STTY(II)

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NAME

stty – set mode of typewriter

SYNOPSIS

```
(stty = 31.)
(file descriptor in r0)
sys stty; arg
...
arg:  .byte ispeed, ospeed; 0; mode

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

DESCRIPTION

Stty sets mode bits and character speeds for the typewriter whose file descriptor is passed in r0 (resp. is the first argument to the call). First, the system delays until the typewriter 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. If DC-11, DL-11 or KL-11 interfaces are used, impossible speed changes are ignored.

0	(hang up dataphone)
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, 300 and 1200 baud are really supported on dial-up lines, in that the code conversion and line control required for IBM 2741's (134.5 baud) must be implemented by the user's program.

The second word of the argument structure is currently unused and reserved for future use.

The *mode* contains several bits which determine the system's treatment of the typewriter:

040000	Select one of two algorithms for form-feed and vertical-tab delays
030000	Select one of four algorithms for carriage-return delays
006000	Select one of four algorithms for tab delays
001400	Select one of four algorithms for new-line delays
000200	even parity allowed on input (e. g. for M37s)
000100	odd parity allowed on input

000040	raw mode: wake up on all characters
000020	map CR into LF; echo LF or CR as CR-LF
000010	echo (full duplex)
000004	map upper case to lower on input (e. g. M33)
000002	echo and print tabs as spaces
000001	special meaning for the other bits (MERT only)

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.

If a form-feed/vertical tab delay is specified, it lasts for about 2 seconds.

Carriage-return delay type 1 lasts about .08 seconds and is suitable for the Terminet 300. Delay type 2 lasts about .16 seconds and is suitable for the VT05 and the TI 700.

New-line delay type 1 is dependent on the current column and is tuned for Teletype model 37's. Type 2 is useful for the VT05 and is about .10 seconds.

Tab delay type 1 is dependent on the amount of movement and is tuned to the Teletype model 37. Other types are unimplemented and are 0.

Characters with the wrong parity, as determined by bits 200 and 100, 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 GE TermiNet 300's and other terminals without the newline function).

In general, MERT delays are more conservative, which make it appear more sluggish.

SEE ALSO

stty (I), gtty (II), include (V)

FILES

/usr/include/sgtty.h contains structure for arg[3]

DIAGNOSTICS

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

BUGS

MERT seems to always set the terminal interface to even parity.