

**NAME**

**sigemptyset**, **sigfillset**, **sigaddset**, **sigandset**, **sigdelset**, **sigisemptyset**, **sigismember**, **sigorset** - manipulate signal sets

**LIBRARY**

Standard C Library (libc, -lc)

**SYNOPSIS**

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

*int*

```
sigemptyset(sigset_t *set);
```

*int*

```
sigfillset(sigset_t *set);
```

*int*

```
sigaddset(sigset_t *set, int signo);
```

*int*

```
sigandset(sigset_t *set, const sigset_t *left, const sigset_t *right);
```

*int*

```
sigdelset(sigset_t *set, int signo);
```

*int*

```
sigisemptyset(const sigset_t *set);
```

*int*

```
sigismember(const sigset_t *set, int signo);
```

*int*

```
sigorset(sigset_t *set, const sigset_t *left, const sigset_t *right);
```

**DESCRIPTION**

These functions manipulate signal sets stored in a *sigset\_t*. Either **sigemptyset()** or **sigfillset()** must be called for every object of type *sigset\_t* before any other use of the object.

The **sigemptyset()** function initializes a signal set to be empty.

The **sigfillset()** function initializes a signal set to contain all signals.

The **sigaddset()** function adds the specified signal *signo* to the signal set.

The **sigandset()** function sets the specified *set* to the logical AND of all signals from the *left* and *right* signal sets.

The **sigdelset()** function deletes the specified signal *signo* from the signal set.

The **sigisemptyset()** function returns whether the specified *set* is empty or not.

The **sigismember()** function returns whether a specified signal *signo* is contained in the signal set.

The **sigorset()** function sets the specified *set* to the logical OR of all signals from the *left* and *right* signal sets.

## RETURN VALUES

The **sigisemptyset()** function returns 1 if the set is empty, 0 otherwise.

The **sigismember()** function returns 1 if the signal is a member of the set, 0 otherwise.

The other functions return 0 upon success. A -1 return value indicates an error occurred and the global variable *errno* is set to indicate the reason.

## ERRORS

These functions could fail if one of the following occurs:

[EINVAL]            *signo* has an invalid value.

## SEE ALSO

kill(2), sigaction(2), sigpending(2), sigprocmask(2), sigsuspend(2)

## STANDARDS

The **sigandset()**, **sigisemptyset()**, and **sigorset()** functions are FreeBSD extensions, compatible with functions of the same name provided by both musl libc and GNU libc.

The rest of these functions are defined by IEEE Std 1003.1-1988 ("POSIX.1").