# NVDA

## Orientation

Works best when working in one thing at a time. As you move thru each element, use the short cuts to move through your test page with NVDA. These instructions coordinate with an installation that uses the CapsLock key for the NVDA button. The insert key and numpad 0 (when num lock is off) can be used as well.

## Operating NVDA Short cuts

To open the NVDA menu use CAPSLOCK + N

To quit NVDA, CAPSLOCK + Q

Note: Make sure in the general settings "Show exit options when exiting NVDA " is unchecked.

NVDA can be used in two modes:

* Browse mode – Move through the page by element
* Focus mode – This is the order that NVDA will read, left to right, top to bottom. Focus mode is used when the user enters a form or other fields that require user input.

When in Browse mode using the TAB key, and a BEEP is heard, NVDA has found an edit field and you are now switching modes to Focus Mode and you can enter text.

NVDA automatically switches between Browse and Focus modes, but the user can toggle between them using CAPSLOCK + Space Bar.

Your laptop settings for Browse is set to not read ALL on page load. This is not the default. It is checked and will read when a document lodes on the web in browse mode. We recommend you use keyboard controls to move through the elements of the page. However, if you want to see what it reads, and does not read, this can be changed at any time in the settings to automatically say ALL on page load.

To move across your webpage in NVDA, use the TAB key. This gives you feedback on reading order at the same time.

The following single keys allow you to browse by elements.

B - Button

E - Edit field

* Tab to enter form field
* Escape to get out of form field. This includes the address bar.

F - Form field

H - Headings

L - List

### T - Table

Once in table, use Control + Alt and then arrows

## Reading

With these shortcuts, you should be able to read through most content with NVDA.

* **CAPSLOCK** + **Down Arrow**: Start reading at the current position
* **Ctrl**: Stop reading
* **CAPSLOCK** + **Up Arrow**: Reread current line
* Ctrl + Right or left arrow: Previous/next word
* **Up or down arrow**: Previous/Next line
* **Right or Left arrow:** Previous/Next character

## Single-key shortcuts

There are several single-key shortcuts to quickly navigate by common page elements. These include:

* **B**: Buttons
* **D**: Landmarks (Banner, search area, nav pane or main content)
* **F**: Form controls
* **G**: Graphics
* **H**: Headings
* **1** - **6**: Headings level 1-6
* **I**: Items in a list
* **K**: Links
* **L**: Lists
* **T**: Tables
* **Tab**: Links and form controls

SHIFT key plus a single key short cut allows you to navigate in reverse.

Navigating a page with NVDA:

Ctrl + Home: Top of the page

Ctrl + End: Bottom of the page

Ctrl + L: Browser address bar

Ctrl + R: Refresh the page (useful if you get lost or if NVDA is not behaving as expected)

## Images

To review an image for alternative text, if it is there it will be read by NVDA. If alternative text is not defined, NVDA will say “Graphic.”

## Device Uniqueness

This software operated without use of the mouse and screen. All you need is the keyboard connected and the sound on. Once you are comfortable, turn the screen off to use NVDA for testing.

## WCAG Applicable Guidance Related to this Device

| **Guidance** | **Criterion** |
| --- | --- |
| [WCAG 2.1 SC 1.3.2](https://www.w3.org/WAI/WCAG21/Understanding/meaningful-sequence.html) | Meaningful Sequence (A) |
| [WCAG 2.1 SC 1.3.5](https://www.w3.org/WAI/WCAG21/Understanding/identify-input-purpose) | Identify Input Purpose (AA) |
| [WCAG 2.1 SC 2.2.6](https://www.w3.org/WAI/WCAG21/Understanding/timeouts) | Timeouts (AAA) |
| [WCAG 2.1 SC 2.4.4](https://www.w3.org/WAI/WCAG21/Understanding/link-purpose-in-context) | Link purpose (in context) |
| [WCAG 2.1 SC 2.4.6](https://www.w3.org/WAI/WCAG21/Understanding/headings-and-labels) | Headings and Labels – Helps clarify information needed that is different from visual information. |
| [WCAG 2.1 SC 3.1.1](https://www.w3.org/WAI/WCAG21/Understanding/language-of-page.html) | Language of page |
| [WCAG 2.1 SC 3.3.1](https://www.w3.org/WAI/WCAG21/Understanding/error-identification) | Error Identification |
| [WCAG 2.1 SC 4.1.3](https://www.w3.org/WAI/WCAG21/Understanding/status-messages) | Status Messages (AA) |

## Disabilities Impacted

* Blind
* Low Vision
* Cognitive

## AT Testing Instructions

| **Website Elements to Test** | **Device Instructions** |
| --- | --- |
| Navigate to interactive elements (Focus indicator must be active) | NVDA + F7: Open the Elements List. This takes you to lists page links, headings, and landmarks. |
| Link | Links: List all links Insert + F7  Go to next link K  Go to next unvisited link U  Go to next visited link V  Activate: Link Enter |
| Button | Single key: B |
| Links, Checkbox, Radio Buttons | Use ENTER to select or activate certain elements.  Can you access (TAB) and activate (ENTER) these elements?  Does the visible name on the button match the name that you hear? Is it announced as a button?  Is the link text descriptive instead of vague, like “click here” or “read more”? |
| Dynamic Content | Test elements like pop-up dialog boxes and modal windows.  Can you tab to controls within the pop up window?  Can you close the window using the ESC key?  When you close the window and navigate away, does the focus move to a logical place?  Are status and alert messages announced by the screen reader? |
| Select drop down menu or Menu Bar |  |
| Autocomplete | Single Key F |
| Form Fields | Check any forms on the page. Are you able to fill out the form using only your keyboard?  Are there correct and distinct labels for each field?  Can you select checkboxes via the SPACEBAR key?  Are you alerted to errors and/or requirements?  Do you receive audible confirmation when you submit the form? |
| Slider |  |
| Reading Order | TAB key to move through reading order . Use SHIFT + TAB to go backwards. |

## Resource Video

[WebAIM Reference](https://webaim.org/articles/nvda/)

[Harvard Reference](https://accessibility.huit.harvard.edu/nvda)

### [NVDA Modes](https://youtu.be/Z1akKGHXR58?si=uAxLBB4oNLdksxy5)

* [NVDA Shortcuts List (Deque)](https://dequeuniversity.com/screenreaders/nvda-keyboard-shortcuts)
* [Using NVDA to Evaluate Web A11y (WebAIM)](https://webaim.org/articles/nvda/)

[Deque University Keyboard Short cuts](https://dequeuniversity.com/screenreaders/nvda-keyboard-shortcuts)

[NVDA Quick Guide](https://www.nvaccess.org/files/nvda/documentation/userGuide.html#NVDAQuickStartGuide)