

JsGauges

version 1.1

About

JsGauges is a JavaScript software that allows you to show two types of analog gauges on your web-page. That could be classical round gauges like a speedometer or linear like an ordinary thermometer.

Gauges are fully configurable, so you can easily create your own design by changing CSS-like settings.

Script uses two libraries: RaphaelJS and JSON parser.

RaphaelJS is a powerful JavaScript library. It is used to draw and animate SVG or VML graphics.

JSON parser is used to analyze JSON data in older browsers.

This script builds interactive gauges using vector graphics. This is a cross-browser solution and it works in:

- IE7+
- Safari
- Firefox 3+
- Chrome

Using AJAX technology script downloads JSON file from server and updates current gauge state.

A lot of settings allow you to create your own design.

Installation is easy and doesn't require much time.

Versions history

Version 1.1

1. Column height bug fixed.
2. Column has three "zones" and changes color if current gauge value matches zone range.
3. You can fill gauge background with image.

Installation

Copy script files and folders to your website directory.

Add tags to your header:

```
<script type="text/javascript" src="js/json2.js"></script>
```

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

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

Add a blank DIV on your page somewhere you want to place gauges:

```
<div id="jsGauges"></div>
```

Script parses a JSON file with the name jsgauges.json that should be located on your website folder.

Example of JSON file:

```
{
  "round": {
    "rpm": 10000,
    "speed": 200,
    "test": 100,
    "load": 535
  },
  "linear": {
    "temp": 40,
    "level": 70
  }
}
```

As you may see there is a list with gauge names and current values. Depending on settings script downloads this file with some interval.

Each gauge with a name listed in this file must have its own settings with the same name. At the beginning of jsGauges script file you'll see a list of settings that you should use to style your gauges. There are several examples of round and linear gauges.

Settings

There are few common settings and two kinds of styling settings for linear and round gauges.

Common settings (lines# 343-344):

```
jsGauges.settings.targetDiv = document.getElementById("jsGauges"); // Target DIV
jsGauges.settings.interval = 10000; // AJAX refreshing interval in ms.
```

In this example script will create nodes in a DIV with ID="jsGauges". Script will download JSON file each 10000ms. (10 seconds).

Styling settings tip:

You can fill objects using:

#	Type	Example	Description
1	Color name	"red"	Color name ("red", "green", "cornflowerblue", etc).
2	Color code	"#EAEAEA"	Please refer to Raphael color parsing description.
3	Linear gradient	"90-#fff-#000"	90° gradient from white to black.
		"0-#fff-#00:20-#000"	0° gradient from white via red (at 20%) to black.
4	Radial gradient	"r#fff-#000"	Gradient from white to black.
		"r(0.25, 0.75)#fff-#000"	Gradient from white to black with focus point at 0.25, 0.75. Focus point coordinates are in 0..1 range.
5	Image	"url(img/test2.gif)"	Background image. GIF, JPEG or PNG.

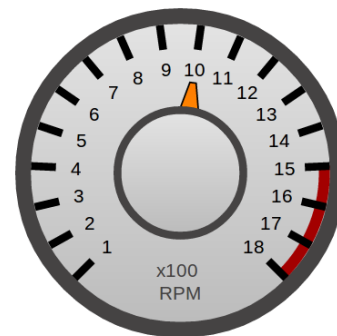
Radial gradients can only be applied to circles and ellipses.

RaphaelJS color parsing.

1. Color name ("red", "green", "cornflowerblue", etc)
2. #... — shortened HTML color: ("#000", "#fc0", etc)
3. #..... — full length HTML color: ("#000000", "#bd2300")
4. rgb(..., ..., ...) — red, green and blue channels' values: ("rgb(200, 100, 0)")
5. rgb(...%, ...%, ...%) — same as above, but in %: ("rgb(100%, 175%, 0%)")
6. rgba(..., ..., ..., ...) — red, green and blue channels' values: ("rgba(200, 100, 0, .5)")
7. rgba(...%, ...%, ...%, ...%) — same as above, but in %: ("rgba(100%, 175%, 0%, 50%)")
8. hsb(..., ..., ...) — hue, saturation and brightness values: ("hsb(0.5, 0.25, 1)")
9. hsb(...%, ...%, ...%) — same as above, but in %
10. hsba(..., ..., ..., ...) — same as above, but with opacity
11. hsl(..., ..., ...) — almost the same as hsb, see Wikipedia
12. hsl(...%, ...%, ...%) — same as above, but in %
13. hsla(..., ..., ..., ...) — same as above, but with opacity
14. Optionally for hsb and hsl you could specify hue as a degree: "hsl(240deg, 1, .5)" or, if you want to go fancy, "hsl(240°, 1, .5)"

Round gauges styling settings:

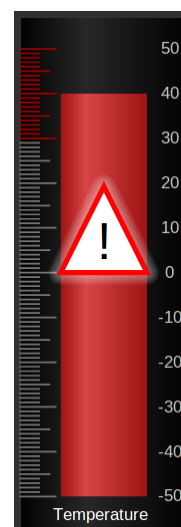
Example of styled gauge with settings.



#	Setting name	Value	Example	Description
1	gaugeRadius	number	100	Raphael drawing will be 2px bigger than gauge.
2	step	number	1	Numerate each "step" * "scaleDivisionValue". In this gauge each 1000.
3	stepStroke	number	5	Graduation width of each numerated step.
4	subStep	number	0	Choose substeps.
5	subStepStroke	number	2	Graduation width of each non-numerated step.
6	subSubStep	number	0	Choose subsubstep.
7	font	string	"12px Arial"	Graduation numbers font.
8	fontColor	string	"#000"	Graduation numbers font color.
9	fontStroke	number	0	Graduation numbers font stroke width.
10	textMargin	number	13	Text margin from graduation marks.
11	max	number	18000	Number of numerated steps.
12	min	number	1000	Starting from.
13	scaleDivisionValue	number	1000	Changing amount of graduation steps. (max - min) / scaleDivisionValue = 18
14	textNumRatio	number	1000	If you want to show 10 instead of 1000 - use textNumRatio = 100
15	startAngle	number	225	Start graduation from (number) degrees. Where first graduation mark will be located.
16	gradAngle	number	270	Graduation angle. Angle of arc with graduation.
17	background	string	"270-#E4E4E4-#bbb"	Gauge background color. Color. gradient or image.
18	strokeColor	string	"#454343"	Gauge stroke color.
19	strokeOpacity	number	1	Gauge stroke opacity from 0 to 1.
20	strokeWidth	number	10	Gauge stroke width in pixels.
21	handColor	string	"270-#FF9A00-#FF7B00"	Hand fill color. Color. gradient or image.
22	handStrokeColor	string	"#000"	Hand stroke color.
23	handStrokeWidth	number	1	Gauge hand stroke width in pixels.
24	handOpacity	number	1	Gauge hand opacity. Number from 0 to 1.
25	handMaxWidth	number	30	Hand width in the gauge center.
26	handMinWidth	number	4	Hand width close to graduation.
27	handLengthTune	number	-30	Adjust hand length. Value in pixels. "-30" makes it 30px less.
28	handHolder	number	40	Display hand holder in gauge center. Radius in pixels. "0" if you don't want any.
29	handHolderColor	string	"270-#E4E4E4-#bbb"	Fill color of optional circle in gauge center. Color or gradient.
30	handHolderStroke	number	5	Stroke width of optional circle in gauge center.
31	handHolderStrkClr	string	"#454343"	Stroke color of optional circle in gauge center.
32	graduationColor	string	"#000"	Color of graduation marks.
33	graduationLength	number	7	Graduation marks length in pixels.
34	graduationMargin	number	5	Margin graduation from gauge border.
35	redZoneStart	number	15000	Red zone starts from this value. Or "false".
36	redZoneEnd	number	18000	Where red zone ends.
37	redZoneColor	string	"#A30000"	Color of red zone arc.
38	redZoneOpacity	number	1	Opacity of red zone arc. Number from 0 to 1.
39	alarmShow	boolean	true	Show alarm sign when value is in red zone. True or false.
40	alarmSignWidth	number	30	Width and height of alarm sign.
41	alarmFill	string	"white"	Alarm sign triangle fill color.
42	alarmStroke	string	"red"	Alarm sign triangle stroke color.
43	alarmStrokeWidth	number	3	Alarm sign triangle stroke width.
44	alarmBlink	boolean	false	Should alarm sign blink or not. Works just when you have one gauge on a page.
45	alarmGlow	string	"white"	Alarm sign glow color.
46	alarmFont	string	"18px Arial"	Font of a text inside alarm sign.
47	alarmFontColor	string	"#000"	Text color inside alarm sign.
48	alarmText	string	"!"	Text that you want to display when alarm sign appears.
49	gaugeText	string	"x100 \n RPM"	String or false. ("Km/h", "RPM", etc) "\n" to start new line
50	gaugeTextX	number	0	Relative X position from gauge center
51	gaugeTextY	number	70	Relative Y position from gauge center
52	gaugeTextColor	string	"#454343"	Optional text color.
53	gaugeTextFont	string	"12px Arial"	Size in pixels and font name.

Linear gauges styling settings:

Example of styled gauge with settings.



#	Setting name	Value	Example	Description
1	animationTime	number	100	Column animation time in ms.
2	alarmShow	boolean	true	Show alarm sign when value is in red zone. True or false.
3	alarmBlink	boolean	false	Should alarm sign blink or not. Works just when you have one gauge on a page.
4	alarmText	string	"!"	Text that you want to display when alarm sign appears.
5	alarmFont	string	"30px Arial"	Font of a text inside alarm sign.
6	alarmFontColor	string	"#000"	Text color inside alarm sign.
7	alarmGlow	string	"white"	Alarm sign glow color.
8	alarmFill	string	"white"	Alarm sign triangle fill color.
9	alarmStroke	string	"red"	Alarm sign triangle stroke color.
10	alarmStrokeWidth	number	3	Alarm sign triangle stroke width.
11	gaugeHeight	number	300	Height in pixels.
12	gaugeWidth	number	100	Width in pixels.
13	step	number	10	Numerate each "step" * "scaleDivisionValue". In this gauge each 1000.
14	subStep	number	5	Each fifth graduation mark will be longer than subsubstep
15	subSubStep	number	1	Each 1 mark will be short. Subsubstep.
16	max	number	50	Max value for graduation.
17	min	number	-50	Min value for graduation.
18	scaleDivisionValue	number	1	changing amount of graduation steps. (max - min) / scaleDivisionValue = 100
19	textNumRatio	number	1	If you want to show 10 instead of 1000 - use textNumRatio = 100
20	background	string	"0-#000-#272727:40-#000"	Gauge background color. Color or gradient.
21	strokeColor	string	"#313131"	Gauge stroke color.
22	strokeOpacity	number	1	Number 0 - 1
23	strokeWidth	number	4	Width in pixels.
24	greenValueStart	number	20	Green zone start. If value is equal or bigger column will be "green zone" colored.
25	greenValueEnd	number	27	Green zone ends if value is more than this.
26	columnGreenColor	string	"0-#5C8926-#71A138:30-#5C8926"	Column "green zone" color. Color, gradient or image.
27	yellowValueStart	number	28	Yellow zone start. If value is equal or bigger column will be "yellow zone" colored.
28	yellowValueEnd	number	34	Yellow zone ends if value is more than this.
29	columnYellowColor	string	"0-#CEAC39-#E0C362:30-#CEAC39"	Column "yellow zone" color. Color, gradient or image.
30	redValueStart	number	35	Red zone start. If value is equal or bigger column will be "red zone" colored.
31	redValueEnd	number	51	Red zone ends if value is more than this.
32	columnRedColor	string	"0-#9E1313-#D64646:30-#9E1313"	Column "red zone" color. Color, gradient or image.
33	columnWidth	number	50	Gauge column width.
34	columnMarginY	number	20	Column margin top and margin bottom
35	columnStroke	string	"none"	Color of stroke
36	columnStrokeWidth	number	0	Width in pixels
37	columnStrokeOpacity	number	1	Number 0 - 1
38	graduationColor	string	"#777777"	Stroke color
39	gradRedZoneColor	string	"#9E0000"	Color of graduation in red zone.
40	textMarginRight	number	10	Text margin from a right gauge border.
41	font	string	"10px Arial"	Graduation numbers font.
42	fontColor	string	"#C3C3C3"	Graduation numbers font color.
43	redZoneStart	number	30	Red zone starts from this value. Or "false".
44	redZoneEnd	number	50	Where red zone ends. Or "false".
45	gaugeText	string	"Temperature"	String or false. ("Km/h", "RPM", etc) "\n" to start new line
46	gaugeTextX	number	0	Relative X position from gauge center
47	gaugeTextY	number	143	Relative Y position from gauge center
48	gaugeTextColor	string	"#fff"	Optional text color.
49	gaugeTextFont	string	"10px Arial"	Size in pixels and font name.