SFML

* [Main Page](http://docs.google.com/index.htm)
* [Modules](http://docs.google.com/modules.htm)
* [Classes](http://docs.google.com/annotated.htm)
* [Files](http://docs.google.com/files.htm)

[Classes](#_gjdgxs) | [Functions](#_30j0zll)

System module

Base module of SFML, defining various utilities. [More...](#1fob9te)

| Classes | |
| --- | --- |
| class | [sf::Clock](http://docs.google.com/classsf_1_1Clock.htm) |
|  | Utility class that measures the elapsed time. [More...](http://docs.google.com/classsf_1_1Clock.htm#details) |
|  | |
| class | [sf::InputStream](http://docs.google.com/classsf_1_1InputStream.htm) |
|  | Abstract class for custom file input streams. [More...](http://docs.google.com/classsf_1_1InputStream.htm#details) |
|  | |
| class | [sf::Lock](http://docs.google.com/classsf_1_1Lock.htm) |
|  | Automatic wrapper for locking and unlocking mutexes. [More...](http://docs.google.com/classsf_1_1Lock.htm#details) |
|  | |
| class | [sf::Mutex](http://docs.google.com/classsf_1_1Mutex.htm) |
|  | Blocks concurrent access to shared resources from multiple threads. [More...](http://docs.google.com/classsf_1_1Mutex.htm#details) |
|  | |
| class | [sf::NonCopyable](http://docs.google.com/classsf_1_1NonCopyable.htm) |
|  | Utility class that makes any derived class non-copyable. [More...](http://docs.google.com/classsf_1_1NonCopyable.htm#details) |
|  | |
| class | [sf::String](http://docs.google.com/classsf_1_1String.htm) |
|  | Utility string class that automatically handles conversions between types and encodings. [More...](http://docs.google.com/classsf_1_1String.htm#details) |
|  | |
| class | [sf::Thread](http://docs.google.com/classsf_1_1Thread.htm) |
|  | Utility class to manipulate threads. [More...](http://docs.google.com/classsf_1_1Thread.htm#details) |
|  | |
| class | [sf::ThreadLocal](http://docs.google.com/classsf_1_1ThreadLocal.htm) |
|  | Defines variables with thread-local storage. [More...](http://docs.google.com/classsf_1_1ThreadLocal.htm#details) |
|  | |
| class | [sf::ThreadLocalPtr< T >](http://docs.google.com/classsf_1_1ThreadLocalPtr.htm) |
|  | Pointer to a thread-local variable. [More...](http://docs.google.com/classsf_1_1ThreadLocalPtr.htm#details) |
|  | |
| class | [sf::Time](http://docs.google.com/classsf_1_1Time.htm) |
|  | Represents a time value. [More...](http://docs.google.com/classsf_1_1Time.htm#details) |
|  | |
| class | [sf::Utf](http://docs.google.com/classsf_1_1Utf.htm) |
|  | Utility class providing generic functions for UTF conversions. [More...](http://docs.google.com/classsf_1_1Utf.htm#details) |
|  | |
| class | [sf::Vector2< T >](http://docs.google.com/classsf_1_1Vector2.htm) |
|  | Utility template class for manipulating 2-dimensional vectors. [More...](http://docs.google.com/classsf_1_1Vector2.htm#details) |
|  | |
| class | [sf::Vector3< T >](http://docs.google.com/classsf_1_1Vector3.htm) |
|  | Utility template class for manipulating 3-dimensional vectors. [More...](http://docs.google.com/classsf_1_1Vector3.htm#details) |
|  | |

| Functions | |
| --- | --- |
| void | [sf::sleep](http://docs.google.com/group__system.htm#gab8c0d1f966b4e5110fd370b662d8c11b) (Time duration) |
|  | Make the current thread sleep for a given duration. |
|  | |
| std::ostream & | [sf::err](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f) () |
|  | Standard stream used by SFML to output warnings and errors. |
|  | |

## Detailed Description

Base module of SFML, defining various utilities.

It provides vector classes, unicode strings and conversion functions, threads and mutexes, timing classes.

## Function Documentation

| sf::err | ( |  | ) |  |
| --- | --- | --- | --- | --- |

Standard stream used by SFML to output warnings and errors.

By default, [sf::err()](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f) outputs to the same location as std::cerr, (-> the stderr descriptor) which is the console if there's one available.

It is a standard std::ostream instance, so it supports all the insertion operations defined by the STL (operator <<, manipulators, etc.).

[sf::err()](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f) can be redirected to write to another output, independantly of std::cerr, by using the rdbuf() function provided by the std::ostream class.

Example:

// Redirect to a file

std::ofstream file("sfml-log.txt");

std::streambuf\* previous = [sf::err](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f)().rdbuf(file.rdbuf());

// Redirect to nothing

[sf::err](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f)().rdbuf(NULL);

// Restore the original output

[sf::err](http://docs.google.com/group__system.htm#ga7fe7f475639e26334606b5142c29551f)().rdbuf(previous);

| void sf::sleep | ( | Time | *duration* | ) |  |
| --- | --- | --- | --- | --- | --- |

Make the current thread sleep for a given duration.

sf::sleep is the best way to block a program or one of its threads, as it doesn't consume any CPU power.

Parameters

| duration | [Time](http://docs.google.com/classsf_1_1Time.htm) to sleep |
| --- | --- |

Copyright � Laurent Gomila  ::  Documentation generated by [doxygen](http://www.doxygen.org/)  ::