Programs for handicapped users (barrier free)

Recommended programs for blind or handicapped users

To enable blind or visually impaired users to use a computer Labdoo installs free available, barrier-free software and add-ons, e.g.

- screen-reader Orca (a tool, reaing screen content),
- specific programs like eLinks (text-based web-browser) and others.,
- optional: braille reader (not part of the Labdoo project, has to be added by 2rd parties and partners),
- or special USB-disc drives with Adriane, a desktop and user interface, optimized for blind users.

Labdoo offers two ways to use barrierfree software:

1. run it using a standard Labdoo computer and its educational content (images for Cloning later than November 2016 are coming with this pre-installed solution) or
2. use a bootable USB disc drive

- USB 2.0 is recommended as most donated computers do not have a USB 3.0 slot,
- 16 GB or up (4,5 GB System, 6 GB for Wikipedia for Schools and 5 GB free for user data),
- can be used as boot media on any computer or laptop,
- pre-installed Wikipedia for Schools (EN or FR) on each USB disc drive,
- access to the educational content stored on each Labdoo laptop in the text-based web browser, content being presented by Orca screen-reader or braille reader.

You are able to set-up a bootable, Knoppix Adriane based USB disc drive yourself ([for more details see here](#). In the German speaking countries Labdoo offers to deliver pre-installed USB disc drives 16 GB on request (5 € / 6 sfr. per USB disc drive plus Porto); send a mail to Labdoo-DACH@Labdoo.org.

USB disc drives and Knoppix / Adriane

Labdoo recommends to use [Knoppix](#) / [Adriane](#), a Linux based solution especially to support blind or visual impaired users. Knoppix comes with a [LXDE desktop](#), the same as Labdoo laptops use as well. [Adriane](#) is a text-based desktop and user interface, fulfilling in a perfect way the needs of blind users. Using screen-reader or Braille reader the screen content will be made accessible.

As you know Labdoo combines educational content and software in a sophisticated way. So we pre-install here as well content. Wikipedia for Schools (in English or French), manuals and more is pre-installed on each USB disc drive. And users have access to educational content online or on a Labdoo laptops, even bookmarked in browser for faster access for blind users.

Reasons to recommend Knoppix / Adriane are:

- a mature solution for blind or visual impaired users, text-based or using LXDE (sehr ähnlich wie in Lubuntu); easy to learn and understand, especially if you are familiar with Labdoo laptops,
- Adriane coms with a text-based user interface for blind or visually impaired users and integration of screen-reader and Braille reader
- support of common languages (EN, DE, FR, ES etc.)
- Integrated BrailleTTY support to run most Braille readers
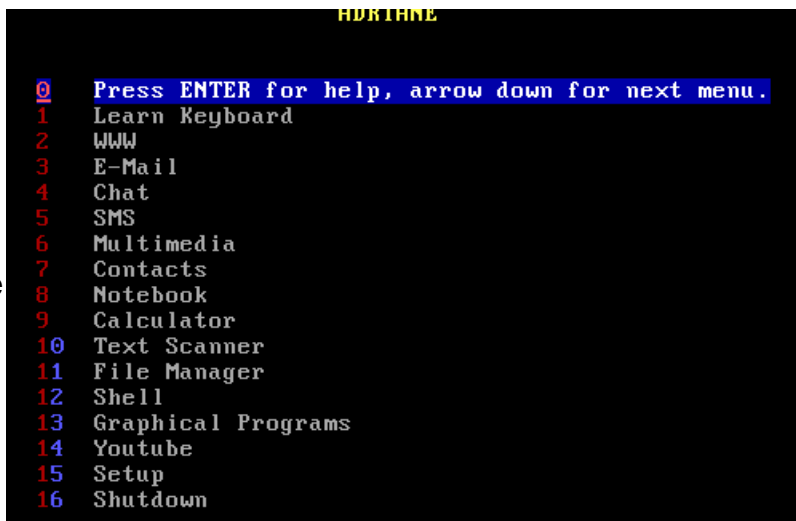
Recommended accessories (not part of Labdoo project)

- head-set (when a user hears text being read by screen-reader it may disturb other users),
- external, english keyboard and mouse (USB),
- Scanner (an OCR based scan and reader program is part of Adriane; text can be scanned, converter and read),
- Braille reader (many, not all braille reader will be supported),
- special Braille keyboard or Braille stickers for keyboard.

You are able to download the Knoppix Adriane iso file from here http://www.knopper.net/knoppix-mirrors/ and to install it by yourself, but there are various setting to be done. So the Labdoo team produced two Knoppix / Adriane based, pre-installed images (one to be installed using dd, one for Clonezilla / image for Cloning). These images come are available in English or French, with pre-installed wikipedia for schools.

- This USB disc drive will boot into Adriane user-interface first,
- Browser based educational content and wikis of connected laptop are accessible,
- Runs with any computer or laptop,

Install a Knoppix / Adriane USB disc drive yourself
Download the image you need and follow these instructions [to follow] .

BIOS settings, sequence of boot media

Either you change the boot sequence in a way that the USB disc drive comes first before the internal disc-drive (HDD). Or you have to select the boot media during boot process.

Main features of ADRIANE

WWW	Surfing the Web is supported by a special web browser (elinks), which presents the relevant information in an easy to read form, and also supports Javascript, picture- and multimedia-content if selected. Using the arrow-keys and ENTER, the user can easily navigate through weblinks, where the "normal " text is accessible through the reading functions. Webforms for the internet search, online shopping and online banking are also supported.
Text recognition	Scanning, speaking or saving of printed texts like mail, newspaper articles or books.
EMail	Reading and writing/answering email, provided you have an email account.
Multimedia	Playing of audio or video files, digital TV via DVB-T.
Notebook	Creating and managing of short notes or text files.
Contact manager	Compact database for adresses and phone numbers.
SMS and GPRS/UMTS	Using Short-Messaging-Service (reading and writing/answering SMS) and using mobile internet access with your own cellphone. Connection between computer and phone via bluetooth or cable. Caution: While most (even the cheapest) cell phones do support the "modem function" needed for this feature, there are still some that won't work.
File manager	For managing your own documents, adresses and notes, multimedia files and such, a rather simple file manager is integrated into the ADRIANE menus, which also allows on-demand inclusion of flash disks and other removable media.
Graphical programs	Graphics mode is the "mouse-oriented" desktop known to many users, which is made accessible by the graphical screenreader orca and compiz-fusions zoom functions for vision impaired users. Here, openoffice and firefox as well as many other graphical applications are available.
Settings	Adjustments for volume of speech output, standard page orientation for text recognition, network and other settings can be changed here.
Customized Functions	The ADRIANE menu system can be taylored to contain additional applcations, or just a subset (the "favourites") of the user.

Navigate within Adriane text mode

CapsLock + space	read line activated
CapsLock + arrow up	read previous line
CapsLock + arrow down	read next line
CapsLock + page up	read from page begin to actual cursor position
CapsLock + page down	read from here to page end
CapsLock + arrow left / right	spell actual line letter by letter

(CapsLock = key to switch to large letters)

Navigate using LXDE and Orca (graphical user interface)

Super + Mouse wheel up or down	set zoom
Super + m	small mouse magnifier
Move mouse to right upper screen corner	show all windows
CapsLock + space	configure Orca (when started)
Super + AltLeft left mouseclick	add a comment to screen
Super + AltLinks k	delete comment on screen

Super = left Pinguin- or "Windows" key

More information here:

- https://wiki.ubuntuusers.de/Barrierefreiheit
- https://wiki.ubuntuusers.de/Sprachausgabe/
- http://www.knopper.net/knoppix/
- http://en.wikibooks.org/wiki/Knowing_Knoppix
- http://www.knopper.net/knoppix-adriane/
- https://de.wikibooks.org/wiki/Adriane-Handbuch
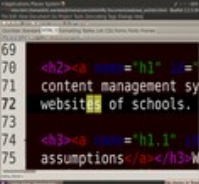
- **Pre-installed programs for handicapped users for Labdoo computer or Adriane USB disc drive**

The tools listed below Tools will support blind or visually impaired users and are alternatives to programs with graphical user interface. These tools come with a text-based user-interface and are easier to use by blind users.

If the user is able to see part of the screen your can also improve the visibility by adjusting the screen parameters **Large Fonts** and **High Contrast**.
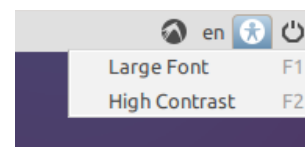
program	description	program name	screen shot

Orca	Screen reader; **Wichtig:** to toggle Orca on / off please press at the same time **Alt + Super/Windows + o**. To configure Orca open a terminal (User labdoo) -> type `orca -s` (Enter).	Orca	
pico2wave	Tool reading marked (high lighted) text in any document. To toggle pico2wave on / off press the keys **Alt + Super/Windows + p** at the same time. Mark text before, then press these keys, text will be read. If marked text is too long an error will be reported.	pico2wave	
Elinks	Text based web browser, running in a terminal (Link on desktop)	Elinks	
bluefish	Text based HTML editor	bluefish	
gespeaker mbrola	Alternative converter Text → Speach	gespeaker	
Espeak	Tool to generate electronic speach	Espeak	
alpine	Text orientiertes e-Mail Tool (im Terminal starten → Programmname → Enter)	alpine	
irssi	Text orientated e-mail tool (start in terminal → program name → Enter)	irssi	
lynx	Text based web browser in a terminal (start in terminal → program name → Enter)	lynx-cur	
Elinks	Text based web browser in a terminal (start in terminal → program name → Enter)	Elinks	

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[Midnight Commander (mc)](#)	Text based file manager (start in terminal → program name → Enter)	MC	
[easystroke](#)	Maus / Gesture controlled user interface	easystroke	
[dasher](#)	Text input by mouse, mousepad, Eyetracker or Touchpad	dasher	
[cellwriter](#)	converter hand writing → text	cellwriter	
[sitplus](#)	ludic-therapeutic activities	sitplus	
[kmag](#)	Magnifying glass function for screen	kmag	
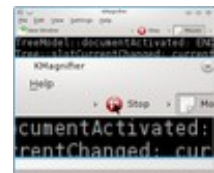
Tags:
[handicap](#)
[blind](#)
[visually impaired](#)
[adriane](#)
[knoppix](#)