ state?

5.1.3.7 Control [] BSGTools.IO.CombinedOutput.Controls `[get]`

The combined Controls.

5.1.3.8 sbyte BSGTools.IO.CombinedOutput.FixedValue `[get]`

The clamped, combined FixedValue.

5.1.3.9 float BSGTools.IO.CombinedOutput.FixedValueF `[get]`

The clamped, combined FixedValue as a float.

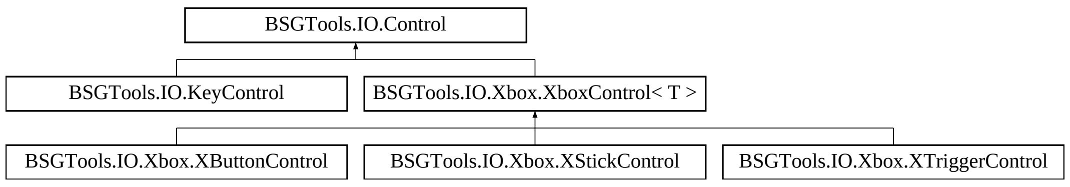
5.1.3.10 float BSGTools.IO.CombinedOutput.Value `[get]`

The clamped, combined Value.

5.2 BSGTools.IO.Control Class Reference

Provided to give a common base class and common functionality for KeyControl and XboxControl.

Inheritance diagram for BSGTools.IO.Control:


BSGTools.IO.Control
BSGTools.IO.KeyControl
BSGTools.IO.Xbox.XboxControl< T >
BSGTools.IO.Xbox.XButtonControl
BSGTools.IO.Xbox.XStickControl
BSGTools.IO.Xbox.XTriggerControl

Public Member Functions

- void Reset ()

  Reset all non-configuration values and states for this control.
- void Reset (bool block)

  Reset all non-configuration values for this control. This is the best method to use for cutscenes.
- override string ToString ()

  Returns debug information in a single line.
- virtual string ToStringBlock ()

  Returns debug information as a formatted string block.
- void Update ()

  Updates the control. This should never be used by any user-made script. This is public specifically for the use of InputMaster.

Static Public Member Functions

- static float ClampRange (float f)

  Returns a fixed control range float.
- static sbyte RoundFixed (float f)

  Rounds and clamps to a FixedValue sbyte.
- static float RoundFixedF (float f)

  Rounds and clamps to a FixedValue float.

Protected Member Functions

- void SoftReset ()

  Internally used for maintaining the RealValue inbetween updates while resetting everything else.
- abstract void UpdateStates ()

  Internally used for updating the Up/Held/Down states of a control.
- virtual void UpdateValues ()

  Internally used for updating a control's values using it's current states.

Properties

- ControlState Down `[get, set]`
- ControlState Held `[get, set]`
- ControlState Up `[get, set]`
- float Dead `[get, set]`

- float Gravity `[get, set]`
- float Sensitivity `[get, set]`
- float Value `[get, protected set]`
- sbyte FixedValue `[get, protected set]`
- bool Invert `[get, set]`
- bool IsBlocked `[get, set]`
- bool IsDebugControl `[get, set]`
- string Name `[get, set]`
- bool Snap `[get, set]`
- float RealValue `[get, set]`

5.2.1 Detailed Description

Provided to give a common base class and common functionality for KeyControl and XboxControl.

Controls should be instantiated as parameters in a custom MonoBehaviour using block initialization. See example below.

Declaration Example

```
KeyControl use = new KeyControl(KeyCode.E) {
    Name = "Jump",
    Gravity = 2f,
    Sensitivity = 2f
});
```

5.2.2 Member Function Documentation

5.2.2.1 static float BSGTools.IO.Control.ClampRange (float *f*) `[static]`

Returns a fixed control range float.

Parameters

f	A float to clamp.

Returns

A float fixed to -1...1

5.2.2.2 void BSGTools.IO.Control.Reset ( )

Reset all non-configuration values and states for this control.

See also

Reset(bool)

5.2.2.3 void BSGTools.IO.Control.Reset (bool *block*)

Reset all non-configuration values for this control. This is the best method to use for cutscenes.

Parameters

block	Whether or not to block this input after resetting.

See also

Reset, IsBlocked

5.2.2.4 static sbyte BSGTools.IO.Control.RoundFixed (float *f*) `[static]`

Rounds and clamps to a FixedValue sbyte.

Parameters

f	The value to round and clamp.

Returns

-1, 1 or 0

5.2.2.5 static float BSGTools.IO.Control.RoundFixedF (float *f*) `[static]`

Rounds and clamps to a FixedValue float.

Parameters

f	The value to round and clamp.

Returns

-1, 1 or 0

5.2.2.6 void BSGTools.IO.Control.SoftReset ( ) `[protected]`

Internally used for maintaining the RealValue inbetween updates while resetting everything else.

5.2.2.7 override string BSGTools.IO.Control.ToString ( )

Returns debug information in a single line.

Returns

The debug information.

5.2.2.8 virtual string BSGTools.IO.Control.ToStringBlock ( ) `[virtual]`

Returns debug information as a formatted string block.

Returns

The debug information.

Reimplemented in BSGTools.IO.KeyControl.

5.2.2.9 void BSGTools.IO.Control.Update ( )

Updates the control. This should never be used by any user-made script. This is public specifically for the use of InputMaster.

5.2.2.10 abstract void BSGTools.IO.Control.UpdateStates ( ) [protected], [pure virtual]

Internally used for updating the Up/Held/Down states of a control.

Implemented in BSGTools.IO.Xbox.XTriggerControl, BSGTools.IO.KeyControl, BSGTools.IO.Xbox.XStickControl, and BSGTools.IO.Xbox.XButtonControl.

5.2.2.11 virtual void BSGTools.IO.Control.UpdateValues ( ) [protected], [virtual]

Internally used for updating a control's values using it's current states.

Reimplemented in BSGTools.IO.Xbox.XTriggerControl, and BSGTools.IO.Xbox.XStickControl.

5.2.3 Property Documentation

5.2.3.1 float BSGTools.IO.Control.Dead [get], [set]

Functionally identical to the Dead property of Unity's native Input system. The absolute value of a control's real value reports as 0 if it's less than this value.

5.2.3.2 ControlState BSGTools.IO.Control.Down [get], [set]

The current "down" state of the control.

5.2.3.3 sbyte BSGTools.IO.Control.FixedValue [get], [protected set]

Returns a digital, ceiling-rounded representation of Value. This is functionally identical to calling Input.GetAxisRaw() from Unity's native Input system.

5.2.3.4 float BSGTools.IO.Control.Gravity [get], [set]

Functionally identical to the Gravity property of Unity's native Input system. Speed per second that a control at rest returns to 0.

5.2.3.5 ControlState BSGTools.IO.Control.Held [get], [set]

The current "held" state of the control.

5.2.3.6 bool BSGTools.IO.Control.Invert [get], [set]

Functionally identical to the Invert property of Unity's native Input system. If true, the contol's value will report as -(value). However, the state of the control will remain the same (positive down will still report as positive down, etc). Keep in mind that this functions whether or not a negative binding is supplied.

5.2.3.7 bool BSGTools.IO.Control.IsBlocked `[get], [set]`

This is used to block any control from receiving updates. Keep in mind that if you block a control, it maintains its values from it's most recent update. If you want to block and reset a control, you can use the Reset(bool) function.

5.2.3.8 bool BSGTools.IO.Control.IsDebugControl `[get], [set]`

Used to specify controls that automatically only work in the Editor or in Debug builds.

5.2.3.9 string BSGTools.IO.Control.Name `[get], [set]`

Can be used as a display name or for string metadata.

5.2.3.10 float BSGTools.IO.Control.RealValue `[get], [set], [protected]`

An internally used property that keeps track of the "real value" across updates. This is necessary so that properties like Dead can be applied to the final value. Think of this as the "real value" and the Value property as this value after post processing. This value is not necessary to use for input.

5.2.3.11 float BSGTools.IO.Control.Sensitivity `[get], [set]`

Functionally identical to the Sensitivity property of Unity's native Input system. Speed per second that a control in motion approaches 1.

5.2.3.12 bool BSGTools.IO.Control.Snap `[get], [set]`

Functionally identical to the Snap property of Unity's native Input system. If true, and if the control has a positive and negative binding, the control's value will snap to 0 if provided an opposite input.

5.2.3.13 ControlState BSGTools.IO.Control.Up `[get], [set]`

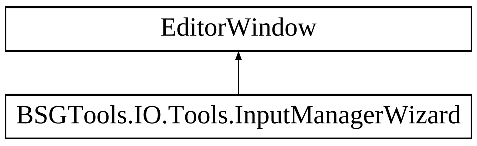
The current "up" state of the control.

5.2.3.14 float BSGTools.IO.Control.Value `[get], [protected set]`

Returns an analog representation of the current real value. This is functionally identical to calling Input.GetAxis() from Unity's native Input system.

5.3 BSGTools.IO.Tools.InputManagerWizard Class Reference

Inheritance diagram for BSGTools.IO.Tools.InputManagerWizard:



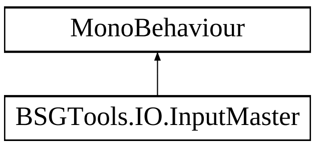
Static Public Member Functions

- static void **ShowWizard** ()

5.4 BSGTools.IO.InputMaster Class Reference

A single instance of this exists in the application. Updates and maintains all Control states.

Inheritance diagram for BSGTools.IO.InputMaster:



Public Member Functions

- void DestroyMaster ()

  Destroys the InputMaster object.
- void ResetAll ()

  Resets all states/values on all controls.
- void SetBlockAll (bool blocked)

  Blocks or unblocks all controls. This has the side effect of resetting all control states.
- void UpdateControls (params Control[] controls)

  Searches the control list for the provided Control objects and replaces them with said provided object

Static Public Member Functions

- static InputMaster CreateMaster (object controlClass)

  Uses reflection to get all controls in a class. Depending on the control count from your controlClass, this could have a noticable performance spike unless used during loading.
- static InputMaster CreateMaster (params Control[] controls)

  Creates a new, empty, hidden GameObject, adds a new instance of InputMaster to it, and adds the provided controls to the master's control list.

Properties

- bool AnyControlDown `[get]`
- bool AnyControlHeld `[get]`
- bool AnyControlUp `[get]`
- float MouseWheel `[get]`
- string MouseWheelAxisName `[get, set]`
- float MouseWheelRaw `[get]`
- float MouseX `[get]`
- string MouseXAxisName `[get, set]`
- float MouseXRaw `[get]`
- float MouseY `[get]`
- string MouseYAxisName `[get, set]`
- float MouseYRaw `[get]`

5.4.1 Detailed Description

A single instance of this exists in the application. Updates and maintains all Control states.

5.4.2 Member Function Documentation

5.4.2.1 static **InputMaster** BSGTools.IO.InputMaster.CreateMaster (object *controlClass*) `[static]`

Uses reflection to get all controls in a class. Depending on the control count from your controlClass, this could have a noticable performance spike unless used during loading.

Parameters

controlClass	The instance of a class to get the controls from.

Returns

The new InputMaster instance.

5.4.2.2 static **InputMaster** BSGTools.IO.InputMaster.CreateMaster (params **Control**[] *controls*) `[static]`

Creates a new, empty, hidden GameObject, adds a new instance of InputMaster to it, and adds the provided controls to the master's control list.

Parameters

controls	A full listing of all of the games controls with the default bindings.

Returns

The new InputMaster instance.

5.4.2.3 void BSGTools.IO.InputMaster.DestroyMaster ( )

Destroys the InputMaster object.

5.4.2.4 void BSGTools.IO.InputMaster.ResetAll ( )

Resets all states/values on all controls.

See also

ResetAll(bool)

5.4.2.5 void BSGTools.IO.InputMaster.SetBlockAll (bool *blocked*)

Blocks or unblocks all controls. This has the side effect of resetting all control states.

Parameters

blocked	To block/unblock.

See also

Control.IsBlocked

5.4.2.6 void BSGTools.IO.InputMaster.UpdateControls (params Control[ ] *controls*)

Searches the control list for the provided Control objects and replaces them with said provided object

Parameters

controls	The Control objects to search and replace

5.4.3 Property Documentation

5.4.3.1 bool BSGTools.IO.InputMaster.AnyControlDown `[get]`

Are any controls in an active Down state?

5.4.3.2 bool BSGTools.IO.InputMaster.AnyControlHeld `[get]`

Are any controls in an active Held state?

5.4.3.3 bool BSGTools.IO.InputMaster.AnyControlUp `[get]`

Are any controls in an active Up state?

5.4.3.4 float BSGTools.IO.InputMaster.MouseWheel `[get]`

The MouseWheel Axis axis value from Unity's native Input system.

5.4.3.5 string BSGTools.IO.InputMaster.MouseWheelAxisName `[get]`, `[set]`

The MouseWheel Axis axis name in Unity's Input Manager

5.4.3.6 float BSGTools.IO.InputMaster.MouseWheelRaw `[get]`

The MouseWheel Axis raw axis value from Unity's native Input system.

5.4.3.7 float BSGTools.IO.InputMaster.MouseX `[get]`

The Mouse X Axis axis value from Unity's native Input system.

5.4.3.8 string BSGTools.IO.InputMaster.MouseXAxisName `[get]`, `[set]`

The Mouse X Axis axis name in Unity's Input Manager

5.4.3.9 float BSGTools.IO.InputMaster.MouseXRaw `[get]`

The Mouse X Axis raw axis value from Unity's native Input system.

5.4.3.10 float BSGTools.IO.InputMaster.MouseY `[get]`

The Mouse Y Axis axis value from Unity's native Input system.

5.4.3.11 string BSGTools.IO.InputMaster.MouseYAxisName `[get]`, `[set]`

The Mouse Y Axis axis name in Unity's Input Manager

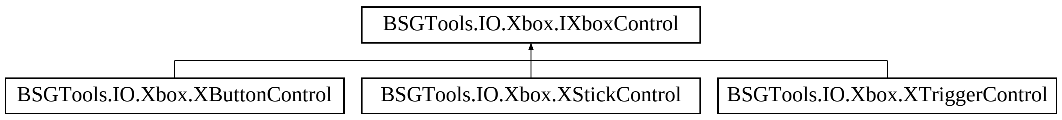
5.4.3.12 float BSGTools.IO.InputMaster.MouseYRaw [get]

The Mouse Y Axis raw axis value from Unity's native Input system.

5.5 BSGTools.IO.Xbox.IXboxControl Interface Reference

Used for type constraints. Contains nor enforces any functionality.

Inheritance diagram for BSGTools.IO.Xbox.IXboxControl:


BSGTools.IO.Xbox.IXboxControl
BSGTools.IO.Xbox.XButtonControl
BSGTools.IO.Xbox.XStickControl
BSGTools.IO.Xbox.XTriggerControl

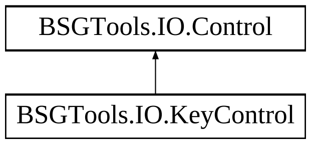
5.5.1 Detailed Description

Used for type constraints. Contains nor enforces any functionality.

5.6 BSGTools.IO.KeyControl Class Reference

Used for all Keyboard and Mouse Button controls. Any binding present in Unity's KeyCode enumeration is valid here.

Inheritance diagram for BSGTools.IO.KeyControl:



Public Member Functions

- KeyControl (KeyCode positive)

  Creates a new KeyControl. This is the "new version" of OneWayControl from previous versions of InputMaster.
- KeyControl (KeyCode positive, KeyCode negative)

  Creates a new KeyControl with a negative binding. This is the "new version" of AxisControl from previous versions of InputMaster.
- override string ToStringBlock ()

  Returns debug information as a formatted string block.

Protected Member Functions

- override void UpdateStates ()

  Updates the current states of this control.

Properties

- ModifierKey Modifier `[get, set]`
- KeyCode Negative `[get, set]`
- KeyCode Positive `[get, set]`

Additional Inherited Members

5.6.1 Detailed Description

Used for all Keyboard and Mouse Button controls. Any binding present in Unity's KeyCode enumeration is valid here.

5.6.2 Constructor & Destructor Documentation

5.6.2.1 BSGTools.IO.KeyControl.KeyControl (KeyCode *positive*)

Creates a new KeyControl. This is the "new version" of OneWayControl from previous versions of InputMaster.

Parameters

positive	Positive

5.6.2.2 BSGTools.IO.KeyControl.KeyControl (KeyCode *positive,* KeyCode *negative*)

Creates a new KeyControl with a negative binding. This is the "new version" of AxisControl from previous versions of InputMaster.

Parameters

positive	Positive
negative	Negative

5.6.3 Member Function Documentation

5.6.3.1 override string BSGTools.IO.KeyControl.ToStringBlock ( ) `[virtual]`

Returns debug information as a formatted string block.

Returns

The debug information.

Reimplemented from BSGTools.IO.Control.

5.6.3.2 override void BSGTools.IO.KeyControl.UpdateStates ( ) `[protected]`, `[virtual]`

Updates the current states of this control.

Implements BSGTools.IO.Control.

5.6.4 Property Documentation

5.6.4.1 ModifierKey BSGTools.IO.KeyControl.Modifier `[get], [set]`

The OPTIONAL modifier key for this control.

5.6.4.2 KeyCode BSGTools.IO.KeyControl.Negative `[get], [set]`

The OPTIONAL negative binding for this control.

5.6.4.3 KeyCode BSGTools.IO.KeyControl.Positive `[get], [set]`

The REQUIRED positive binding for this control. CANNOT BE KeyCode.None!

5.7 BSGTools.IO.ModifierKey Class Reference

Represents a Modifier for a control.

Public Types

- enum ModEnums {
  None, **LShift**, **LCtrl**, **LAlt**,
  LWindows, **LCommand**, **RShift**, **RCtrl**,
  RAlt, **RWindows**, **RCommand** }

  Used with FromMEnum for listing options.

Static Public Member Functions

- static ModifierKey FromMEnum (ModEnums me)

  Utility method for listing purposes.
- static implicit operator KeyCode (ModifierKey modifier)

  Assists in checking key status.
- static implicit operator ModifierKey (ModEnums modifier)

  Utility operator overload for listing purposes.

Static Public Attributes

- static readonly ModifierKey LAlt = new ModifierKey(KeyCode.LeftAlt, "Left Alt")

  The Left Alt modifier key.
- static readonly ModifierKey LCommand = new ModifierKey(KeyCode.LeftCommand, "Left Command")

  The Left Command modifier key on Apple based keyboards.
- static readonly ModifierKey LCtrl = new ModifierKey(KeyCode.LeftControl, "Left Control")

  The Left Control modifier key.
- static readonly ModifierKey LShift = new ModifierKey(KeyCode.LeftShift, "Left Shift")

  The Left Shift modifier key.
- static readonly ModifierKey LWindows = new ModifierKey(KeyCode.LeftWindows, "Left Windows")

  The Left Windows modifier key.
- static readonly ModifierKey[] modifiers

  Can be used for listing.

- static readonly ModifierKey None = new ModifierKey(KeyCode.None, "None")

  Default Modifier for KeyControls with no modifier.
- static readonly ModifierKey RAlt = new ModifierKey(KeyCode.RightAlt, "Right Alt")

  The Right Alt modifier key.
- static readonly ModifierKey RCommand = new ModifierKey(KeyCode.RightCommand, "Right Command")

  The Right Command modifier key on Apple based keyboards.
- static readonly ModifierKey RCtrl = new ModifierKey(KeyCode.RightControl, "Right Control")

  The Right Control modifier key.
- static readonly ModifierKey RShift = new ModifierKey(KeyCode.RightShift, "Right Shift")

  The Right Shift modifier key.
- static readonly ModifierKey RWindows = new ModifierKey(KeyCode.RightWindows, "Right Windows")

  The Right Windows modifier key.

Properties

- string DisplayName `[get]`

  Full name of this modifier key.
- KeyCode UKeyCode `[get]`

  Unity's keycode for this Modifier.

5.7.1 Detailed Description

Represents a Modifier for a control.

5.7.2 Member Enumeration Documentation

5.7.2.1 enum **BSGTools.IO.ModifierKey.ModEnums**

Used with FromMEnum for listing options.

5.7.3 Member Function Documentation

5.7.3.1 static **ModifierKey** BSGTools.IO.ModifierKey.FromMEnum (**ModEnums** *me*) `[static]`

Utility method for listing purposes.

Parameters

me	The ModEnums to convert.

Returns

The proper static modifier.

5.7.3.2 static implicit BSGTools.IO.ModifierKey.operator KeyCode (**ModifierKey** *modifier*) `[static]`

Assists in checking key status.

5.7.3.3 static implicit BSGTools.IO.ModifierKey.operator **ModifierKey** (**ModEnums** *modifier*) `[static]`

Utility operator overload for listing purposes.

5.7.4 Member Data Documentation

5.7.4.1 readonly **ModifierKey** BSGTools.IO.ModifierKey.LAlt = new **ModifierKey**(KeyCode.LeftAlt, "Left Alt") [static]

The Left Alt modifier key.

5.7.4.2 readonly **ModifierKey** BSGTools.IO.ModifierKey.LCommand = new **ModifierKey**(KeyCode.LeftCommand, "Left Command") [static]

The Left Command modifier key on Apple based keyboards.

5.7.4.3 readonly **ModifierKey** BSGTools.IO.ModifierKey.LCtrl = new **ModifierKey**(KeyCode.LeftControl, "Left **Control**") [static]

The Left Control modifier key.

5.7.4.4 readonly **ModifierKey** BSGTools.IO.ModifierKey.LShift = new **ModifierKey**(KeyCode.LeftShift, "Left Shift") [static]

The Left Shift modifier key.

5.7.4.5 readonly **ModifierKey** BSGTools.IO.ModifierKey.LWindows = new **ModifierKey**(KeyCode.LeftWindows, "Left Windows") [static]

The Left Windows modifier key.

5.7.4.6 readonly **ModifierKey** [] BSGTools.IO.ModifierKey.modifiers [static]

Initial value:

```
= new ModifierKey[]{
        None,
        LShift,
        LCtrl,
        LAlt,
        LWindows,
        LCommand,
        RShift,
        RCtrl,
        RAlt,
        RWindows,
        RCommand,
    }
```

Can be used for listing.

5.7.4.7 readonly **ModifierKey** BSGTools.IO.ModifierKey.None = new **ModifierKey**(KeyCode.None, "None") [static]

Default Modifier for KeyControls with no modifier.

5.7.4.8 readonly **ModifierKey** BSGTools.IO.ModifierKey.RAlt = new **ModifierKey**(KeyCode.RightAlt, "Right Alt") [static]

The Right Alt modifier key.

5.7.4.9 readonly **ModifierKey** BSGTools.IO.ModifierKey.RCommand = new **ModifierKey**(KeyCode.RightCommand, "Right Command") `[static]`

The Right Command modifier key on Apple based keyboards.

5.7.4.10 readonly **ModifierKey** BSGTools.IO.ModifierKey.RCtrl = new **ModifierKey**(KeyCode.RightControl, "Right **Control**") `[static]`

The Right Control modifier key.

5.7.4.11 readonly **ModifierKey** BSGTools.IO.ModifierKey.RShift = new **ModifierKey**(KeyCode.RightShift, "Right Shift") `[static]`

The Right Shift modifier key.

5.7.4.12 readonly **ModifierKey** BSGTools.IO.ModifierKey.RWindows = new **ModifierKey**(KeyCode.RightWindows, "Right Windows") `[static]`

The Right Windows modifier key.

5.7.5 Property Documentation

5.7.5.1 string BSGTools.IO.ModifierKey.DisplayName `[get]`

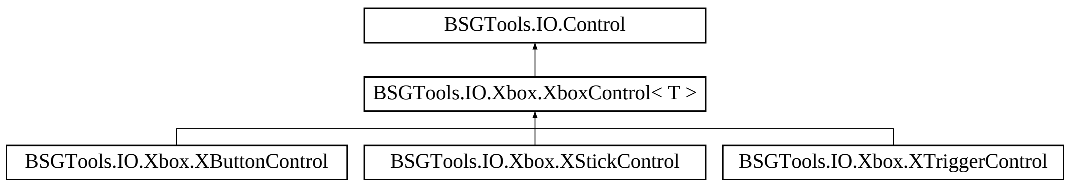
Full name of this modifier key.

5.7.5.2 KeyCode BSGTools.IO.ModifierKey.UKeyCode `[get]`

Unity's keycode for this Modifier.

5.8 BSGTools.IO.Xbox.XboxControl< T > Class Template Reference

Inheritance diagram for BSGTools.IO.Xbox.XboxControl< T >:


BSGTools.IO.Control
BSGTools.IO.Xbox.XboxControl< T >
BSGTools.IO.Xbox.XButtonControl
BSGTools.IO.Xbox.XStickControl
BSGTools.IO.Xbox.XTriggerControl

Static Public Member Functions

- static T[] CreateMultiple (byte count, T toClone)

  Allows for the creation of up to 4 XboxControls at the same time (one for each controller index). An XboxControl must be provided for cloning. The ControllerIndex of the provided clone is ignored.

Protected Member Functions

- XboxControl (byte controllerIndex)

    Creates a new XboxControl .
- abstract T CreateClone (byte controller)

    Creates a clone of an this XboxControl.

Properties

- byte ControllerIndex `[get]`

Additional Inherited Members

5.8.1 Detailed Description

The base class for all Xbox 360 control classes.

Template Parameters

T	Used for generic self-creation.

Type Constraints

T* : *IXboxControl

5.8.2 Constructor & Destructor Documentation

5.8.2.1 BSGTools.IO.Xbox.XboxControl< T >.XboxControl (byte *controllerIndex*) `[protected]`

Creates a new *XboxControl* .

Parameters

controllerIndex	ControllerIndex

5.8.3 Member Function Documentation

5.8.3.1 abstract T BSGTools.IO.Xbox.XboxControl< T >.CreateClone (byte *controller*) `[protected], [pure virtual]`

Creates a clone of an this XboxControl.

Parameters

controller	The index of the controller that will manipulate this control's states and values.

Returns

Implemented in BSGTools.IO.Xbox.XTriggerControl, BSGTools.IO.Xbox.XStickControl, and BSGTools.IO.Xbox.X↵ButtonControl.

5.8.3.2 static T [ ] BSGTools.IO.Xbox.XboxControl< T >.CreateMultiple (byte *count*, T *toClone*) `[static]`

Allows for the creation of up to 4 XboxControls at the same time (one for each controller index). An *XboxControl* must be provided for cloning. The ControllerIndex of the provided clone is ignored.

Parameters

count	The number of controllers to create this control for.
toClone	The instance to take values from for clone creation.

Returns

An array of type T, each assigned to a specific controller index.

Example

```
// Defines a jump control for all 4 players.
XButtonControl[] jump = XButtonControl.CreateMultiple(4, new XButtonControl(0, XButton.A) {
    Name = "Jump",
    Gravity = 2f,
    Sensitivity = 2f
});

// Usage
jump[0].Value; //Player One's jump value
jump[3].Value; //Player Four's jump value
```

5.8.4 Property Documentation

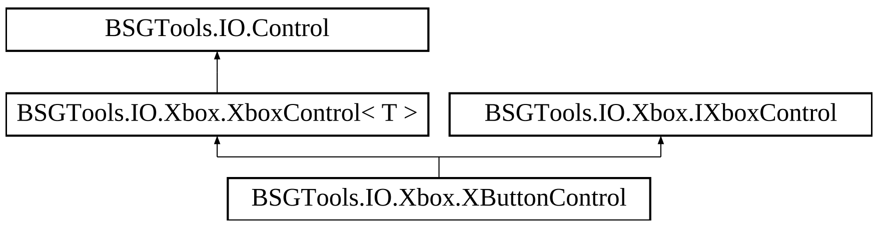
5.8.4.1 byte BSGTools.IO.Xbox.XboxControl< T >.ControllerIndex [get]

The index of the controller that will manipulate this control's states and values. This is used in conjunction to the PlayerIndex enumeration in XInput.

5.9 BSGTools.IO.Xbox.XButtonControl Class Reference

Used for integrating Xbox 360 controller digital buttons/inputs into InputMaster's Control system.

Inheritance diagram for BSGTools.IO.Xbox.XButtonControl:


BSGTools.IO.Control
BSGTools.IO.Xbox.XboxControl< T >
BSGTools.IO.Xbox.IXboxControl
BSGTools.IO.Xbox.XButtonControl

Public Member Functions

- XButtonControl (XButton positive)

  Creates an XButtonControl for a single player game.
- XButtonControl (XButton positive, XButton negative)

  Creates an XButtonControl for a single player game.

Protected Member Functions

- override XButtonControl CreateClone (byte controller)

Creates a clone of this XButtonControl.

- override void UpdateStates ()

  Updates this control's states.

Properties

- XButton Negative `[get, set]`
- XButton Positive `[get, set]`

Additional Inherited Members

5.9.1 Detailed Description

Used for integrating Xbox 360 controller digital buttons/inputs into InputMaster's Control system.

5.9.2 Constructor & Destructor Documentation

5.9.2.1 BSGTools.IO.Xbox.XButtonControl.XButtonControl (**XButton** *positive*)

Creates an XButtonControl for a single player game.

Parameters

positive	The positive binding. CANNOT BE XButton.None!

5.9.2.2 BSGTools.IO.Xbox.XButtonControl.XButtonControl (**XButton** *positive,* **XButton** *negative*)

Creates an XButtonControl for a single player game.

Parameters

positive	The positive binding. CANNOT BE XButton.None!
negative	The negative binding.

5.9.3 Member Function Documentation

5.9.3.1 override **XButtonControl** BSGTools.IO.Xbox.XButtonControl.CreateClone (byte *controller*) `[protected], [virtual]`

Creates a clone of this XButtonControl.

Parameters

controller	The index of the controller that will manipulate this control's states and values.

Returns

The cloned control.

Implements BSGTools.IO.Xbox.XboxControl< T >.

5.9.3.2 override void BSGTools.IO.Xbox.XButtonControl.UpdateStates ( ) `[protected], [virtual]`

Updates this control's states.

Implements BSGTools.IO.Control.

5.9.4 Property Documentation

5.9.4.1 XButton BSGTools.IO.Xbox.XButtonControl.Negative `[get]`, `[set]`

The negative binding for this control.

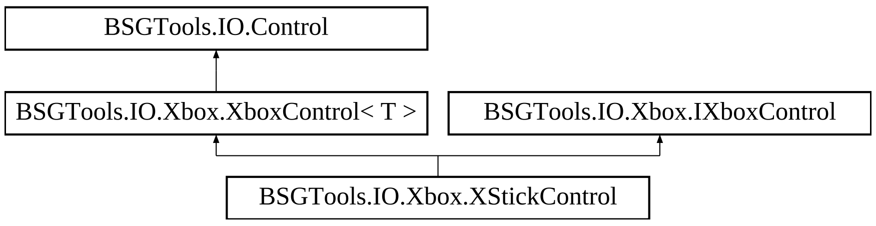
5.9.4.2 XButton BSGTools.IO.Xbox.XButtonControl.Positive `[get]`, `[set]`

The positive binding for this control. CANNOT BE XBinding.None!

5.10 BSGTools.IO.Xbox.XStickControl Class Reference

Used for integrating Xbox 360 controller analog sticks into InputMaster's Control system.

Inheritance diagram for BSGTools.IO.Xbox.XStickControl:


BSGTools.IO.Control
BSGTools.IO.Xbox.XboxControl< T >
BSGTools.IO.Xbox.IXboxControl
BSGTools.IO.Xbox.XStickControl

Public Types

- enum InvertMode { **X** = 1 >> 0, **Y** = 1 >> 1 }

    Because there are 2 axes to worry about, a specialized enumeration is used to allow for different inversion modes.

Public Member Functions

- XStickControl (XStick stick)

    Creates an XStickControl for a single player game.

Protected Member Functions

- override XStickControl CreateClone (byte controller)

    Creates a clone of this XStickControl.
- override void UpdateStates ()

    States are not used for stick controls.
- override void UpdateValues ()

    Updates this control's values. The StickValue property is updated in UpdateStates.

Properties

- XStick Stick `[get, set]`

Additional Inherited Members

5.10.1 Detailed Description

Used for integrating Xbox 360 controller analog sticks into InputMaster's Control system.

5.10.2 Member Enumeration Documentation

5.10.2.1 enum BSGTools.IO.Xbox.XStickControl.InvertMode

Because there are 2 axes to worry about, a specialized enumeration is used to allow for different inversion modes.

5.10.3 Constructor & Destructor Documentation

5.10.3.1 BSGTools.IO.Xbox.XStickControl.XStickControl (XStick *stick*)

Creates an XStickControl for a single player game.

Parameters

stick	The bound stick.

5.10.4 Member Function Documentation

5.10.4.1 override XStickControl BSGTools.IO.Xbox.XStickControl.CreateClone (byte *controller*) `[protected]`, `[virtual]`

Creates a clone of this XStickControl.

Parameters

controller	The ControllerIndex to assign to the new clone.

Returns

The cloned XStickControl.

Implements BSGTools.IO.Xbox.XboxControl< T >.

5.10.4.2 override void BSGTools.IO.Xbox.XStickControl.UpdateStates ( ) `[protected]`, `[virtual]`

States are not used for stick controls.

Implements BSGTools.IO.Control.

5.10.4.3 override void BSGTools.IO.Xbox.XStickControl.UpdateValues ( ) `[protected]`, `[virtual]`

Updates this control's values. The StickValue property is updated in UpdateStates.

Reimplemented from BSGTools.IO.Control.

5.10.5 Property Documentation

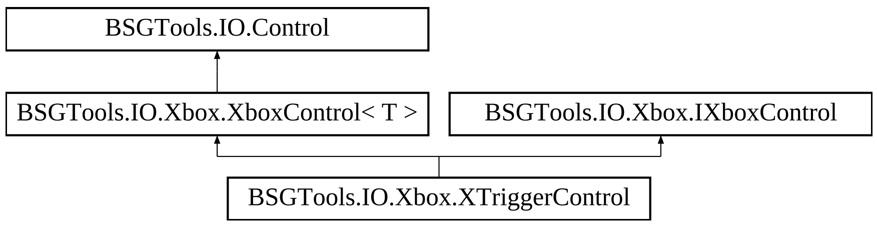
5.10.5.1 XStick BSGTools.IO.Xbox.XStickControl.Stick `[get]`, `[set]`

The assigned analog stick.

5.11 BSGTools.IO.Xbox.XTriggerControl Class Reference

Used for integrating Xbox 360 controller triggers into InputMaster's Control system.

Inheritance diagram for BSGTools.IO.Xbox.XTriggerControl:


BSGTools.IO.Control
BSGTools.IO.Xbox.XboxControl< T >
BSGTools.IO.Xbox.IXboxControl
BSGTools.IO.Xbox.XTriggerControl

Public Member Functions

- XTriggerControl (XTrigger trigger)

    Creates an XTriggerControl for a single player game.

Protected Member Functions

- override XTriggerControl CreateClone (byte controller)

    Creates a clone of this XTriggerControl.
- override void UpdateStates ()

    In this specialized case, the values are updated here, not the states.
- override void UpdateValues ()

Properties

- XTrigger Trigger `[get, set]`

Additional Inherited Members

5.11.1 Detailed Description

Used for integrating Xbox 360 controller triggers into InputMaster's Control system.

5.11.2 Constructor & Destructor Documentation

5.11.2.1 BSGTools.IO.Xbox.XTriggerControl.XTriggerControl (XTrigger *trigger*)

Creates an XTriggerControl for a single player game.

Parameters

trigger	The bound trigger.

5.11.3 Member Function Documentation

5.11.3.1 override **XTriggerControl** BSGTools.IO.Xbox.XTriggerControl.CreateClone (byte *controller*) [protected], [virtual]

Creates a clone of this XTriggerControl.

Parameters

controller	The ControllerIndex to assign to the new clone.

Returns

The cloned XTriggerControl.

Implements BSGTools.IO.Xbox.XboxControl< T >.

5.11.3.2 override void BSGTools.IO.Xbox.XTriggerControl.UpdateStates ( ) [protected], [virtual]

In this specialized case, the values are updated here, not the states.

Implements BSGTools.IO.Control.

5.11.3.3 override void BSGTools.IO.Xbox.XTriggerControl.UpdateValues ( ) [protected], [virtual]

UpdateStates

Reimplemented from BSGTools.IO.Control.

5.11.4 Property Documentation

5.11.4.1 XTrigger BSGTools.IO.Xbox.XTriggerControl.Trigger [get], [set]

The assigend trigger that will manipulate this control's states and values.