| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ScrollPaneAdjustable.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/ScrollPane.AccessibleAWTScrollPane.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/Shape.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/ScrollPaneAdjustable.html)    [**NO FRAMES**](http://docs.google.com/ScrollPaneAdjustable.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#tyjcwt) | DETAIL: FIELD | CONSTR | [METHOD](#1t3h5sf) |

## **java.awt**

Class ScrollPaneAdjustable

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.awt.ScrollPaneAdjustable**

**All Implemented Interfaces:** [Adjustable](http://docs.google.com/java/awt/Adjustable.html), [Serializable](http://docs.google.com/java/io/Serializable.html)

public class **ScrollPaneAdjustable**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Adjustable](http://docs.google.com/java/awt/Adjustable.html), [Serializable](http://docs.google.com/java/io/Serializable.html)

This class represents the state of a horizontal or vertical scrollbar of a ScrollPane. Objects of this class are returned by ScrollPane methods.

**Since:** 1.4 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#java.awt.ScrollPaneAdjustable)

| **Field Summary** | |
| --- | --- |

| **Fields inherited from interface java.awt.**[**Adjustable**](http://docs.google.com/java/awt/Adjustable.html) |
| --- |
| [HORIZONTAL](http://docs.google.com/java/awt/Adjustable.html#HORIZONTAL), [NO\_ORIENTATION](http://docs.google.com/java/awt/Adjustable.html#NO_ORIENTATION), [VERTICAL](http://docs.google.com/java/awt/Adjustable.html#VERTICAL) |

| **Method Summary** | |
| --- | --- |
| void | [**addAdjustmentListener**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#addAdjustmentListener(java.awt.event.AdjustmentListener))([AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html) l)            Adds the specified adjustment listener to receive adjustment events from this ScrollPaneAdjustable. |
| [AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html)[] | [**getAdjustmentListeners**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getAdjustmentListeners())()            Returns an array of all the adjustment listeners registered on this ScrollPaneAdjustable. |
| int | [**getBlockIncrement**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getBlockIncrement())()            Gets the block value increment for the adjustable object. |
| int | [**getMaximum**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getMaximum())()            Gets the maximum value of the adjustable object. |
| int | [**getMinimum**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getMinimum())()            Gets the minimum value of the adjustable object. |
| int | [**getOrientation**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getOrientation())()            Returns the orientation of this scrollbar. |
| int | [**getUnitIncrement**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getUnitIncrement())()            Gets the unit value increment for the adjustable object. |
| int | [**getValue**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getValue())()            Gets the current value of the adjustable object. |
| boolean | [**getValueIsAdjusting**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getValueIsAdjusting())()            Returns true if the value is in the process of changing as a result of actions being taken by the user. |
| int | [**getVisibleAmount**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getVisibleAmount())()            Gets the length of the proportional indicator. |
| [String](http://docs.google.com/java/lang/String.html) | [**paramString**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#paramString())()            Returns a string representing the state of this scrollbar. |
| void | [**removeAdjustmentListener**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#removeAdjustmentListener(java.awt.event.AdjustmentListener))([AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html) l)            Removes the specified adjustment listener so that it no longer receives adjustment events from this ScrollPaneAdjustable. |
| void | [**setBlockIncrement**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setBlockIncrement(int))(int b)            Sets the block value increment for the adjustable object. |
| void | [**setMaximum**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setMaximum(int))(int max)            This method should **NOT** be called by user code. |
| void | [**setMinimum**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setMinimum(int))(int min)            This method should **NOT** be called by user code. |
| void | [**setUnitIncrement**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setUnitIncrement(int))(int u)            Sets the unit value increment for the adjustable object. |
| void | [**setValue**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setValue(int))(int v)            Sets the value of this scrollbar to the specified value. |
| void | [**setValueIsAdjusting**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setValueIsAdjusting(boolean))(boolean b)            Sets the valueIsAdjusting property. |
| void | [**setVisibleAmount**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setVisibleAmount(int))(int v)            This method should **NOT** be called by user code. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#toString())()            Returns a string representation of this scrollbar and its values. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Method Detail** |
| --- |

### getOrientation

public int **getOrientation**()

Returns the orientation of this scrollbar.

**Specified by:**[getOrientation](http://docs.google.com/java/awt/Adjustable.html#getOrientation()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the orientation of this scrollbar, either Adjustable.HORIZONTAL or Adjustable.VERTICAL

### setMinimum

public void **setMinimum**(int min)

This method should **NOT** be called by user code. This method is public for this class to properly implement Adjustable interface.

**Specified by:**[setMinimum](http://docs.google.com/java/awt/Adjustable.html#setMinimum(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**min - the minimum value **Throws:** AWTError - Always throws an error when called.

### getMinimum

public int **getMinimum**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getMinimum()) Gets the minimum value of the adjustable object.

**Specified by:**[getMinimum](http://docs.google.com/java/awt/Adjustable.html#getMinimum()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the minimum value of the adjustable object

### setMaximum

public void **setMaximum**(int max)

This method should **NOT** be called by user code. This method is public for this class to properly implement Adjustable interface.

**Specified by:**[setMaximum](http://docs.google.com/java/awt/Adjustable.html#setMaximum(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**max - the maximum value **Throws:** AWTError - Always throws an error when called.

### getMaximum

public int **getMaximum**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getMaximum()) Gets the maximum value of the adjustable object.

**Specified by:**[getMaximum](http://docs.google.com/java/awt/Adjustable.html#getMaximum()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the maximum value of the adjustable object

### setUnitIncrement

public void **setUnitIncrement**(int u)

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#setUnitIncrement(int)) Sets the unit value increment for the adjustable object.

**Specified by:**[setUnitIncrement](http://docs.google.com/java/awt/Adjustable.html#setUnitIncrement(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**u - the unit increment

### getUnitIncrement

public int **getUnitIncrement**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getUnitIncrement()) Gets the unit value increment for the adjustable object.

**Specified by:**[getUnitIncrement](http://docs.google.com/java/awt/Adjustable.html#getUnitIncrement()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the unit value increment for the adjustable object

### setBlockIncrement

public void **setBlockIncrement**(int b)

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#setBlockIncrement(int)) Sets the block value increment for the adjustable object.

**Specified by:**[setBlockIncrement](http://docs.google.com/java/awt/Adjustable.html#setBlockIncrement(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**b - the block increment

### getBlockIncrement

public int **getBlockIncrement**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getBlockIncrement()) Gets the block value increment for the adjustable object.

**Specified by:**[getBlockIncrement](http://docs.google.com/java/awt/Adjustable.html#getBlockIncrement()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the block value increment for the adjustable object

### setVisibleAmount

public void **setVisibleAmount**(int v)

This method should **NOT** be called by user code. This method is public for this class to properly implement Adjustable interface.

**Specified by:**[setVisibleAmount](http://docs.google.com/java/awt/Adjustable.html#setVisibleAmount(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**v - the length of the indicator **Throws:** AWTError - Always throws an error when called.

### getVisibleAmount

public int **getVisibleAmount**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getVisibleAmount()) Gets the length of the proportional indicator.

**Specified by:**[getVisibleAmount](http://docs.google.com/java/awt/Adjustable.html#getVisibleAmount()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the length of the proportional indicator

### setValueIsAdjusting

public void **setValueIsAdjusting**(boolean b)

Sets the valueIsAdjusting property.

**Parameters:**b - new adjustment-in-progress status**Since:** 1.4 **See Also:**[getValueIsAdjusting()](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getValueIsAdjusting())

### getValueIsAdjusting

public boolean **getValueIsAdjusting**()

Returns true if the value is in the process of changing as a result of actions being taken by the user.

**Returns:**the value of the valueIsAdjusting property**See Also:**[setValueIsAdjusting(boolean)](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#setValueIsAdjusting(boolean))

### setValue

public void **setValue**(int v)

Sets the value of this scrollbar to the specified value.

If the value supplied is less than the current minimum or greater than the current maximum, then one of those values is substituted, as appropriate.

**Specified by:**[setValue](http://docs.google.com/java/awt/Adjustable.html#setValue(int)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**v - the new value of the scrollbar

### getValue

public int **getValue**()

**Description copied from interface:** [**Adjustable**](http://docs.google.com/java/awt/Adjustable.html#getValue()) Gets the current value of the adjustable object.

**Specified by:**[getValue](http://docs.google.com/java/awt/Adjustable.html#getValue()) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Returns:**the current value of the adjustable object

### addAdjustmentListener

public void **addAdjustmentListener**([AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html) l)

Adds the specified adjustment listener to receive adjustment events from this ScrollPaneAdjustable. If l is null, no exception is thrown and no action is performed.

Refer to [AWT Threading Issues](http://docs.google.com/doc-files/AWTThreadIssues.html#ListenersThreads) for details on AWT's threading model.

**Specified by:**[addAdjustmentListener](http://docs.google.com/java/awt/Adjustable.html#addAdjustmentListener(java.awt.event.AdjustmentListener)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**l - the adjustment listener.**See Also:**[removeAdjustmentListener(java.awt.event.AdjustmentListener)](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#removeAdjustmentListener(java.awt.event.AdjustmentListener)), [getAdjustmentListeners()](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getAdjustmentListeners()), [AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html), [AdjustmentEvent](http://docs.google.com/java/awt/event/AdjustmentEvent.html)

### removeAdjustmentListener

public void **removeAdjustmentListener**([AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html) l)

Removes the specified adjustment listener so that it no longer receives adjustment events from this ScrollPaneAdjustable. If l is null, no exception is thrown and no action is performed.

Refer to [AWT Threading Issues](http://docs.google.com/doc-files/AWTThreadIssues.html#ListenersThreads) for details on AWT's threading model.

**Specified by:**[removeAdjustmentListener](http://docs.google.com/java/awt/Adjustable.html#removeAdjustmentListener(java.awt.event.AdjustmentListener)) in interface [Adjustable](http://docs.google.com/java/awt/Adjustable.html) **Parameters:**l - the adjustment listener.**Since:** JDK1.1 **See Also:**[addAdjustmentListener(java.awt.event.AdjustmentListener)](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#addAdjustmentListener(java.awt.event.AdjustmentListener)), [getAdjustmentListeners()](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#getAdjustmentListeners()), [AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html), [AdjustmentEvent](http://docs.google.com/java/awt/event/AdjustmentEvent.html)

### getAdjustmentListeners

public [AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html)[] **getAdjustmentListeners**()

Returns an array of all the adjustment listeners registered on this ScrollPaneAdjustable.

**Returns:**all of this ScrollPaneAdjustable's AdjustmentListeners or an empty array if no adjustment listeners are currently registered**Since:** 1.4 **See Also:**[addAdjustmentListener(java.awt.event.AdjustmentListener)](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#addAdjustmentListener(java.awt.event.AdjustmentListener)), [removeAdjustmentListener(java.awt.event.AdjustmentListener)](http://docs.google.com/java/awt/ScrollPaneAdjustable.html#removeAdjustmentListener(java.awt.event.AdjustmentListener)), [AdjustmentListener](http://docs.google.com/java/awt/event/AdjustmentListener.html), [AdjustmentEvent](http://docs.google.com/java/awt/event/AdjustmentEvent.html)

### toString

public [String](http://docs.google.com/java/lang/String.html) **toString**()

Returns a string representation of this scrollbar and its values.

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a string representation of this scrollbar.

### paramString

public [String](http://docs.google.com/java/lang/String.html) **paramString**()

Returns a string representing the state of this scrollbar. This method is intended to be used only for debugging purposes, and the content and format of the returned string may vary between implementations. The returned string may be empty but may not be null.

**Returns:**the parameter string of this scrollbar.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ScrollPaneAdjustable.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#tyjcwt) | DETAIL: FIELD | CONSTR | [METHOD](#1t3h5sf) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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