

**NAME**

bsd\_signal - signal handling with BSD semantics

**SYNOPSIS**

```
#define _XOPEN_SOURCE /* See feature\_test\_macros\(7\) */  
#include <signal.h>  
  
typedef void (*sighandler_t)(int);  
  
sighandler_t bsd_signal(int signum, sighandler_t handler);
```

**DESCRIPTION**

The **bsd\_signal()** function takes the same arguments, and performs the same task, as [signal\(2\)](#).

The difference between the two is that **bsd\_signal()** is guaranteed to provide reliable signal semantics, that is: a) the disposition of the signal is not reset to the default when the handler is invoked; b) delivery of further instances of the signal is blocked while the signal handler is executing; and c) if the handler interrupts a blocking system call, then the system call is automatically restarted. A portable application cannot rely on [signal\(2\)](#) to provide these guarantees.

**RETURN VALUE**

The **bsd\_signal()** function returns the previous value of the signal handler, or **SIG\_ERR** on error.

**ERRORS**

As for [signal\(2\)](#).

**ATTRIBUTES**

**Multithreading** (see [pthreads\(7\)](#))

The **bsd\_signal()** function is thread-safe.

**CONFORMING TO**

4.2BSD, POSIX.1-2001. POSIX.1-2008 removes the specification of **bsd\_signal()**, recommending the use of [sigaction\(2\)](#) instead.

**NOTES**

Use of **bsd\_signal()** should be avoided; use [sigaction\(2\)](#) instead.

On modern Linux systems, **bsd\_signal()** and [signal\(2\)](#) are equivalent. But on older systems, [signal\(2\)](#) provided unreliable signal semantics; see [signal\(2\)](#) for details.

The use of *sighandler\_t* is a GNU extension; this type is defined only if the **\_GNU\_SOURCE** feature test macro is defined.

**SEE ALSO**

[sigaction\(2\)](#), [signal\(2\)](#), [sysv\\_signal\(3\)](#), [signal\(7\)](#)

**COLOPHON**

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