NAME

stty − set mode of terminal

SYNOPSIS

(stty = 31.)
(file descriptor in r0)
sys stty; arg
arg: .byte ispeed, ospeed; .byte erase, kill; mode

stty(fildes, arg)
struct {
char ispeed, ospeed;
char erase, kill;
int mode;
} *arg;

DESCRIPTION

Stty sets mode bits and character speeds for the terminal whose file descriptor is passed in r0 (resp. is the first argument to the call). First, the system delays until the terminal is quiescent. The input and output speeds are set from the first two bytes of the argument structure as indicated by the following table, which corresponds to the speeds supported by the DH-11 interface.

0 (hang up modem)
1 50 baud
2 75 baud
3 110 baud
4 134.5 baud
5 150 baud
6 200 baud
7 300 baud
8 600 baud
9 1200 baud
10 1800 baud
11 2400 baud
12 4800 baud
13 9600 baud
14 External A
15 External B

In the current configuration, only 110, 150 and 300 baud are really supported on dial-up lines. The half-duplex line discipline required for the 202 modem (1200 baud) is not supplied.

The next two characters of the argument structure specify the erase and kill characters respectively. (Defaults are # and @.)

The *mode* contains several bits that determine the system's treatment of the terminal:

100000 select one of two types of backspace delays
040000 select one of two types of form-feed and vertical-tab delays
030000 select one of four types of carriage-return delays
006000 select one of four types of tab delays
001400 select one of four types of new-line delays
000200 even parity allowed on input
000100 odd parity allowed on input
000040 raw mode

000020 map CR into LF; echo LF or CR as CR-LF
000010 echo (full duplex)
000004 map upper case to lower on input
000002 echo and print tabs as spaces
000001 hang up (drop ‘data terminal ready’) after last close

The delay bits specify how long transmission stops to allow for mechanical or other movement when certain characters are sent to the terminal. In all cases a value of 0 indicates no delay.

Backspace delays are currently unimplemented.

Form-feed/vertical-tab delay type 1 lasts about 2 seconds.

Carriage-return delay types 1 and 2 last about .09 seconds, and type 3 lasts about .15 seconds. Types 2 and 3 have the side effect of not transmitting a carriage-return if at the leftmost column.

New-line delay type 1 is dependent on the current column and is tuned for the TELETYPE® Model 37. Type 2 lasts about .03 seconds and type 3 lasts about .15 seconds.

Tab delay type 1 is dependent on the amount of movement and is tuned for the TELETYPE Model 37. Other types are unimplemented and are 0.

Characters with the wrong parity, as determined by bits 0200 and 0100, are ignored.

In raw mode, every character is passed immediately to the program without waiting until a full line has been typed. No erase or kill processing is done; the end-of-file character (EOT), the interrupt character (DEL) and the quit character (FS) are not treated specially.

Mode 020 causes input carriage returns to be turned into new-lines; input of either CR or LF causes LF-CR both to be echoed (used for terminals without the newline function, i.e. most).

The upper case mode is used on terminals without lower case, see *tty(IV)*.

The hangup mode 01 causes the line to be disconnected when the last process with the line open closes it or terminates. It is useful when a port is to be used for some special purpose; for example, if it is associated with an ACU used to place outgoing calls.

This system call is also used with certain special files other than terminals, and is system dependent.

SEE ALSO

stty(I), gtty(II), tty(IV)

DIAGNOSTICS

The error bit (c-bit) is set if the file descriptor does not refer to a terminal. From C, a negative value indicates an error.