



### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'brltty.1'***

**\$ man brltty.1**

BRLTTY(1)                      BRLTTY User's Manual                      BRLTTY(1)

#### **NAME**

brltty - refreshable braille display driver for Linux/Unix

#### **SYNOPSIS**

brltty [option ...]

#### **DESCRIPTION**

brltty is a background process (daemon) which provides access to the console screen (when in text mode) for a blind person using a refreshable braille display. It drives the braille display, and provides complete screen review functionality. Some speech capability has also been incorporated.

#### **OPTIONS**

Options can be passed to brltty in a number of ways. From most to least influential, these are:

1. Command Line Options
2. Boot Parameters
3. Environment Variables (if the -E (--environment-variables) option is in effect)

#### 4. The Configuration File

#### 5. Built-in Defaults

### Command Line Options

The options are processed sequentially from left to right. If an option is specified more than once, or in case of a conflict, the rightmost specification takes precedence.

The following options are supported:

**-a table** (**--attributes-table=**)

The path to the attributes table. Relative paths are anchored at /etc/brltty/Attributes. The .atb extension is optional. The built-in default is left\_right.atb.

**-b driver,...|auto** (**--braille-driver=**)

The driver for the braille display (see Driver Specification).  
The built-in default is auto.

**-c table** (**--contraction-table=**)

The path to the contraction table. Relative paths are anchored at /etc/brltty/Contraction. The .ctb extension is optional.

**-d device,...** (**--braille-device=**)

The device to which the braille display is connected. The built-in default is usb:,bluetooth:.

The general form of a braille device specification is qualifier:data. For backward compatibility with earlier releases, if the qualifier is omitted then serial: is assumed. The following device types are supported:

#### Bluetooth

For a bluetooth device, specify bluetooth:address. The address must be six two-digit hexadecimal numbers separated by colons, e.g. 01:23:45:67:89:AB.

**Serial** For a serial device, specify serial:device. The serial: qualifier is optional (for backward compatibility). If a relative path is given then it's anchored at /dev/ (the usual location where devices are defined on a Unix-like system). The following device specifications all refer

to the primary serial device on Linux: serial:ttyS0, serial:/dev/ttyS0, ttyS0, /dev/ttyS0.

**USB** For a USB device, specify usb:. brltty will search for the first USB device which matches the braille display driver being used. If this is inadequate, e.g. if you have more than one USB braille display which requires the same driver, then you can refine the device specification by appending the serial number of the display to it, e.g. usb:12345. N.B.: The "identification by serial number" feature doesn't work for some models because some manufacturers either don't set the USB serial number descriptor at all or do set it but not to a unique value.

A comma-delimited list of braille devices may be specified. If this is done then autodetection is performed on each listed device in sequence. This feature is particularly useful if you have a braille display with more than one interface, e.g. both a serial and a USB port.

**-e (--standard-error)**

Write logs to standard error rather than to the system log (useful for debugging).

**-f file (--configuration-file=)**

The path to the configuration file. Relative paths are anchored at the current working directory. The built-in default is /etc/brltty.conf.

**-h (--help)**

Print a command line usage summary (commonly used options only), and then exit.

**-i name (--speech-input=)**

The file system object (FIFO, named pipe, named socket, etc) which gives other applications access to brltty's speech driver for text-to-speech conversion. It's created at start-up and removed at termination. Relative paths are anchored at the current working directory. The built-in default is that the file

system object is not created.

**-k table** (**--keyboard-table=**)

The path to the keyboard table. Relative paths are anchored at /etc/brltty/Keyboard. The .ktb extension is optional.

**-l level** (**--log-level=**)

The minimum severity level for messages written to the log. Any of the following numbers, or any abbreviation of their corresponding names, may be specified:

0 emergency

1 alert

2 critical

3 error

4 warning

5 notice

6 information

7 debug

The built-in default is notice.

**-m device** (**--midi-device=**)

The device to use for the Musical Instrument Digital Interface.

For ALSA it's client:port, where each may be either a number or a case-sensitive substring of its name. For other interfaces it's the full path to an appropriate system device. The built-in default is:

Linux/ALSA the first available MIDI output port

Linux/OSS /dev/sequencer

**-n** (**--no-daemon**)

Remain in the foreground (useful for debugging).

**-o name=value,...** (**--override-preference=**)

Override a preference setting. For the location of the preferences file, see the **-F** (**--preferences-file**) option.

**-p device** (**--pcm-device=**)

The device to use for digital audio. For ALSA it's name[:argument,...]. For other interfaces it's the full path to an appropriate

priate system device. The built-in default is:

FreeBSD /dev/dsp

Linux/ALSA hw:0,0

Linux/OSS /dev/dsp

NetBSD /dev/audio

OpenBSD /dev/audio

Qnx the preferred PCM output device

Solaris /dev/audio

**-q (--quiet)**

Suppress the start-up messages. This is done by reducing the default log level (see the **-l (--log-level=)** option) to warning (information if either **-v (--verify)** or **-V (--version)** is also specified).

**-r (--release-device)**

Release the device to which the braille display is connected when the current screen or window can't be read.

**-s driver,...|auto (--speech-driver=)**

The driver for the speech synthesizer (see Driver Specification). The built-in default is auto.

**-t table (--text-table=)**

The path to the text table. Relative paths are anchored at /etc/brltty/Text. The .ttb extension is optional. The built-in default is en-nabcc.ttb (the North American Braille Computer Code).

**-v (--verify)**

Print the start-up messages and then exit. This always includes the versions of brltty itself, the server side of its application programming interface, and each of the selected braille and speech drivers. If the **-q (--quiet)** option isn't also specified then it also includes the values of the options after all sources have been considered. If more than one braille driver and/or more than one braille device has been specified then braille display autodetection is performed. If more than one

speech driver has been specified then speech synthesizer autodetection

is performed.

-x driver (--screen-driver=)

The screen driver. The built-in default is operating system appropriate.

-A name=value,... (--api-parameters=)

Parameters for the application programming interface. If the same parameter is specified more than once then the rightmost specification is used. Parameter names may be abbreviated.

-B [driver:]name=value,... (--braille-parameters=)

Parameters for the braille display driver. If the same parameter is specified more than once then the rightmost specification is used. Parameter names may be abbreviated. If a parameter assignment is qualified with a driver identification code then it's only processed if that braille display driver is being used.

-D directory (--drivers-directory=)

The path to the directory which contains the dynamically loadable driver objects. The built-in default is /usr/lib64/brltty.

-E (--environment-variables)

Recognize environment variables.

-F file (--preferences-file=)

The path to the preferences file. Relative paths are anchored at /var/lib/brltty. The built-in default is brltty.prefs.

-H (--full-help)

Print a command line usage summary (all options), and then exit.

-I (--install-service)

(Windows only) Install brltty as the BrIAPI service so that it will be automatically started when the system is booted, and so that applications can know that a BrIAPI server is running.

-K arg (--keyboard-properties=)

Properties of the keyboard.

-L file (--log-file=)

The file to which log messages are written. Relative paths are anchored at the current working directory. The default is to send log messages to the system log.

**-M csecs (--message-delay=)**

The message hold time in hundredths of a second. The built-in default is 400 (4 seconds).

**-N (--no-api)**

Don't start the application programming interface.

**-P file (--pid-file=)**

The full path to the process identifier file. If this option is supplied, brltty writes its process identifier (pid) into the specified file at start-up. The file is removed when brltty terminates.

**-R (--remove-service)**

(Windows only) Remove the BrIAPI service so that brltty will not be automatically started when the system is booted, and so that applications can know that no BrIAPI server is running.

**-S [driver:]name=value,... (--speech-parameters=)**

Parameters for the speech synthesizer driver. If the same parameter is specified more than once then the rightmost specification is used. Parameter names may be abbreviated. If a parameter assignment is qualified with a driver identification code then it's only processed if that speech synthesizer driver is being used.

**-T directory (--tables-directory=)**

The path to the directory which contains the text, attributes, contraction, keyboard, and input tables. The built-in default is /etc/brltty.

**-U directory (--updatable-directory=)**

The path to a directory which contains files that can be updated. The built-in default is /var/lib/brltty.

**-V (--version)**

Print the versions of brltty itself, the server side of its ap?

plication programming interface, and those drivers which were configured in at build-time, and then exit. If the -q (--quiet) option isn't also specified then also print copyright information.

-W directory (--writable-directory=)

The path to a directory which can be written to. The built-in default is /run/brlTTY.

-X name=value,... (--screen-parameters=)

Parameters for the screen driver. If the same parameter is specified more than once then the rightmost specification is used. Parameter names may be abbreviated.

-Y text (--start-message=)

The text to be shown when the braille driver starts and to be spoken when the speech driver starts. The built-in default is BRLTTY 6.3.

-Z text (--stop-message=)

The text to be shown when the braille driver stops. The built-in default is BRLTTY stopped.

## Environment Variables

The following environment variables are recognized if the -E (--environment-variables) option is specified:

BRLTTY\_API\_PARAMETERS=name=value,...

Parameters for the application programming interface. See the -A (--api-parameters=) option for details.

BRLTTY\_ATTRIBUTES\_TABLE=table

The attributes table. See the -a (--attributes-table=) option for details.

BRLTTY\_BRAILLE\_DEVICE=device,...

The device to which the braille display is connected. See the -d (--braille-device=) option for details.

BRLTTY\_BRAILLE\_DRIVER=driver,...|auto

The driver for the braille display. See the -b (--braille-driver=) option for details.



**BRLTTY\_BRaille\_PARAMETERS=[driver:]name=value,...**

Parameters for the braille display driver. See the -B  
(--braille-parameters=) option for details.

**BRLTTY\_CONFIGURATION\_FILE=file**

The configuration file. See the -f (--configuration-file=) op-  
tion for details.

**BRLTTY\_CONTRACTION\_TABLE=table**

The contraction table. See the -c (--contraction-table=) option  
for details.

**BRLTTY\_MIDI\_DEVICE=device**

The device to use for the Musical Instrument Digital Interface.  
See the -m (--midi-device=) option for details.

**BRLTTY\_PCM\_DEVICE=device**

The device to use for digital audio. See the -p (--pcm-device=)  
option for details.

**BRLTTY\_PREFERENCES\_FILE=file**

The preferences file. See the -F (--preferences-file=) option  
for details.

**BRLTTY\_RELEASE\_DEVICE=on|off**

Release the device to which the braille display is connected  
when the current screen or window can't be read. See the -r  
(--release-device) option for details.

**BRLTTY\_SCREEN\_DRIVER=driver**

The screen driver. See the -x (--screen-driver=) option for de-  
tails.

**BRLTTY\_SCREEN\_PARAMETERS=name=value,...**

Parameters for the screen driver. See the -X (--screen-parame-  
ters=) option for details.

**BRLTTY\_SPEECH\_DRIVER=driver,...|auto**

The driver for the speech synthesizer. See the -s  
(--speech-driver=) option for details.

**BRLTTY\_SPEECH\_INPUT=name**

The file system object which gives other applications access to

brltty's speech driver for text-to-speech conversion. See the  
-i (--speech-input=) option for details.

BRLTTY\_SPEECH\_PARAMETERS=[driver:]name=value,...

Parameters for the speech synthesizer driver. See the -S  
(--speech-parameters=) option for details.

BRLTTY\_TEXT\_TABLE=table

The text table. See the -t (--text-table=) option for details.

## The Configuration File

Blank lines are ignored. If the character # occurs on any line then  
all characters from it to the end of that line are treated as a com-  
ment.

The following configuration directives are supported:

api-parameters name=value,...

Parameters for the application programming interface. See the  
-A (--api-parameters=) option for details.

attributes-table table

The attributes table. See the -a (--attributes-table=) option  
for details.

braille-device device,...

The device to which the braille display is connected. See the  
-d (--braille-device=) option for details.

braille-driver driver,...|auto

The driver for the braille display. See the -b  
(--braille-driver=) option for details.

braille-parameters [driver:]name=value,...

Parameters for the braille display driver. See the -B  
(--braille-parameters=) option for details.

contraction-table table

The contraction table. See the -c (--contraction-table=) option  
for details.

midi-device device

The device to use for the Musical Instrument Digital Interface.  
See the -m (--midi-device=) option for details.

pcm-device device

The device to use for digital audio. See the -p (--pcm-device=) option for details.

preferences-file file

The preferences file. See the -F (--preferences-file=) option for details.

release-device on|off

Release the device to which the braille display is connected when the current screen or window can't be read. See the -r (--release-device) option for details.

screen-driver driver

The screen driver. See the -x (--screen-driver=) option for details.

screen-parameters name=value,...

Parameters for the screen driver. See the -X (--screen-parameters=) option for details.

speech-driver driver,...|auto

The driver for the speech synthesizer. See the -s (--speech-driver=) option for details.

speech-input 0me

The file system object which gives other applications access to brltty's speech driver for text-to-speech conversion. See the -i (--speech-input=) option for details.

speech-parameters [driver:]name=value,...

Parameters for the speech synthesizer driver. See the -S (--speech-parameters=) option for details.

text-table table

The text table. See the -t (--text-table=) option for details.

## Driver Specification

A braille display or speech synthesizer driver must be specified via its identification code:

al Alva

an Android

at Albatross  
ba BrlAPI  
bc BrailComm  
bd Braudi  
bg B2G  
bl BrailleLite  
bm Baum  
bn BrailleNote  
cb CombiBraille  
ce Cebra  
cn Canute  
ec EcoBraille  
en eSpeak-NG  
es eSpeak  
eu EuroBraille  
fa FrankAudiodata  
fl FestivalLite  
fs FreedomScientific  
fv Festival  
gs GenericSay  
hd Hedo  
hm HIMS  
ht HandyTech  
hw HumanWare  
ir Iris  
ic Inceptor  
lb Libbraille  
lt LogText  
mb MultiBraille  
md MDV  
mm BrailleMemo  
mn MiniBraille  
mp Mikropuhe

mt Metec  
no no driver  
np NinePoint  
pg Pegasus  
pm Papenmeier  
sd SpeechDispatcher  
sk Seika  
sw Swift  
th Theta  
tn TechniBraille Systems Inc.  
ts Telesensory Systems Inc.  
tt TTY  
vd VideoBraille  
vo Voyager, Part232 (serial adapter), BraillePen/EasyLink  
vr Virtual  
vs VisioBraille  
vv ViaVoice  
xs ExternalSpeech  
xw XWindow

A comma-delimited list of drivers may be specified. If this is done then autodetection is performed using each listed driver in sequence. You may need to experiment in order to determine the most reliable order since some drivers autodetect better than others.

If the single word auto is specified then autodetection is performed using only those drivers which are known to be reliable for this purpose.

#### SEE ALSO

For full documentation, see brlTTY's on-line manual at [\[http://brlTTY.app/documentation.html\]](http://brlTTY.app/documentation.html).