



Screen Reader - Font Size and High Contrast

Introduction

Screen Reader with FontSize and HighContrast for Joomla! and Wordpress is an advanced and lightweight plugin that will add a lot of accessibility features for reading and improve the contents quality to all visually impaired users.

Everything is completely integrated in your site! No additional resources are needed for you or for users, simply install the plugin and you are done!

Screen Reader will show in the frontend as a popup or toolbar that you can position at the top or at the bottom of the page. It supports multiple read mode with override, you can click on 'Play' button or use one single access key to start reading the main content of your pages!

Moreover if you select a specific text part on pages Screen Reader will read only the selected text with a priority algorithm. This ensures that users who need to use access keys can read the entire contents of your pages in a single keystroke. Thanks to a CSS3 selector parameter the main content area of pages can be adjusted to work on every CMS template.

Additional controls are provided like: pausing and resuming reading, stop / playback and volume adjustment.

In addition it's also possible to choose reading the text from images on the site, using the 'alt' or 'title' attribute of images.

Full support for access keys is available, so that users can control reading using keyboard following WCAG specification. Screen Reader is based on an advanced algorithm for the generation of voice, so that users will be able to listen to a natural sounding voice with interpretation of punctuation.

Moreover Screen Reader supports a lot of languages: Arabic, Dutch, English, Greek, German, Italian, Polish, Portuguese, Russian, Japanese, Spanish and much more! More than 50 languages are supported.

It's fully integrated with the native multilingual system and optionally with GTranslate, so when users change or select desired language using the native multilanguage system or Gtranslate(requires the GTranslate parameter for integration enabled), also Screen Reader will be affected automatically choosing the appropriate language for reading!

It's shipped with different templates and it's easy customizable using settings and custom icons.

Once installed the plugin, it can be enabled in the plugins list and the interface of the Screen Reader will be visible in the site frontend.

Configuration

The Screen Reader can be configured to match text rendered in whatever template you are using on your site. This is done using a system based on CSS selectors to match elements on pages. The Screen Reader can read selected portion of text if any or fallback on the main page text.

By default once installed, it's preconfigured to match the main text area for common templates, if you experiment reading of wrong sections in your site the following setting needs to be customized.

Multiple CSS selectors can be specified comma separated to match multiple different elements and part of pages. This allows for example to configure it to read the main menu of the site and the text in the main area of the page.

The screenshot shows the Joomla! administration interface for the Screen Reader configuration. The top navigation bar includes 'System', 'Users', 'Menus', 'Content', 'Components', 'Extensions', and 'Help'. Below the navigation bar are three buttons: 'Save', 'Save & Close', and 'Close'. The main settings section includes the following options:

- Audio Volume: 80%
- Reader mode: Read selected text if any or ...
- Read child nodes: Yes
- Exclude scripts: Yes
- Read images text: No
- Images attribute to read: Alt attribute
- Reading order of images text: Before page text
- CSS Selector for main page area: *[name*=main], *[class*=main], *[id
- Max chunk length: 80

Callouts provide additional information:

- 'Reading mode of the Screen Reader' points to the Reader mode dropdown.
- 'Customize the CSS selector to match main text in your pages' points to the CSS Selector for main page area text box.
- 'Change the length of each chunk read by the reader' points to the Max chunk length dropdown.

Tip: you can use tool such as Firebug or Google Chrome Dev Tools pressing F12 to inspect the HTML structure of your CMS Template.

Notice: if you experiment no audio when clicking on the play button of the Screen Reader, ensure that direct access to this file is allowed on your server:

<http://www.yourdomain.com/plugins/system/screenreader/screenreader/libraries/tts/proxy.php>

Notice: if you experiment audio stopping at random point, try to change the 'Max chunk length' value and ensure that in the HTML there are no special characters or breaking tags that could not be accepted for the reading.

In some cases, some server settings, Joomla extensions such as Akeeba Admin Tools or the htaccess may block on the server with a 403 Forbidden the access to this kind of files.

The same system is used to match the text on pages to be increased/decreased by the font size. You can specify one or more CSS selectors comma separated to select the target text based on the structure of the template HTML.

Notice: The Screen Reader ships with different audio engines. Based on the audio engine that has been chosen, different languages will be supported.

Appearance

Show text label	<input type="radio"/> No <input checked="" type="radio"/> Yes
Enable high contrast	<input type="radio"/> No <input checked="" type="radio"/> Yes
Enable font sizing	<input type="radio"/> No <input checked="" type="radio"/> Yes
Default characters size	<input type="text" value="80"/>
Font size custom selector	<input type="text" value="div.leading-0 p"/>
Corner position	<input type="text" value="Bottom right"/>
Screen reader template	<input type="text" value="Elegant"/>
Toolbar background color	<input type="text" value="#eeeeee"/>
Scrolling type	<input type="text" value="Fixed on scrolling"/>

Toggle Screen Reader features

Customize the CSS selector to match text in your pages for the font sizer

Advanced settings

Exclude pages	<input type="text" value="Select some options"/>
Include jQuery script	<input type="text" value="Yes"/>
Enable preloading for text chunks	<input type="text" value="No"/>

If you enable preloading of text the reading will be more fluid

The Screen Reader is integrated with the native multilanguage, this means that it will work based on the chosen frontend language. Of course the contents text must be the same of the language chosen, you can't mix languages. The Screen Reader always assumes that the contents are written in the language selected for the frontend. If you are using the Gtranslate module and you want to integrate the Screen Reader with the GTranslate multilanguage, don't forget to enable the configuration parameter of the Screen Reader to enable the Gtranslate integration.

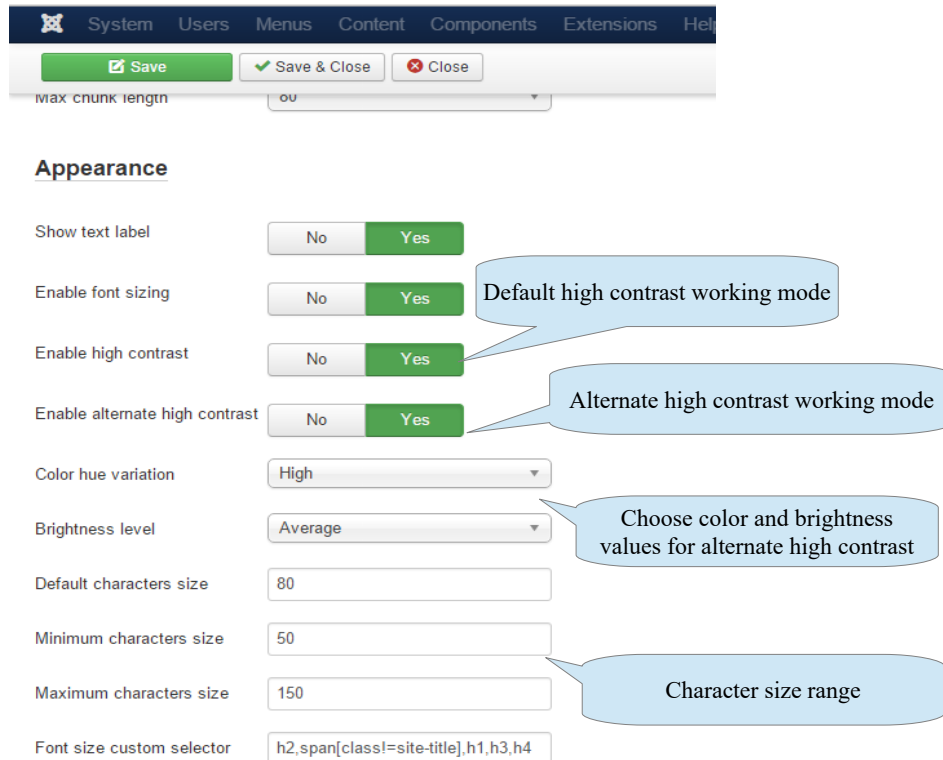
Tip: if you have inline styles(e.g. using the CMS editor) applied to elements that require a custom CSS selector for the font sizing, you may experiment inline styles loss due to the resizing override. In this case switch the parameter 'Font size selector mode' to 'Append' instead of 'Overwrite'

The screenshot shows the Joomla! configuration interface. At the top, there is a navigation bar with 'System', 'Users', 'Menus', 'Content', 'Components', 'Extensions', and 'Help'. Below the navigation bar are three buttons: 'Save', 'Save & Close', and 'Close'. The main content area is titled 'Appearance' and contains the same settings as the first image. The 'Font size selector mode' is set to 'Append' (highlighted in red) instead of 'Overwrite'. A speech bubble points to this setting with the text 'Use the 'Append' mode for font-sizing custom selector elements'.

Use the 'Append' mode for font-sizing custom selector elements

High contrast and additional configurations

The Screen Reader is able to support up to 3 different high contrast modes., the default one and 2 alternate variations. They will be available in the frontend toolbar as 3 different buttons. You can also set a range for the minimum and maximum value used to increase or decrease font size.

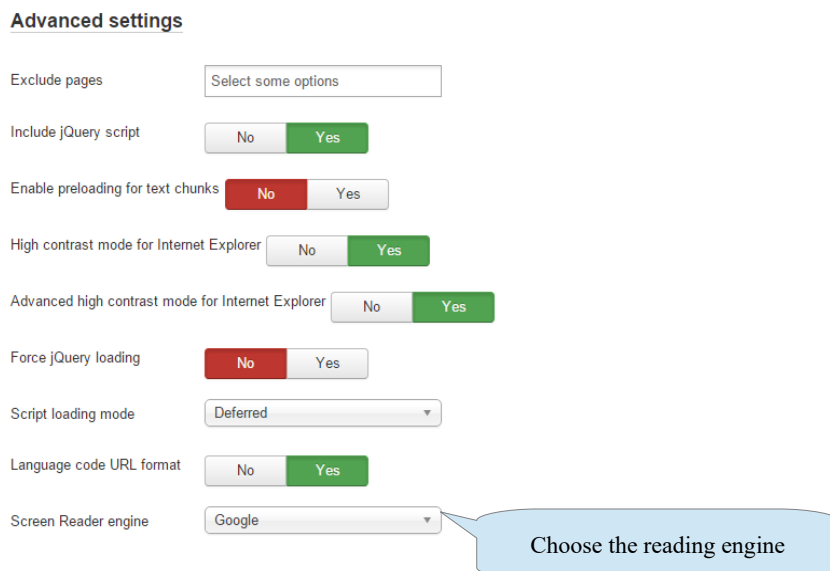


The screenshot shows a configuration window with a menu bar (System, Users, Menus, Content, Components, Extensions, Help) and buttons for Save, Save & Close, and Close. Below the menu is a dropdown for 'max chunk length' with the value 'ou'. The main section is titled 'Appearance' and contains several settings:

- Show text label: No Yes
- Enable font sizing: No Yes (Callout: Default high contrast working mode)
- Enable high contrast: No Yes (Callout: Alternate high contrast working mode)
- Enable alternate high contrast: No Yes
- Color hue variation: High (dropdown)
- Brightness level: Average (dropdown) (Callout: Choose color and brightness values for alternate high contrast)
- Default characters size: 80 (input)
- Minimum characters size: 50 (input)
- Maximum characters size: 150 (input) (Callout: Character size range)
- Font size custom selector: h2,span[class!=site-title],h1,h3,h4 (input)

Tip: Internet Explorer doesn't support alternate high contrast variations

You can switch it to another reading service if needed using the parameter below. Based on the audio engine that has been chosen, different languages will be supported.



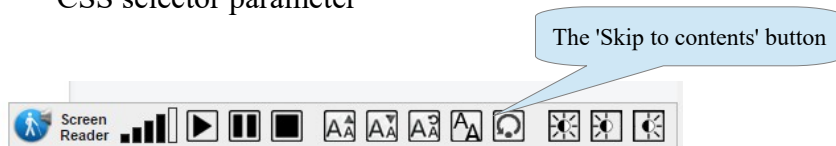
The screenshot shows the 'Advanced settings' section of the configuration interface:

- Exclude pages: Select some options (input)
- Include jQuery script: No Yes
- Enable preloading for text chunks: No Yes
- High contrast mode for Internet Explorer: No Yes
- Advanced high contrast mode for Internet Explorer: No Yes
- Force jQuery loading: No Yes
- Script loading mode: Deferred (dropdown)
- Language code URL format: No Yes
- Screen Reader engine: Google (dropdown) (Callout: Choose the reading engine)

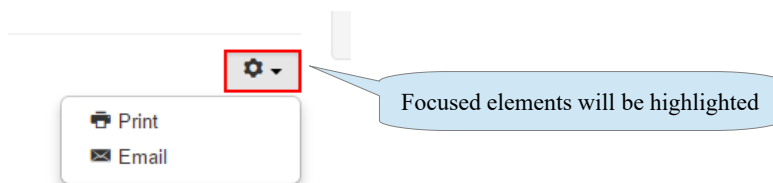
Features and accessibility improvements

In the features and accessibility improvements settings, you can find useful options to enhance accessibility of your website:

- Dyslexic font
- Gray hues
- Text spacing
- Enlarged cursor
- Reading guides
- Read mode
- Custom text and background colors
- Hide images
- 'Skip to contents' button. If enabled the button will be showed in the frontend toolbar and when clicked the page will scroll directly to the target element of the page based on the CSS selector parameter



- The focus outline let you specify a border color and size used when elements in the page receive focus to improve readability



- The 'Remove links target attribute' option will act based on WCAG requirements to fix anchor tags having the target attribute set as '_blank'. WCAG specs require that all links will open in the same page.

Accessibility improvements

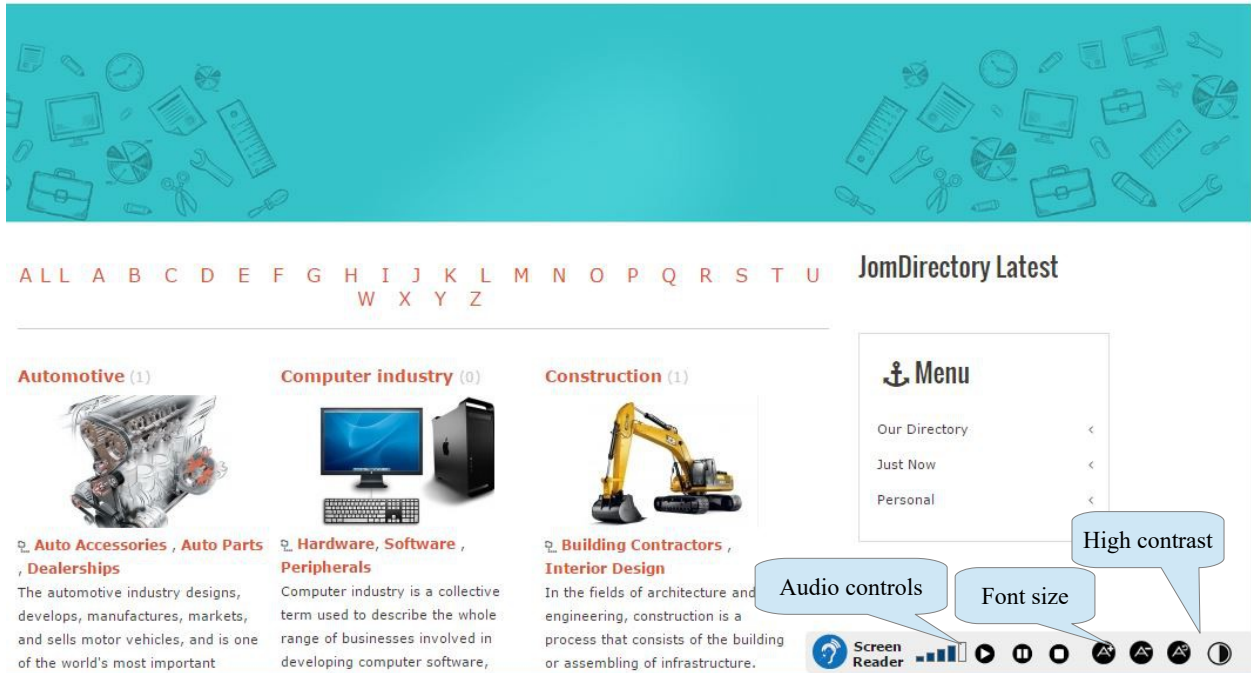
Enable 'Skip to contents'	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	The 'Skip to contents' button will scroll the page to the matched target element
CSS selector for 'Skip to contents'	<input type="text" value="footer"/>	
Enable focus outline	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	The focus outline will surround focused elements with a border color
Focus outline color	<input type="color" value="#ff0000"/>	
Focus outline size	<input type="text" value="2px"/>	
Remove links target attribute	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Fix anchor tags with target → _blank attribute not compliant with WCAG

Frontend

The Screen Reader can be displayed in the frontend as a full-sized popup or as a small toolbar. The interface can be positioned at each corner of the page.

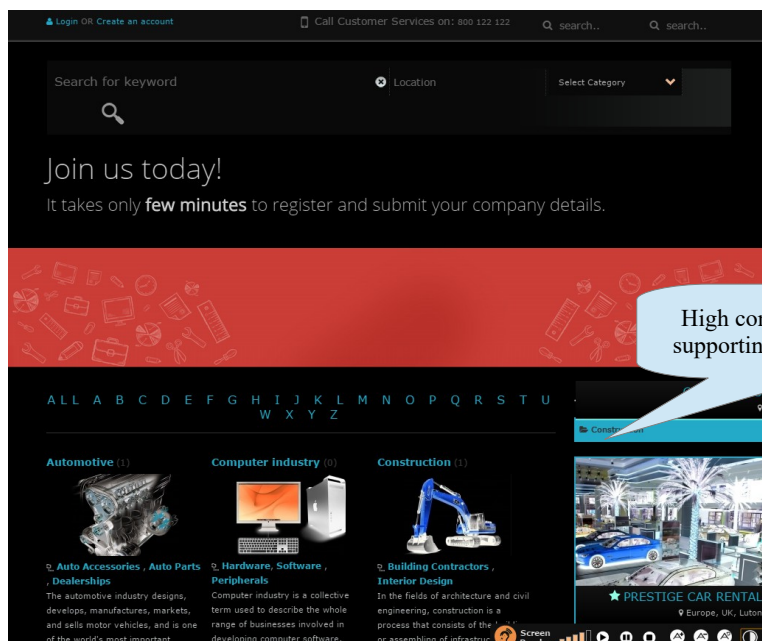
Join us today!

It takes only **few minutes** to register and submit your company details.



The high contrast feature is based on an innovative and advanced HTML5 algorithm and it's capable to adapt automatically to every CMS template and layout without any need of additional configurations.

This means that you have no more to deal with CSS classes to customized the high contrast view of your site, but the high contrast view will be calculated automatically as the inversion of colors on the page.

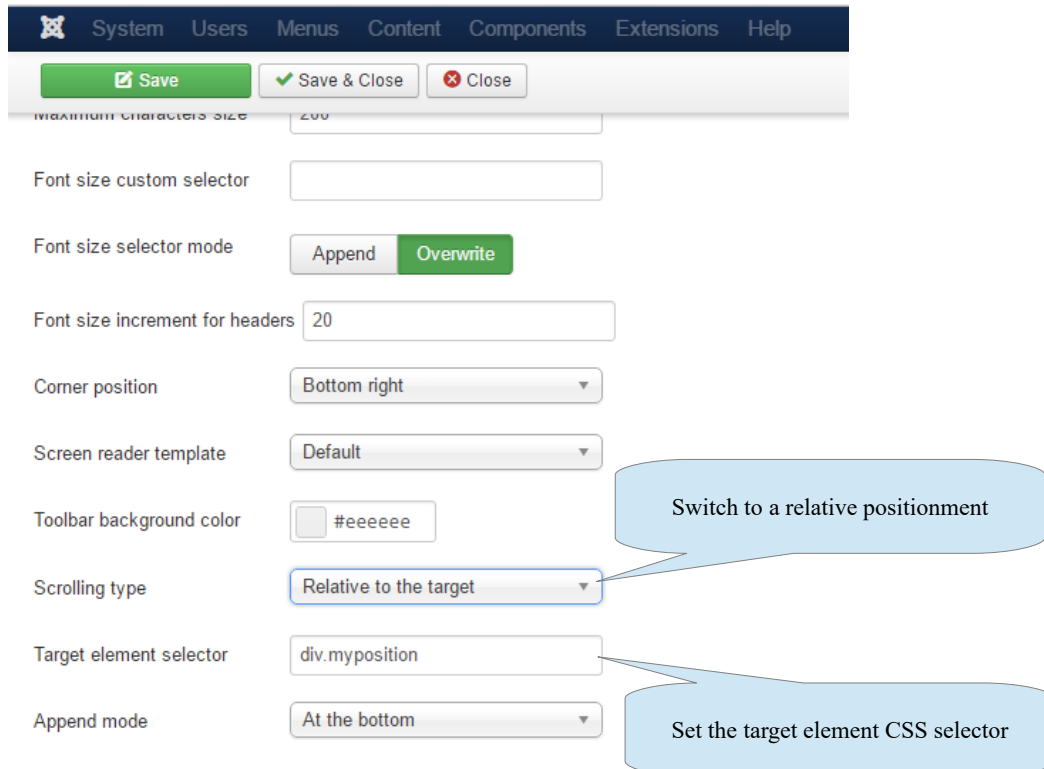


Custom position

The Screen Reader is rendered as a plugin and not as a module, so it's not possible to use a template position to show the toolbar in a specific position of your template.

However it uses css selectors to chose the target element to which the toolbar will be appended to, so you can take advantage of this system to show the toolbar in a specific location of your pages.

By default it's appended to the root html element using a fixed positionment, you can change the following settings to append the toolbar to a specific element using a relative positionment:



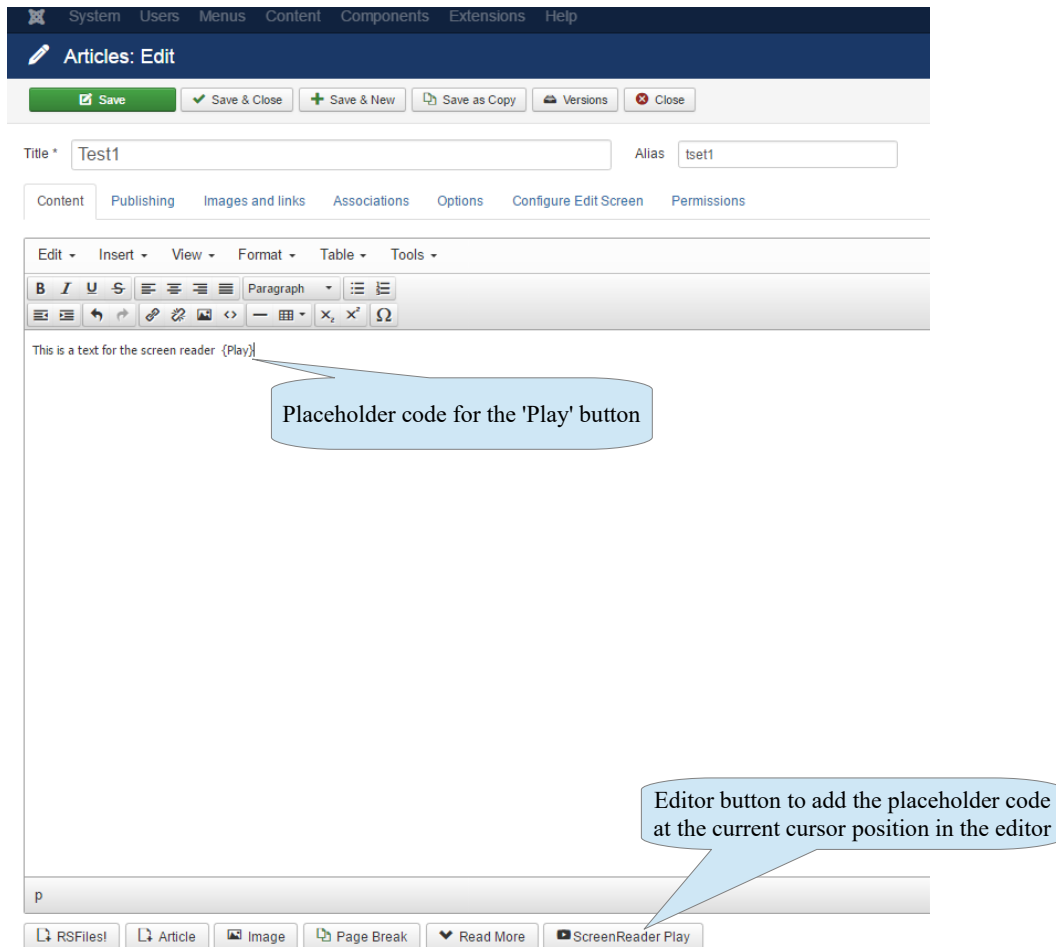
The screenshot shows the settings interface for the Screen Reader. At the top, there is a navigation bar with a logo and menu items: System, Users, Menus, Content, Components, Extensions, and Help. Below this is a toolbar with three buttons: Save (green), Save & Close (green with a checkmark), and Close (red with an X). The settings are organized into a list of rows, each with a label and a control element:

- maximum characters size: 200 (text input)
- Font size custom selector: (text input)
- Font size selector mode: Append (grey), Overwrite (green)
- Font size increment for headers: 20 (text input)
- Corner position: Bottom right (dropdown)
- Screen reader template: Default (dropdown)
- Toolbar background color: #eeeeee (color picker)
- Scrolling type: Relative to the target (dropdown) - Callout: "Switch to a relative positionment"
- Target element selector: div.myposition (text input) - Callout: "Set the target element CSS selector"
- Append mode: At the bottom (dropdown)

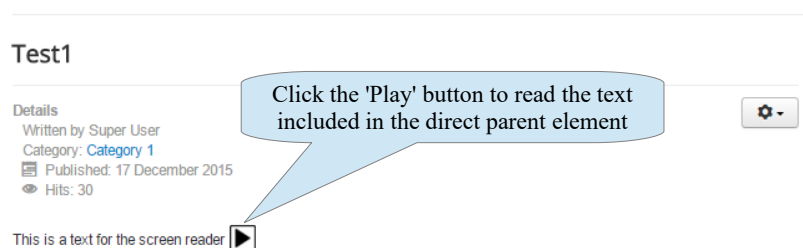
Embed 'Play' buttons

The Screen Reader supports a particular 'Play' mode based on buttons embedded directly inside your contents.

This can be easily done through the editor button visible in the screenshot below, clicking on it a specific HTML code will be added automatically at the current cursor position:



Once that the placeholder code is added into the contents, it will be automatically rendered in the frontend as a 'Play' button icon. When clicked, the Screenreader will read the text that is included in the direct parent element of the 'Play' button.



Take care to include the placeholder code inside the element for which you want to read the text. For example you can add it inside a paragraph element to read the paragraph text.

The editor button supports native contents and custom HTML modules, if you want to add the placeholder manually to other kind of contents you can add the following placeholder code wherever you want that a 'Play' button should be rendered:

```
<span class="screenreader_embed_play_button"> {Play}</span>
```

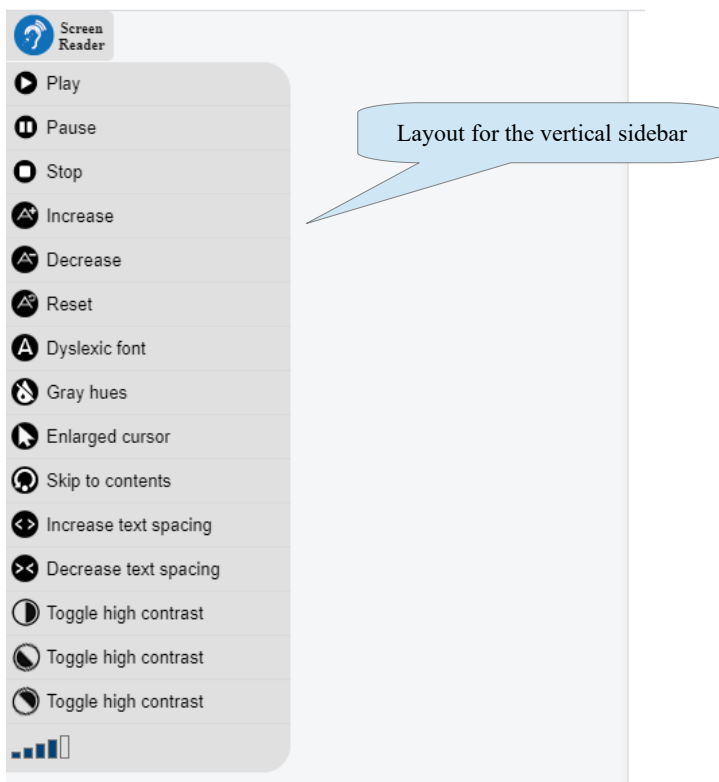
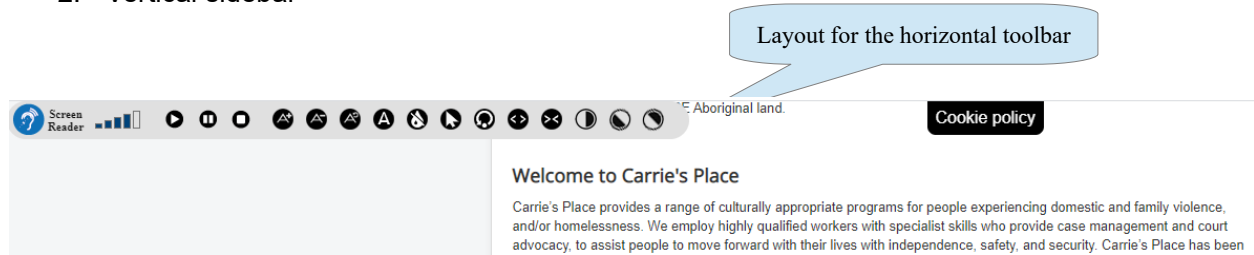
A typical structure looks like the following, so that the 'Play' button is inside the 'p' element and it will read the text in the parent 'p' element.

```
<p>This is a text for the screen reader <span class="screenreader_embed_play_button"> {Play}</span></p>
```


Layout and features buttons

The Screen Reader supports 2 different layout variations, indeed the widget can be rendered as a:

1. Horizontal toolbar
2. Vertical sidebar



For each layout it's possible to open/close the widget thanks to the feature 'Use minimized toolbar'.

Additionally you can add or remove various features and buttons that are optional:

- Audio reader
- Font size
- Dyslexic font
- Gray hues
- Enlarged cursor
- Skip to contents
- Text spacing
- High contrast
- etc...

Additionally the Screen Reader is shipped with the default 'Accessible' template which is displayed via a fully accessible interface with multiple buttons and indicators also including access keys and aria attributes.

The 'Accessible' template supports custom colors, icons and text. In this way you can fully customize the look of the interface to suit your template.

The screenshot displays the 'Screen Reader accessibility tool' interface, which is organized into several functional sections. Each section is highlighted with a callout box:

- Text Reader:** Contains 'Play', 'Pause', and 'Stop' buttons, along with a volume slider set to 90%.
- Font sizing:** Includes 'Increase', 'Decrease', and 'Reset' buttons.
- Accessibility enhancements:** A grid of nine options: 'Dyslexic font', 'Gray hues', 'Enlarged cursor', 'Reading guide', 'Read mode', 'Hide images', 'Skip to contents', 'Increase text spacing', and 'Decrease text spacing'.
- High contrast color:** Three 'Toggle high contrast' buttons with different color indicators.

Callout boxes provide additional context: 'Accessible interface with multiple sections to group features' points to the overall layout; 'Audio controls with dynamic volume' points to the volume slider; 'Font resizing section' points to the font controls; 'Accessibility improvements such as: Dyslexic font, read mode, text spacing, etc' points to the enhancements grid; and 'High contrast and colors section' points to the high contrast buttons.