



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

\$ man timersub.3

timeradd(3) Library Functions Manual timeradd(3)

NAME

timeradd, timersub, timercmp, timerclear, timerisset - timeval operations

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <sys/time.h>

void timeradd(struct timeval *a, struct timeval *b,
              struct timeval *res);

void timersub(struct timeval *a, struct timeval *b,
              struct timeval *res);

void timerclear(struct timeval *tvp);

int timerisset(struct timeval *tvp);

int timercmp(struct timeval *a, struct timeval *b, CMP);
```

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

The macros are provided to operate on timeval structures, defined in <sys/time.h> as:

```
struct timeval {
```

```

time_t    tv_sec;    /* seconds */

suseconds_t tv_usec; /* microseconds */

};

```

timeradd() adds the time values in a and b, and places the sum in the timeval pointed to by res. The result is normalized such that res->tv_usec has a value in the range 0 to 999,999.

timersub() subtracts the time value in b from the time value in a, and places the result in the timeval pointed to by res. The result is normalized such that res->tv_usec has a value in the range 0 to 999,999.

timerclear() zeros out the timeval structure pointed to by tvp, so that it represents the Epoch: 1970-01-01 00:00:00 +0000 (UTC).

timerisset() returns true (nonzero) if either field of the timeval structure pointed to by tvp contains a nonzero value.

timercmp() compares the timer values in a and b using the comparison operator CMP, and returns true (nonzero) or false (0) depending on the result of the comparison. Some systems (but not Linux/glibc), have a broken timercmp() implementation, in which CMP of >=, <=, and == do not work; portable applications can instead use

```

!timercmp(..., <)
!timercmp(..., >)
!timercmp(..., !=)

```

RETURN VALUE

timerisset() and timercmp() return true (nonzero) or false (0).

ERRORS

No errors are defined.

STANDARDS

None.

HISTORY

BSD.

SEE ALSO

gettimeofday(2), time(7)