



Linux Ubuntu 26.04 Manual Pages on command 'siggetmask.3'

\$ man siggetmask.3

sigvec(3) Library Functions Manual sigvec(3)

NAME

sigvec, sigblock, sigsetmask, siggetmask, sigmask - BSD signal API

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <signal.h>
```

```
[[deprecated]] int sigvec(int sig, const struct sigvec *vec,
```

```
    struct sigvec *ovec);
```

```
[[deprecated]] int sigmask(int signum);
```

```
[[deprecated]] int sigblock(int mask);
```

```
[[deprecated]] int sigsetmask(int mask);
```

```
[[deprecated]] int siggetmask(void);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

All functions shown above:

Since glibc 2.19:

```
_DEFAULT_SOURCE
```

glibc 2.19 and earlier:

```
_BSD_SOURCE
```

DESCRIPTION

These functions are provided in glibc as a compatibility interface for programs that make use of the historical BSD signal API. This API is obsolete: new applications should use the POSIX signal API (sigaction(2), sigprocmask(2), etc.).

The `sigvec()` function sets and/or gets the disposition of the signal `sig` (like the POSIX `sigaction(2)`). If `vec` is not NULL, it points to a `sigvec` structure that defines the new disposition for `sig`. If `ovec` is not NULL, it points to a `sigvec` structure that is used to return the previous disposition of `sig`. To obtain the current disposition of `sig` without changing it, specify NULL for `vec`, and a non-null pointer for `ovec`.

The dispositions for SIGKILL and SIGSTOP cannot be changed.

The `sigvec` structure has the following form:

```
struct sigvec {  
    void (*sv_handler)(int); /* Signal disposition */  
    int sv_mask; /* Signals to be blocked in handler */  
    int sv_flags; /* Flags */  
};
```

The `sv_handler` field specifies the disposition of the signal, and is either: the address of a signal handler function; SIG_DFL, meaning the default disposition applies for the signal; or SIG_IGN, meaning that the signal is ignored.

If `sv_handler` specifies the address of a signal handler, then `sv_mask` specifies a mask of signals that are to be blocked while the handler is executing. In addition, the signal for which the handler is invoked is also blocked. Attempts to block SIGKILL or SIGSTOP are silently ignored.

If `sv_handler` specifies the address of a signal handler, then the `sv_flags` field specifies flags controlling what happens when the handler is called. This field may contain zero or more of the following flags:

SV_INTERRUPT

If the signal handler interrupts a blocking system call, then upon return from the handler the system call is not restarted: instead it fails with the error EINTR. If this flag is not specified, then system calls are restarted by default.

SV_RESETHAND

Reset the disposition of the signal to the default before calling the signal handler. If this flag is not specified, then the handler remains established until explicitly removed by a later call to `sigvec()` or until the process performs an `execve(2)`.

SV_ONSTACK

Handle the signal on the alternate signal stack (historically established under BSD using the obsolete `sigstack()` function; the POSIX replacement is `sigaltstack(2)`).

The `sigmask()` macro constructs and returns a "signal mask" for `signum`. For example, we can initialize the `vec.sig_mask` field given to `sigvec()` using code such as the following:

```
vec.sigmask = sigmask(SIGQUIT) | sigmask(SIGABRT);
```

```
/* Block SIGQUIT and SIGABRT during
```

```
handler execution */
```

The `sigblock()` function adds the signals in `mask` to the process's signal mask (like `POSIX sigprocmask(SIG_BLOCK)`), and returns the process's previous signal mask. Attempts to block `SIGKILL` or `SIGSTOP` are silently ignored.

The `sigsetmask()` function sets the process's signal mask to the value given in `mask` (like POSIX `sigprocmask(SIG_SETMASK)`), and returns the process's previous signal mask.

The `siggetmask()` function returns the process's current signal mask. This call is equivalent to `sigblock(0)`.

RETURN VALUE

The `sigvec()` function returns 0 on success; on error, it returns -1 and sets `errno` to indicate the error.

The `sigblock()` and `sigsetmask()` functions return the previous signal mask.

The `sigmask()` macro returns the signal mask for `signum`.

ERRORS

See the ERRORS under sigaction(2) and sigprocmask(2).

ATTRIBUTES

For an explanation of the terms used in this section, see `attributes(7)`.

[illegible]

?	Interface	?	Attribute	?	Value	?
---	-----------	---	-----------	---	-------	---

[illegible]

? sigvec(), sigmask(), sigblock(), sigsetmask(), siggetmask() ? Thread safety ? MT-Safe ?

[illegible]

STANDARDS

None.

HISTORY

sigvec()

sigblock()

sigmask()

sigsetmask()

4.3BSD.

siggetmask()

Unclear origin.

sigvec()

Removed in glibc 2.21.

NOTES

On 4.3BSD, the `signal()` function provided reliable semantics (as when calling `sigvec()` with `vec.sv_mask` equal to 0). On System V, `signal()` provides unreliable semantics. POSIX.1 leaves these aspects of `signal()` unspecified. See `signal(2)` for further details.

In order to wait for a signal, BSD and System V both provided a function named `sigpause(3)`, but this function has a different argument on the two systems. See `sigpause(3)` for details.

SEE ALSO

`kill(2)`, `pause(2)`, `sigaction(2)`, `signal(2)`, `sigprocmask(2)`, `raise(3)`, `sigpause(3)`,
`sigset(3)`, `signal(7)`

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