

Accessibility Inspection

1800Wheelchair

<http://www.1800wheelchair.com>

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Executive Summary

An accessibility review was conducted of the website for 1800Wheelchair.com. The inspection focused on identifying any and all accessibility issues, and pointing out the positive features of the website that should be maintained.

The most significant accessibility issues identified in this evaluation include:

- ♦ **Revise the home page using the Gestalt principles of proximity, grouping together like products.** The current home page has too many product images, making it difficult to distinguish between products, particularly for low vision users. Create a home page that has fewer images and that requires less scrolling.
- ♦ **Change the font characteristics of the navigation bar to improve readability.** Although the navigation is text-based and, therefore, accessible by screen readers, the font color makes it somewhat difficult to read, particularly for users with limited vision.
- ♦ **Modify the tab order to take users to the content more directly.** Users with a screen reader or users that are tabbing through the site should be able to move to the choices in the middle of the screen immediately without needing to tab through the long list of menu items on the sidebar menu.
- ♦ **Use CSS for layout rather than nesting tables.** On some of the pages, tables are nested six deep, due to the use of table for spacing and alignment. Borders are created by inserting images in rows and columns. Both of these practices cause screen readers to generate unnecessary information for the user and are generally not considered good practice.
- ♦ **Add the scope attribute and table headers to link the image with the associated description below each product image.** The table headers give a visual cue to the user about the context of the information provided by the table. The scope attribute gives context for screen readers; the header is read immediately, followed by the information in the column or row that relates to that header.
- ♦ **Provide a mouse-alternative method for closing pop-up windows.** The only way to close a pop-up is to mouse-click on the word 'Close' or the close button at the top of the window.
- ♦ **Provide access to content with CSS, JavaScript, and other technologies turned off.** All the links that generate pop-up 'more information' boxes are implemented using JavaScript. These should be implemented using CSS positioning and link states.
- ♦ **Create a new process for ordering products with multiple options.** The products that require many user decisions should be broken down into multiple pages, stepping the user through the process of building that piece of equipment. This would give the user feedback on what the requested product will look like.
- ♦ **Use the summary attribute to add description to the table.** Adding this attribute in the table element is similar to the 'alt' attribute for images. Using this attribute alleviates the need to listen through several rows of data begin read to decide whether a table is useful to the user.

Terminology & Conventions Used

Different terms are often used when referring to the same part of the browser window or web page. To facilitate understanding of this analysis, one term was used consistently for each browser/web page element. The terms are:

Field name: Field names are the labels that go with text input boxes, drop-down menus, and other form elements.

Global navigation: Links/buttons available from every page, leading to major sections of the website and/or significant pages.

Link label: The label in this case is the word or words that are linked. These words can be in graphical form (such as the graphical buttons at the top of the 1800wheelchair.com interface) or HTML text that is linked.

Local navigation: Links/buttons for moving between pages within a section of the website.

Page name: The primary heading for the page, often shown in larger text and located between the global navigation buttons at the top of the layout and the text content of the page.

Window name: The text at the upper left of the browser window, specified through the (X)HTML `<title></title>` tags.

Single quotes are used to indicate link labels, page names, and window names. Double quotes indicate non-linked body text, field names, alt text, and are used when generally referring to a page. Any divergence from these conventions is noted in the analysis and is done for the purpose of improving clarity.

Priority Levels

The issues identified in this evaluation are grouped into three levels of priority:

High priority: These issues are likely to impact a large number of users extensively. They should be resolved as quickly as budgets allow.

Medium priority: Issues at this priority level are also likely to affect a large number of users but generally are less disruptive to the user experience, relative to the high priority issues. If resources are available to address these issues, they should be addressed.

Low priority: Low priority issues typically impact a small subset of the overall user base, although they may impact a larger group. Regardless of the number of users affected, these issues carry only a minor negative impact. Low priority issues are generally easy to resolve. There is less time pressure to fix low priority issues, compared to medium priority issues and especially high priority issues.

Accessibility Guidelines

Simplicity & Clarity

Simplicity and clarity refers to the ease of use of a website, focusing on how easy it is for the user to understand and step through. The goal of a simple and clear website should be to make sure important areas have visual focus, the design of the website should only contain necessary components, and Gestalt rules of visual perception must be followed.

Practices to Continue

- ◆ **The use of product images to allow sighted users to visualize the product.** This could also be useful for someone aiding a blind user in making a selection.

Suggested Changes

High Priority:

- ◆ **Revise the home page using the Gestalt principle of proximity, grouping together like products.** The current home page has too many product images, making it difficult to distinguish between products, particularly for low vision users. Create a home page that has fewer images and that requires less scrolling.
 - For example, the different groups of wheelchairs, manual, power, and scooters should be grouped. Similarly walking aids, pediatric items, and mobility accessories should each be grouped.

Medium Priority:

- ◆ **Place the button to request a Free Catalog above the fold at 800 x 600 screen resolution.** This is an important accessibility issue, as many users may desire a catalog to assist in their decision-making.

Visual and Non-Visual Navigation

Visual and non-visual navigation means that the navigation should be clear and well organized for users with visual disabilities as well as for those without these disabilities. Efficient content linearization, (meaning the order in which information is accessed by tabbing or screen readers), must be considered when designing the layout of a website. It is confusing for a user if the information on a page is accessed out of order and thus is difficult to understand.

Practices to Continue

- ◆ **Avoid spatial references, for example, “the left navigation bar” or “see picture below”.**

Suggested Changes

High Priority:

- ◆ **Place the main content portion of the table in a new row just below the masthead.** Users with a screen reader or users that are tabbing through the website, must be able to move to the choices in the middle of the screen immediately, without needing to tab through the long list of menu items on the sidebar menu.
- ◆ **Use the summary attribute to add description to the table.** Adding this attribute in the table element is similar to the ‘alt’ attribute for images. Using this attribute alleviates the need to read through several rows of data to decide whether a table is useful to the user.

Medium Priority:

- ◆ **Revise layout navigation for sighted users, replacing grey lines and other division points with darker color bars that provide clearer divisions.** The current graphic design is similar to a news source website. Sighted users have certain visual expectations of retail websites. This would also benefit users with cognitive / information processing deficits.
- ◆ **Provide an alternative method of closing dialog boxes or pop-up windows other than the close button or ‘Close Window’ link.** See the ‘Device Independence’ section for further discussion of this topic.

Proper Text Markup & Phrasing

In order for content to be accessible, it is vital that the information being presented is clear and well-written, as well as HTML markup being applied properly. The name given to a section of a page or a link label is critical to accurately understanding and using the website. Markup that includes accessibility, such as <abbr>, <acronym>, and other language attributes is important. The content of the text on the website should also be at an appropriate reading level for the majority of potential users.

Suggested Changes

High Priority:

- ♦ **Change the font characteristics of the navigation bar to improve readability.** Although the navigation is text-based and, therefore, accessible by screen readers, the font color makes it somewhat difficult to read, particularly for users with limited vision. Changing the font color to black would increase readability.

Medium Priority:

- ♦ **Add titles to navigation links on sub pages.** Adding titles to link labels would provide additional information for users. Links should be underlined using good web practices.
- ♦ **Add header labeling to all page names.** This provides more information to the user about their location within the website.
- ♦ **Add 'abbr' tags to the source code of product pages that contain abbreviations like 'lb' and the quotes abbreviation for inches.** The user may confuse this as part of the product description, rather than a unit of weight or length.
- ♦ **Add 'acronym' tags to the source code.** For example, on the 'General Policies' and 'Returns' pages the text 'RA' and 'ups' would be confusing to someone using an aural device.

Proper Structural Markup

Proper structural markup creates a logical document structure that aids adaptive technology in translating a website and conveying the information to the user. Headings that designate the entire page, sections of the page, or subsections of the page should be differentiated in a clear and understandable fashion. Tabular data and input forms should be made as accessible as possible, using headers, labels, and other markup properly applied.

Practices to Continue

- ◆ **Images are given descriptive alt attributes.**

Suggested Changes

High Priority

- ◆ **Use CSS for layout rather than nesting tables.** On some of the pages tables are nested six deep, due to the use of table for spacing and alignment. Borders are created by inserting images in rows and columns. Both of these practices cause screen readers to generate unnecessary information for the user and are generally not considered good practice.
- ◆ **Modify the tab order to more accurately reflect the user's selection process.** When ordering a product the user should be able to access information on the product before being directed to less critical information or tasks.

Medium Priority

- ◆ **Discontinue use of deprecated tags, for example, .** Browsers and assistive technologies are not likely to continue supporting these tags in future versions, thus rendering the content less accessible.
- ◆ **Modify sub page markup or CSS to make pages visually consistent across the site.** The navigation on some sub pages is larger than on the home page or the main pages.
- ◆ **Remove alt attributes of tags which are part of the graphic design of the page.** For example, images used for borders between page sections do not need alt attributes that are read by a screen reader. An alternative solution would be to use CSS for specifying borders.
- ◆ **Increase the size of the radio buttons to increase overall ease of use, for users with mobility issues.** The larger button gives a user with tremors or limited mobility a greater chance of actually hitting the button.

Low Priority

- ◆ **Validate all pages of the site.** Many of the sub pages have no doctype specified. Some HTML tags are not closed.

Providing Content & Context

Many disabled users experience content on websites by non-visual methods. It is critical that they have the proper framework to interpret the information and also access to that content. Providing information about visual content that can be accessed by non-visual methods increases the usability of the website.

Practices to Continue

- ◆ **Labeling significant images with alternative text.** This provides non-visual users access to important information that is visual. This should only be done for images that provide meaningful information.

Suggested Changes

High Priority

- ◆ **Add the scope attribute and table headers to link the image with the associated description below each product image.** The table headers give a visual cue to the user about the context of the information provided by the table. The scope attribute gives context for screen readers; the header is read immediately followed by the information in the column or row that relates to that header.

Medium Priority

- ◆ **Put some of the text content of the page at the top, before images of the products.** This would provide some information to the user about what they are looking at, other than just the field name of the product category.
- ◆ **Some of the information read by a screen reader is read out of order or does not have context information with it.** For example, in the shopping cart, an image of the product is shown, but does not have alternative text; the first thing read for each product is the word 'remove'.

Low Priority

- ◆ **Revise spelling errors on the 'General policies' page and all product pages, including revising words like 'retuns'.** A sighted user is able to skim content like this and interpret the information correctly. A user that is using a screen reader is more likely to need to pause and replay the unusual misspelled word to try to interpret the sentence, thus slowing down the processing of the information.

Device Independence

It is important that the user has the ability to use a variety of input devices in order to use a website. This includes a mouse, tabbing, mouse alternatives, or text-to-speech software.

Suggested Changes

High Priority

- ♦ **Adjust the layout so a screen reader or tabbing will allow the user to ‘read’ the navigation list then jump to the main content.** On the current website, tabbing goes all the way down the left side of the page then goes to the main content. This is also addressed in the ‘Visual and Non-Visual Navigation’ section.
- ♦ **Provide an alternative other than using mouse clicks as a method for closing pop-up windows.** The only way to currently close a pop-up is to mouse-click on the word ‘Close’ or the close button at the top of the window.

Medium Priority

- ♦ **Provide tab order to ‘Shop by Phone’ to allow the user to access this function.** This would allow the user to select the phone number and use auto-dial software to contact Customer Service.

Graceful Degradation

Graceful degradation is concerned with how the website appears when technologies are disabled and also situations when adaptive technologies are used. For this website, Java, CSS, JavaScript and other technologies were turned off to determine what would happen for the user experience. The impact of using a screen reader and a screen magnifier were also examined.

Practices to Continue

- ♦ **Provide access with images turned off.** There are formatting issues when images are turned off, but there are text alternatives provided and the links still work.
- ♦ **<NOSCRIPT> is used as an alternative to client-side script.** This means that if scripting is not available, the <NOSCRIPT> content will be presented in its place.

Suggested Changes

High Priority

- ♦ **Provide access to content with CSS, JavaScript, and other technologies turned off.** All the links that generate pop-up 'more information' boxes are implemented using JavaScript. These should be implemented using CSS positioning and link states, or new pages that provide the additional information.

Medium Priority

- ♦ **Link images and link labels for products so that screen readers and tabbing do not create a duplicate.** The tab (and screen reader) goes across the row of images, then across the row of link labels causing repetition. (See 'Providing Content & Context' section for more discussion of this topic).

Allowing User Control

It is crucial that disabled users have control over the interface. The user experience can be affected for the worse if certain aspects of the site become difficult to manage.

Practices to Continue

- ♦ **Text resizing is allowed.** Text can be resized as much as the user desires. Some portions of the site that could be crucial are not resizable due to the use of images (see 'Low Priority' bullet point, 'Live Help' and 'Call Us' link labels for suggested changes).

Suggested Changes

Medium Priority

- ♦ **Modifying the 'Learn More' link to send the user to 'Live Help' or to a Product Support Specialist query form.** Currently this link opens a new window with general information about the product and does not provide a method to get more specific information. The link should either take the user directly to the 'Live Help' window or to request help by completing a form online.

Low Priority

- ♦ **Remove the animated links in the global navigation.** The blinking animation for 'Call Us' and 'Free Shipping' does not serve any function and may create confusion or physical irritation for a sensitive user. It is also a problem for individuals prone to seizure disorders.
- ♦ **Replace image links for 'Live Help' and 'Call Us' with text link labels to permit text resizing.** The ability to request help and phone the company should be available to all users regardless of visual capabilities.

Respecting the User

All users should receive the same level of reverence and value. If the user senses that there are processes that are difficult because of their disability, they will leave the website and not return as customers.

Suggested Changes

High Priority

- ♦ **Create a new process for ordering products with multiple options.** The products that require many user decisions should be broken down into multiple pages, stepping the user through the process of building that piece of equipment. This would give the user feedback on what the product will look like.

Medium Priority

- ♦ **Create a faceted classification for products.** This would create further search options for users when a search results in no match. Users with mobility issues, as well as those using speech recognition software, may have a higher instance of misspellings and would find alternate search options very useful.

Additional Accessibility Issues by Page & Section

Further accessibility issues specific to a page, or section are indicated. Some repetition may occur with issues noted in the general review of accessibility issues, if the page or area in question requires significant revisions. Only the pages with further issues are included here.

Contact Us Page

Suggested Changes

Medium Priority

- ◆ **Validate information entered in the contact form and report any missing data.** There is no input validation when a user submits this form. An empty form may be submitted with no error message(s) of any kind.

Checkout Page

Practices to Continue

- ◆ **Add error checking on required fields.** Required fields are labeled with colored text and an asterisk. When the input is incorrect or missing, the field label is bolded text and a clear, descriptive error message appears below the field.

Product Information Pages

Suggested Changes

Low Priority

- ◆ **Add a link that describes the 'Free shipping' text.** The current text is blue and the same sizing as other links, but when a user selects this text, it is not a link. Users expect that blue text (that is a similar size to other linked text), will be a link.