NAME

　　tcsendbreak, **tcdrain**, **tcflush**, **tcflow** - line control functions

LIBRARY

　　Standard C Library (libc, -lc)

SYNOPSIS

　　#include <termios.h>

　　int
　　tcdrain(*int fd*);

　　int
　　tcflow(*int fd*, *int action*);

　　int
　　tcflush(*int fd*, *int action*);

　　int
　　tcsendbreak(*int fd*, *int len*);

DESCRIPTION

　　The **tcdrain**() function waits until all output written to the terminal referenced by *fd* has been transmitted to the terminal.

　　The **tcflow**() function suspends transmission of data to or the reception of data from the terminal referenced by *fd* depending on the value of *action*. The value of *action* must be one of the following:

　　TCOOFF
　　　　　　Suspend output.

　　TCOON　Restart suspended output.

　　TCIOFF　Transmit a STOP character, which is intended to cause the terminal to stop transmitting data to the system. (See the description of IXOFF in the 'Input Modes' section of termios(4)).

　　TCION　Transmit a START character, which is intended to cause the terminal to start transmitting data to the system. (See the description of IXOFF in the 'Input Modes' section of termios(4)).

　　The **tcflush**() function discards any data written to the terminal referenced by *fd* which has not been

transmitted to the terminal, or any data received from the terminal but not yet read, depending on the value of *action*. The value of *action* must be one of the following:

TCIFLUSH   Flush data received but not read.

TCOFLUSH   Flush data written but not transmitted.

TCIOFLUSH Flush both data received but not read and data written but not transmitted.

The **tcsendbreak**() function transmits a continuous stream of zero-valued bits for four-tenths of a second to the terminal referenced by *fd*. The *len* argument is ignored in this implementation.

RETURN VALUES

Upon successful completion, all of these functions return a value of zero.

ERRORS

If any error occurs, a value of -1 is returned and the global variable *errno* is set to indicate the error, as follows:

[EBADF]   The *fd* argument is not a valid file descriptor.

[EINVAL]   The *action* argument is not a proper value.

[ENOTTY]   The file associated with *fd* is not a terminal.

[EINTR]   A signal interrupted the **tcdrain**() function.

[EWOULDBLOCK] The configured timeout expired before the **tcdrain**() function could write all buffered output.

SEE ALSO

tcsetattr(3), termios(4), tty(4), comcontrol(8)

STANDARDS

The **tcsendbreak**(), **tcflush**() and **tcflow**() functions are expected to be compliant with the IEEE Std 1003.1-1988 ("POSIX.1") specification.

The **tcdrain**() function is expected to be compliant with IEEE Std 1003.1-1988 ("POSIX.1") when the drain wait value is set to zero with comcontrol(8), or with ioctl(2) *TIOCSDRAINWAIT*, or with sysctl(8) *kern.tty_drainwait*. A non-zero drain wait value can result in **tcdrain**() returning

EWOULDBLOCK without writing all output. The default value for *kern.tty_drainwait* is 300 seconds.