



WHITEMAGIC  
SOFTWARE

TECHNICAL DOCUMENTATION  
MULTICOLUMN TABLE SORT

# CONTENTS

<b>1 Introduction</b>	<b>1</b>
1.1 Audience	1
1.2 Features	1
1.3 Browser Compatibility	1
<b>2 Installation</b>	<b>2</b>
2.1 File Descriptions	2
2.1.1 mts-example.html	2
2.1.2 events.js	2
2.1.3 sort.js	2
<b>3 Usage</b>	<b>3</b>
3.1 CSS Styling	3
3.1.1 tr.zebra	3
3.1.2 tr.selected	4
3.2 Including JavaScript	4
3.3 Table Setup	4
3.3.1 Table Identifier	4
3.3.2 Table Body	5
3.4 Sort Activation	5
<b>4 Known Issues</b>	<b>6</b>
4.1 Modifier Keys	6
4.2 Disappearing Row Selection	6
4.3 Testing	6
<b>5 Copyright</b>	<b>7</b>
<b>6 License</b>	<b>8</b>

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# 1 INTRODUCTION

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This document provides technical details of the multi-column table sort JavaScript code, including:

- Installation
- Usage
- Modification

## 1.1 AUDIENCE

This document is intended for a technical audience. Readers should be comfortable with client-side, web-based technology such as:

- Web browsers (Firefox, Internet Explorer)
- JavaScript
- HTML

## 1.2 FEATURES

Key features include:

- Simple API
- Selectable data
- Data selection controls
- Automatic zebra striping
- Compatibility: Firefox, Internet Explorer
- Sort states: ascending, descending, and none

## 1.3 BROWSER COMPATIBILITY

The software has been successfully tested with:

- Internet Explorer 6 (Windows XP)
- Firefox 2 (Kubuntu Linux)

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## 2 INSTALLATION

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Install the software as follows:

1. Unzip **multicolumn.zip** into the same directory as your web pages.

The installation will have created the following directory and file structure:

```
|-- mts-example.html
|-- js
    |-- events.js
    |-- sort.js
```

### 2.1 FILE DESCRIPTIONS

This section describes the contents of the installed files.

#### 2.1.1 MTS-EXAMPLE.HTML

This HTML file provides a sample table with data. The sample table has five columns, all of which may be used to sort the data.

#### 2.1.2 EVENTS.JS

This file provides cross-browser functionality for assigning events (for example, mouse clicks) to JavaScript functions.

#### 2.1.3 SORT.JS

This file provides the functionality for sorting multiple columns of tabular data, set up in a standard HTML table.

## 3 USAGE

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The multi-column table sort has the following components:

- CSS Styling
- Including JavaScript
- Table Setup
- Sort Activation

### 3.1 CSS STYLING

The following styles control the background colour of each table body row:

- `tr.zebra`
- `tr.selected`

#### 3.1.1 TR.ZEBRA

This style determines the striping background colour. If you already have zebra striping in your table, but it uses a different name (for example, `<tr class='even'>`), then change the file `sort.js`. To do this, perform these steps:

1. Load `sort.js` into a text editor.
2. Find the following line:  

```
var CSS_CLASS_ZEBRA = 'zebra';
```
3. Change the line to:  

```
var CSS_CLASS_ZEBRA = 'even';
```
4. Save the file.

The multi-column table sort routine will now apply zebra striping to rows with the class of 'even'. You can also change the striping to odd rows by editing the following line:

```
row.className = (row.rowIndex & 1 == 1) ? '' : me.getZebra();
```

To reverse the striping, use:

```
row.className = (row.rowIndex & 1 == 1) ? me.getZebra() : '';
```

The `(row.rowIndex & 1 == 1)` checks if a number is odd based on the value of the least significant bit. To disable zebra striping entirely, comment out the line:

```
//row.className = (row.rowIndex & 1 == 1) ? me.getZebra() : '';
```

### 3.1.2 TR.SELECTED

This style controls the background colour of a row when the user highlights it (via mouse clicks).

## 3.2 INCLUDING JAVASCRIPT

To apply the sort functionality to an HTML table, the HTML page must include the following two lines within the header (that is, the `<head>` and `</head>` tags):

```
<script type="text/javascript" src="js/events.js"></script>  
<script type="text/javascript" src="js/sort.js"></script>
```

If the location of the Javascript files is not within a subdirectory of the HTML page, then change the `src` value accordingly.

## 3.3 TABLE SETUP

To use the Javascript, the HTML table must:

- have an identifier; and
- have a table body, distinct from the table's header and footer.

### 3.3.1 TABLE IDENTIFIER

Assign a value to the table's `id` attribute. This attribute is used by the sort code. For example:

```
<table id='identifier'>
```

### 3.3.2 TABLE BODY

The table must have a single, distinct `tbody` element. Tables used for tabular data should have the following general form (with emphasis on the portions analysed by the multi-column table sort code):

```
<table id='identifier'>
  <thead>
    <tr>
      <th>Header 1</th>
      <th>Header 2</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Data 1</td>
      <td>Data 2</td>
    </tr>
  </tbody>
  <tfoot>
    <tr>
      <td>Footer 1</td>
      <td>Footer 2</td>
    </tr>
  </tfoot>
</table>
```

The sorting behaviour for data not enclosed in `thead`, `tbody` or `tfoot` elements is undefined.

## 3.4 SORT ACTIVATION

At the bottom of the web page, before the closing `</body>` tag, insert the following code:

```
<script type="text/javascript">
  new SortableTable( 'identifier' );
</script>
```

Change the `'identifier'` parameter of the table to match table's `id` attribute.

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## 4 KNOWN ISSUES

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This section lists known problems with the multi-column table sort software.

### 4.1 MODIFIER KEYS

**Problem:** The Shift and Control keys modify mouse clicks for row selection as expected, however, using Shift alone after separate series of rows have been selected does not cause rows outside the Shift-ed range to be deselected.

**Workaround:** None

**Expected Behaviour:** Only the rows selected between the two click points, while Shift is held, should be selected. All other rows should be deselected.

**Severity:** Low

### 4.2 DISAPPEARING ROW SELECTION

**Problem:** Selected rows are deselected after a header column is clicked.

**Workaround:** None

**Expected Behaviour:** Selected rows should continue to be selected, even after sorting.

**Severity:** Low to Moderate

### 4.3 TESTING

**Problem:** The sort functionality has not been tested in Lynx, Opera, and many other browsers.

**Severity:** Moderate

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