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sf::RenderStates Class Reference

[Graphics module](http://docs.google.com/group__graphics.htm)

Define the states used for drawing to a [RenderTarget](http://docs.google.com/classsf_1_1RenderTarget.htm). [More...](http://docs.google.com/classsf_1_1RenderStates.htm#details)

#include <[RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm)>

| Public Member Functions | |
| --- | --- |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#a885bf14070d0d5391f062f62b270b7d0) () |
|  | Default constructor. |
|  | |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#a4e3378a224f67513b95d58184e85210c) ([BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) theBlendMode) |
|  | Construct a default set of render states with a custom blend mode. |
|  | |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#a3e99cad6ab05971d40357949930ed890) (const [Transform](http://docs.google.com/classsf_1_1Transform.htm) &theTransform) |
|  | Construct a default set of render states with a custom transform. |
|  | |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#a8f4ca3be0e27dafea0c4ab8547439bb1) (const [Texture](http://docs.google.com/classsf_1_1Texture.htm) \*theTexture) |
|  | Construct a default set of render states with a custom texture. |
|  | |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#a39f94233f464739d8d8522f3aefe97d0) (const [Shader](http://docs.google.com/classsf_1_1Shader.htm) \*theShader) |
|  | Construct a default set of render states with a custom shader. |
|  | |
|  | [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm#ae508c91ac7b8992dc22b8d8a4027ad09) ([BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) theBlendMode, const [Transform](http://docs.google.com/classsf_1_1Transform.htm) &theTransform, const [Texture](http://docs.google.com/classsf_1_1Texture.htm) \*theTexture, const [Shader](http://docs.google.com/classsf_1_1Shader.htm) \*theShader) |
|  | Construct a set of render states with all its attributes. |
|  | |

| Public Attributes | |
| --- | --- |
| [BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) | [blendMode](http://docs.google.com/classsf_1_1RenderStates.htm#ad6ac87f1b5006dae7ebfee4b5d40f5a8) |
|  | Blending mode. |
|  | |
| [Transform](http://docs.google.com/classsf_1_1Transform.htm) | [transform](http://docs.google.com/classsf_1_1RenderStates.htm#a1f737981a0f2f0d4bb8dac866a8d1149) |
|  | [Transform](http://docs.google.com/classsf_1_1Transform.htm). |
|  | |
| const [Texture](http://docs.google.com/classsf_1_1Texture.htm) \* | [texture](http://docs.google.com/classsf_1_1RenderStates.htm#a457fc5a41731889de9cf39cf9b3436c3) |
|  | [Texture](http://docs.google.com/classsf_1_1Texture.htm). |
|  | |
| const [Shader](http://docs.google.com/classsf_1_1Shader.htm) \* | [shader](http://docs.google.com/classsf_1_1RenderStates.htm#ad4f79ecdd0c60ed0d24fbe555b221bd8) |
|  | [Shader](http://docs.google.com/classsf_1_1Shader.htm). |
|  | |

| Static Public Attributes | |
| --- | --- |
| static const [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm) | [Default](http://docs.google.com/classsf_1_1RenderStates.htm#ad29672df29f19ce50c3021d95f2bb062) |
|  | Special instance holding the default render states. |
|  | |

## Detailed Description

Define the states used for drawing to a [RenderTarget](http://docs.google.com/classsf_1_1RenderTarget.htm).

There are four global states that can be applied to the drawn objects:

* the blend mode: how pixels of the object are blended with the background
* the transform: how the object is positioned/rotated/scaled
* the texture: what image is mapped to the object
* the shader: what custom effect is applied to the object

High-level objects such as sprites or text force some of these states when they are drawn. For example, a sprite will set its own texture, so that you don't have to care about it when drawing the sprite.

The transform is a special case: sprites, texts and shapes (and it's a good idea to do it with your own drawable classes too) combine their transform with the one that is passed in the [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm) structure. So that you can use a "global" transform on top of each object's transform.

Most objects, especially high-level drawables, can be drawn directly without defining render states explicitely – the default set of states is ok in most cases.

window.Draw(sprite);

If you want to use a single specific render state, for example a shader, you can pass it directly to the Draw function: [sf::RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm) has an implicit one-argument constructor for each state.

window.draw(sprite, [shader](http://docs.google.com/classsf_1_1RenderStates.htm#ad4f79ecdd0c60ed0d24fbe555b221bd8));

When you're inside the Draw function of a drawable object (inherited from [sf::Drawable](http://docs.google.com/classsf_1_1Drawable.htm)), you can either pass the render states unmodified, or change some of them. For example, a transformable object will combine the current transform with its own transform. A sprite will set its texture. Etc.

See Also[sf::RenderTarget](http://docs.google.com/classsf_1_1RenderTarget.htm), [sf::Drawable](http://docs.google.com/classsf_1_1Drawable.htm)

Definition at line [45](http://docs.google.com/RenderStates_8hpp_source.htm#l00045) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

## Constructor & Destructor Documentation

| sf::RenderStates::RenderStates | ( |  | ) |  |
| --- | --- | --- | --- | --- |

Default constructor.

Constructing a default set of render states is equivalent to using [sf::RenderStates::Default](http://docs.google.com/classsf_1_1RenderStates.htm#ad29672df29f19ce50c3021d95f2bb062). The default set defines:

* the BlendAlpha blend mode
* the identity transform
* a null texture
* a null shader

| sf::RenderStates::RenderStates | ( | [BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) | *theBlendMode* | ) |  |
| --- | --- | --- | --- | --- | --- |

Construct a default set of render states with a custom blend mode.

Parameters

| theBlendMode | Blend mode to use |
| --- | --- |

| sf::RenderStates::RenderStates | ( | const [Transform](http://docs.google.com/classsf_1_1Transform.htm) & | *theTransform* | ) |  |
| --- | --- | --- | --- | --- | --- |

Construct a default set of render states with a custom transform.

Parameters

| theTransform | [Transform](http://docs.google.com/classsf_1_1Transform.htm) to use |
| --- | --- |

| sf::RenderStates::RenderStates | ( | const [Texture](http://docs.google.com/classsf_1_1Texture.htm) \* | *theTexture* | ) |  |
| --- | --- | --- | --- | --- | --- |

Construct a default set of render states with a custom texture.

Parameters

| theTexture | [Texture](http://docs.google.com/classsf_1_1Texture.htm) to use |
| --- | --- |

| sf::RenderStates::RenderStates | ( | const [Shader](http://docs.google.com/classsf_1_1Shader.htm) \* | *theShader* | ) |  |
| --- | --- | --- | --- | --- | --- |

Construct a default set of render states with a custom shader.

Parameters

| theShader | [Shader](http://docs.google.com/classsf_1_1Shader.htm) to use |
| --- | --- |

| sf::RenderStates::RenderStates | ( | [BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) | *theBlendMode*, |
| --- | --- | --- | --- |
|  |  | const [Transform](http://docs.google.com/classsf_1_1Transform.htm) & | *theTransform*, |
|  |  | const [Texture](http://docs.google.com/classsf_1_1Texture.htm) \* | *theTexture*, |
|  |  | const [Shader](http://docs.google.com/classsf_1_1Shader.htm) \* | *theShader* |
|  | ) |  |  |

Construct a set of render states with all its attributes.

Parameters

| theBlendMode | Blend mode to use |
| --- | --- |
| theTransform | [Transform](http://docs.google.com/classsf_1_1Transform.htm) to use |
| theTexture | [Texture](http://docs.google.com/classsf_1_1Texture.htm) to use |
| theShader | [Shader](http://docs.google.com/classsf_1_1Shader.htm) to use |

## Member Data Documentation

| [BlendMode](http://docs.google.com/group__graphics.htm#ga80c52fe2f7050d7f7573b7ed3c995388) sf::RenderStates::blendMode |
| --- |

Blending mode.

Definition at line [115](http://docs.google.com/RenderStates_8hpp_source.htm#l00115) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

| | const [RenderStates](http://docs.google.com/classsf_1_1RenderStates.htm) sf::RenderStates::Default | | --- | | static |
| --- | --- | --- |

Special instance holding the default render states.

Definition at line [110](http://docs.google.com/RenderStates_8hpp_source.htm#l00110) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

| const [Shader](http://docs.google.com/classsf_1_1Shader.htm)\* sf::RenderStates::shader |
| --- |

[Shader](http://docs.google.com/classsf_1_1Shader.htm).

Definition at line [118](http://docs.google.com/RenderStates_8hpp_source.htm#l00118) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

| const [Texture](http://docs.google.com/classsf_1_1Texture.htm)\* sf::RenderStates::texture |
| --- |

[Texture](http://docs.google.com/classsf_1_1Texture.htm).

Definition at line [117](http://docs.google.com/RenderStates_8hpp_source.htm#l00117) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

| [Transform](http://docs.google.com/classsf_1_1Transform.htm) sf::RenderStates::transform |
| --- |

[Transform](http://docs.google.com/classsf_1_1Transform.htm).

Definition at line [116](http://docs.google.com/RenderStates_8hpp_source.htm#l00116) of file [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm).

The documentation for this class was generated from the following file:

* [RenderStates.hpp](http://docs.google.com/RenderStates_8hpp_source.htm)

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