# Slint Accessibility HowTo

Slint is accessible to visually impaired users, with speech and with a braille device, from installation to usage in a console and in graphical environments.

The main software used to provide speech are espeakup with espeak on the console, orca with espeak-ng, speech-dispatcher and at-spi in graphical environments.

brltty is used for braille, both on the console and in graphical environments, orca communicating with brlapi in the latter case.

## A. Installation.

First, download the ISO image and use it to make a bootable DVD or USB stick, as detailed in How to Get and Install Slint \_ The machine is ready to boot off that media and when you hear a 'beep' or an arpeggio.

Installation is provided in following languages: English (USA)
Dutch
French
German
Greek
Italian
Norwegian
Portuguese (Brazil)
Portuguese (Portugal)
Russian
Spanish (Latin America)
Swedish
Turkish
Ukrainian

You can navigate in the languages list with the arrow keys, initially the cursor is on English (USA) However choosing the language at this step is optional, this can also be done and changed at the beginning of installation when you will have speech and braille.

If you need to include additional kernel parameters in the boot command line, before pressing Enter but after having optionally chosen the language do what follows (the procedure differs whether in UEFI or Legacy mode):

In UEFI mode (you heard an arpeggio):
Press the e key
Press the down arrow three times
Press the End key
Press the space bar
Type the kernel parameter (like e.g. speakup.synth=apollo). Be aware that the US keyboard map will be in use when typing. Press Ctrl+X to boot (do not press Enter!)

In Legacy or BIOS mode (you heard just one beep):
Press the Tab key
Press the space bar
Enter the kernel parameter. Be aware that the US keyboard map will be in use when typing. Press
Enter to boot.

You can include in the boot command line a kernel parameter to configure the speakup driver for your
hardware synthesizer if need be, as in the example above.

You can also include in the boot command line the settings for your Braille device, in this form:
brltty=<driver code>,<device>,<text table>
For instance to install with a Papenmeier device connected through USB with a French text table type:
brltty=pm,usb:,fr_FR

Also if your braille device is connected through USB it should always be recognized, maybe just the
text table won't be the good one if you didn't enter the settings at first.

In any case, as there is no timeout, booting will only begin when you press [Enter].

Speech and Braille are available at the beginning of installation.

If you choose to keep speech, the system will be configured so that speech be available at log in.

brltty will always be started, so it will be available on the console, and in graphical environments if
orca is used.

# B. Settings of the installed system

The first regular user created during installation will have speech and braille already enabled in the
installed system, if speech was used during installation. Other users will need to check or make
additional settings, as indicated below.

To enable braille:
a) To insure that /etc/rc.d/rc.brltty executable type as root: chmod 755 /etc/rc.d/rc.brltty
or to also start it immediately:
service start espeakup b) make yourself member of the braille group, typing as root:
usermod -G braille -a username
In the command above, replace username with your login name.

Then edit as root the file /etc/brltty.conf to include your settings.

To enable speech at the system level type as root:
login-chooser
and choose one of the login modes that speak: text, lightdm or gdm

To enable speech in graphical environments as regular user type as this user:
orca-on

# C. Usage

Bear in mind that when you start the system it won't boot immediately: currently there is a 1O seconds time out by default to let you possibly choose which system to boot and input command line parameters. but pressing Enter after the "beep" sound will start the boot sequence.

At start up, you will get a braille output early, then speech just before login.

During installation you chose to start Slint initially in text mode or in graphical mode. This can be changed later.

In text mode, after having logged in typing your credentials (username then password) the whole screen is used by the virtual terminal where you type the commands and that displays their output.

In this mode you use initially in the virtual terminal number 1, called tty1.
You can switch to another one typing e.g. Alt+F2 for tty2.
To go back to tty1 press Alt+F1.
Initially 6 virtual terminals are available, that you may dedicate to specific applications, like editing a text in tty1 and listening music in tty3.

Whenever you start a new tty you have to log in again.

In graphical mode each application runs in its own window.
You first log in in a specific window called a login or display manager, then the whole graphical environment is displayed.

You can set the mode (text or graphical) and the display manager just typing as root this command:
login-chooser
The command is self explanatory.
Among the login managers, only text, gdm (the default in graphical mode) and lightdm have speech enabled.

After log in you can choose among the provided graphical environments typing as regular user this command:
session-chooser
This command is also self explanatory, just typing it will display the available choices.
The default graphical environment is MATE, which is the most accessible.
Be aware that neither KDE nor TWM are accessible.

You can start in text mode then at any time launch the graphical environment chosen with "session-chooser", just typing as regular user:
startx

In gdm, the focus is initially in the User field. Type your user. orlogin name then type Enter and type your password.

You can access other features of gdm through keyboard shortcuts. In English:
Alt+A: Actions (shutdown or reboot)
Alt+E: Session menu
Alt+L: change the language, for the next session and possibly further session, possibly also for gdm itself

Alt+T: Theme
You can use the Tab key to navigate among input fields, and the up anddown keys to menus.

In lightdm, pressing F4 toggle the sound on or off.
Initially the cursoris in the password field.
Press Tab leads to the "login push button", then to the user's list or "combo box".
In this list pressing space shows the currently selected user.
Use the arrow keys to choose another one then type the corresponding password.
Instead, choosing "Other…" adds a field where you can type the login name of a non listed user.
Still in lightdm, F10 brings up a menu allowing to reboot or shutdown, and Alt+F4 brings up directly
an UI with shutdown or cancel buttons.

Once in a graphical environment, you can toggle between it and a console. Let's say you want to use
tty2 (tty1 being busy):
Press Ctrl+Alt+F2, then login.
Press Ctrl+Alt+F7 to go back to the graphical environment.

To know how to use Orca, including its specific key bindings, type:
man orca
In short, once in a graphical environment, in desktop mode:
Insert+Space: launch the orca Configuration dialog.
Insert+S: toggle speech on and off.

The same general key bindings are used in all graphical environments, with a few exceptions, Mod1
being generally the left Alt key:
Mod1+F1: panel's application menu.
Mod1+F2: pop up a 'run…" dialog, but in Fluxbox where it starts lxterminal.
Also in Fluxbox, Mod1+F3 restarts Fluxbox.
Mod1+F4: closes the raised window.

The panel's application menu has the same layout in all accessible graphical environments shipped
but MATE.
From top to bottom:
Terminal emulator: mate-terminal in MATE elsewhere lxterminal by default
File manager: Caja in MATE elsewhere PCManfm by default
Web browser: Firefox by default
Mail client: Thunderbird by default
Preferences
Slint Dashboard (non accessible yet as it's a Qt4 app)
Applications sorted by category
Run dialog
Logout dialog (also allows shut down and reboot)

You can use arrow keys to navigate in the menu.

In MATE, the top panel includes on its left from left to right the menus (Applications, then Places, then
System) then launchers for mate-terminal, caja (file manager), Firefox, Thunderbird and the geany
text editor.
On its right still from left to right a notification area, a screen locker, a logout and a halt or reboot
buttons.
The bottom panel has from left to right a windows list, a "show destktop" plugin, then a workspace
switcher.

Still in Mate, users with a low vision partially users will benefit of using the compiz window instead or marco which is the default.

As a regular user, type:
gsettings set org.mate.session.required-components windowmanager compiz
To go back to marco:
gsettings set org.mate.session.required-components windowmanager marco

Or to make the change just for the current session type:
compiz –replace &
and to go back to marco:
marco –replace &

This setting is also available graphically from mate-tweak, in theWindows category.

You can access specific Compiz settings just typing:
ccsm &

The default Compiz shortcuts in Slint are listed in /usr/doc/slint-14.2.1.2/CompizShortcuts

This document is also available here:
http://slackware.uk/slint/x86_64/slint-14.2.1/doc/CompizShortcuts

You can configure speech-dispatcher typing as regular user:
spd-conf
Important: when following line will be displayed:
Default audio output method [pulse] : after : type libao then press Enter, else you will lose speech!

You can configure brltty editing as root this file: /etc/brltty.conf

# D. Links

https://help.gnome.org/users/orca/stable/index.html
Slint mailing list:
https://www.freelists.org/list/slint

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