StockChartX HTML5 Web & Mobile

Frequently Asked Questions

version 1.0

Modulus

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Table of Contents

1. How to append bars on the chart? 6
2. How to update the last bar on the chart? 6
3. I've added an indicator (`gChart.addIndicators`). If I change data series, it does not refresh / re-plot indicator. What should I do? 7
4. When I add fresh bars to the chart, it doesn't move automatically. What should I do? 7
5. How to set the values for the second scale? 8
6. How to change value scale decimal digits? 8
7. How can I change instruments set used by chart? 8
8. When I draw the line, or any other drawings, how can I save them? 9
9. How can a chart be destroyed? This is NOT a question on how to remove the chart panel, but the chart as a whole along with all its event listeners. 9
10. How to subscribe some chart event? 9
11. I would like to see a list of all the available events in StockChartX. 9
12. How to switch to full window mode? 13
13. Is it possible to hide the top toolbar? Or show chart as full window mode from the beginning without the top buttons? 13
14. May I add new button in the toolbar? 14
15. I'd like to cut "year" option from the custom time frames dropdown in the time frame picker. What should I do? 14
16. How to customise the time frame picker? 15
17. I would like to know how to add custom indicators to the chart 16
18. How to display my custom indicator in the Indicators window? 16
19. Is it possible to add/modify font type, size, etc.? 16

20. How can I change chart panel's grid color, chart's background color, etc.? How to define themes? I would like to load a theme similar to the "Light" theme at the startup of the page I am working on. 16

21. How can I change fonts in the chart area? 17

22. How can I turn off the watermark? 17

23. How can I draw text on a chart? 17

24. How can I change watermark theme? 18

25. I change line type for indicators or drawings, but it doesn't take into effect in IE 10. 18

Introduction

About StockChartX HTML5 Web & Mobile

StockChartX HTML5 Web & Mobile Financial Chart Library with Technical Analysis is based on original, award-winning StockChartX financial chart component perfected through over 20 years of development and trusted by over three million traders around the world. It works on smartphones, tablets and desktop browsers.

Developed in JavaScript and rendered on an HTML5 Canvas, StockChartX HTML5 allows developers **to chart real-time financial data**, **embed objects** such as buy and sell arrows, **add images** to charts, **add trend lines** and geometric shapes, i**nsert technical indicators**, and much more.

StockChartX HTML5 Web & Mobile runs in any browser without the use of plugins. It works in Internet Explorer, Safari, FireFox, and Chrome. It also works on tablets and smart-phones, even the desktop.

On a mobile device, such as an iPad, Android, or Windows Surface, StockChartX HTML5 can be manipulated using touch gestures like pinch, swipe, and tap. On a computer with a web browser, StockChartX HTML5 has a full set of mouse and keyboard controls. This **provides a full technical analysis tool set**, with a common user interface and look and feel, across all devices.

Frequently Asked Questions

1. How to append bars on the chart?

```
var sampleBar = {
    open   : 1.2563,
    high   : 1.2587,
    low    : 1.2521,
    close  : 1.2545,
    volume : 200,
    date   : new Date()
};

var sampleBarsArray = [sampleBar, sampleBar,
sampleBar];

function appendBars(bars) {
    gChart.appendBars(bars);
    gChart.setNeedsAutoScale();
    gChart.update();
}

appendBars(sampleBarsArray);
```

2. How to update the last bar on the chart?

See example below. You can also update other values in these arrays in such way. Notice: if you have indicators on the chart, it is necessary to additionally call **gChart.updateIndicators()**; before **gChart.setNeedsAutoScale()**;

```
var sampleBar = {
    open   : 1.2563,
    high   : 1.2587,
    low    : 1.2521,
    close  : 1.2545,
    volume : 200,
    date   : new Date()
};
```

```
function updateLastBar(bar) {
    var chartData = gChart.getCommonDataSeries();
    var index = chartData.open.values.length - 1;

    chartData.open  .values[index] = bar.open;
    chartData.high  .values[index] = bar.high;
    chartData.low   .values[index] = bar.low;
    chartData.close .values[index] = bar.close;
    chartData.volume.values[index] = bar.volume;
    chartData.date  .values[index] = bar.date;

    gChart.setNeedsAutoScale();
    gChart.update();
}

updateLastBar(sampleBar);
```

3. I've added an indicator (`gChart.addIndicators`). If I change data series, it does not refresh / re-plot indicator. What should I do?

```
gChart.updateIndicators();
```

4. When I add fresh bars to the chart, it doesn't move automatically. What should I do?

You have to set `firstVisibleRecord/lastVisibleRecord`.
Example:

```
gChart.firstVisibleRecord = 20;
gChart.lastVisibleRecord = 150;
gChart.update();
```

5. How to set the values for the second scale?

You have to assign scale to some indicator/plot. Example:

```
var scale = chart.addValueScale(); // add new scale
indicator.valueScale = scale; // assign scale to the
indicator
```

6. How to change value scale decimal digits?

```
var decimalDigits = 5;
gChart.mainPanel.formatter.
setDecimalDigits(decimalDigits);
```

7. How can I change instruments set used by chart?

You have to override method `StockChartX.getAllInstruments`. For example, put all needed instruments into variable `instruments` and add this code:

```
StockChartX.getAllInstruments = function()
{ return instruments;};
```

Now chart will fetch symbols from the `instruments` variable which is as array. Notice that all objects in this array must look like:

```
{
    company: "Apple Computer Inc",
    exchange: "Simulation",
    symbol: "AAPL"
}
```

8. When I draw line, or any other drawings, how can I save them?

```
gChart.saveDrawingsState();
```

9. How can a chart be destroyed? This is NOT a question on how to remove the chart panel, but the chart as a whole along with all its event listeners.

Call

```
gChart.destroy();
```

10. How to subscribe some chart event?

You can find all chart events inside `StockChartX.ChartEvent object.`

Here is an example of how to subscribe chart event:

```
gChart.on(StockChartX.ChartEvent.MORE_HISTORY_
REQUESTED, function() {
    console.log("TODO: Load more history!");
});
```

By the way, you can find more examples in **/site/scripts/site.js**.

11. I would like to see a list of all the available events in StockChartX.

Chart events - can be subscribed using chart object

WINDOW_MODE_CHANGED — Window mode changed (default / fullscreen)
TOOLBAR_LOADED — Chart toolbar loaded
STATE_CHANGED — Chart state changed
TIME_INTERVAL_CHANGED — Chart time interval changed (gChart.timeInterval)
INDICATOR_ADDED — Indicator added
INDICATOR_REMOVED — Indicator removed
THEME_CHANGED — Chart theme changed
GLOBAL_THEME_CHANGED — Chart global theme changed
PRICE_STYLE_CHANGED — Chart price style changed
HOVER_RECORD_CHANGED — Chart hover record changed
INSTRUMENT_CHANGED — Chart instrument changed (object gChart.instrument)
SYMBOL_ENTERED — Symbol changed in the toolbar's Instrument selector
TIME_FRAME_CHANGED — Time frame changed in the toolbar
CROSS_HAIR_CHANGED — Crosshair type changed
STATE_LOADED — Chart state loaded (after gChart.loadState)
LOCALE_CHANGED — Chart locale changed
VALUE_SCALE_ADDED — Chart value scale added
VALUE_SCALE_REMOVED — Chart value scale removed

USER_DRAWING_STARTED — Drawing started (by user)
USER_DRAWING_FINISHED — Drawing finished (by user)
USER_DRAWING_CANCELLED — Drawing cancelled (by user)

PANEL_ADDED — New chart panel added
PANEL_REMOVED — Chart panel removed

DATE_SCALE_THEME_CHANGED — Date scale theme changed
FIRST_VISIBLE_RECORD_CHANGED — First visible record changed
LAST_VISIBLE_RECORD_CHANGED — Last visible record changed
MORE_HISTORY_REQUESTED — More historical data requested. Can be used to dynamically load historical data gradually. Fired when user scrolls chart to the beginning.

PanelEvent - can be subscribed using panel object

THEME_CHANGED — Theme changed
X_GRID_VISIBLE_CHANGED — X grid lines visibility changed (visible/invisible)
Y_GRID_VISIBLE_CHANGED — Y grid lines visibility changed (visible/invisible)
PLOT_ADDED — New plot added
PLOT_REMOVED — Plot removed
DOUBLE_CLICKED — Panel double clicked

DrawingEvent - can be subscribed using drawing object

PANEL_CHANGED — Drawing panel changed
VALUE_SCALE_CHANGED — Drawing value scale changed
VISIBLE_CHANGED — Drawing visibility changed (visible/invisible)
POINTS_CHANGED — Drawing points changed
LOCKED_CHANGED — When drawing locked or unlocked
RESIZABLE_CHANGED — When drawing becomes resizable or not
SELECTABLE_CHANGED — When drawing becomes selectable or not
SELECTED_CHANGED — Indicates whether drawing is selected or unselected
THEME_CHANGED — Drawing theme changed
DRAG_FINISHED — On drawing drag finished (by user)
DRAG_STARTED — On drawing drag started (by user)
DOUBLE_CLICK — Mouse double click on chart drawing
CONTEXT_MENU — On context menu called (right mouse click)

Text drawing

TEXT_CHANGED — Drawing text changed

Image drawing

URL_CHANGED — Image URL changed

Arrow drawing

ARROW_HEAD_RATIO_CHANGED — Arrow head ratio changed
ARROW_TAIL_RATIO_CHANGED — Arrow tail ratio changed

Dot drawing

DOT_RADIUS_CHANGED — Dot radius changed

Geometric marker drawing (Arrow drawing, Diamond drawing, Square drawing, etc.)

SIZE_CHANGED — Size changed

Fibonacci drawings

LEVELS_CHANGED — Levels changed
SHOW_TREND_LINE_CHANGED — Trend line was shown or hidden
SHOW_LEVEL_LINES_CHANGED — Level lines were shown or hidden
SHOW_LEVEL_BACKGROUNDS_CHANGED — Level backgrounds were shown or hidden
SHOW_LEVEL_VALUES_CHANGED — Level values were shown or hidden
SHOW_LEVEL_PRICES_CHANGED — Level prices were shown or hidden
SHOW_LEVEL_PERCENTS_CHANGED — Level percents were shown or hidden
LEVEL_TEXT_HOR_POSITION_CHANGED — Level text horizontal position was changed
LEVEL_TEXT_VER_POSITION_CHANGED — Level text vertical position was changed
LEVEL_LINES_EXTENSION_CHANGED — Level lines extension was enabled or disabled
REVERSE_CHANGED — Fibonacci drawing was reversed

PlotEvent - can be subscribed using plot object

DATA_SERIES_CHANGED — Data series has been changed

PANEL_CHANGED — Plot panel has been changed
THEME_CHANGED — Plot theme has been changed
STYLE_CHANGED — Plot style has been changed
SHOW_VALUE_MARKERS_CHANGED — Show value markers option has been enabled/disabled
VISIBLE_CHANGED — Plot visibility has been changed (visible/invisible)
VALUE_SCALE_CHANGED — Plot value scale has been changed
BASE_VALUE_CHANGED — Plot base value has been changed

Bar plot

COLUMN_WIDTH_RATIO_CHANGED — Plot column width ratio changed
MIN_WIDTH_CHANGED — Plot min width changed

Point plot

POINT_SIZE_CHANGED — Plot point size changed

12. How to switch to full window mode?

Call

```
gChart.toggleFullWindow();
```

13. Is it possible to hide the top toolbar? Or show chart as full window mode from the beginning without the top buttons?

Yes, you have to set showToolbar to false when you create a chart. Example:

```
gChart = $('#chartContainer').StockChartX({
    width: 800,
    height: 460,
    showToolbar: false,
    fullWindowMode: true
});
```

14. May I add new button in the toolbar?

Put button's HTML in the **/site/view/Toolbar.html**. Example:

```
<div class="scxToolbar-btn scxToolbar-btn-myButton"
title="Delete Selected Drawing"></div>
```

Then in your chart wrapper function find your button using jQuery. Add onClick event handler which will do needed things. Note that toolbar's html is loaded asynchronously. That's why you have to subscribe `TOOLBAR_LOADED` event.

```
gChart.on(StockChartX.ChartEvent.TOOLBAR_LOADED,
function(event) {
        jQuery($('#chartContainer .scxToolbar-btn-
myButton')).on('click', function() {
            // do something
        });
    });
```

Note that `TOOLBAR_LOADED` event is fired once per page, when Toolbar.html file will be really loaded by browser. So if you have few charts on your page, you have to do workaround. You can check if toolbar's div exists in chart's container. However, if you are lucky, there is possible situation when you initialised few charts before Toolbar.html had been loaded. Then this event will be fired in all these charts.

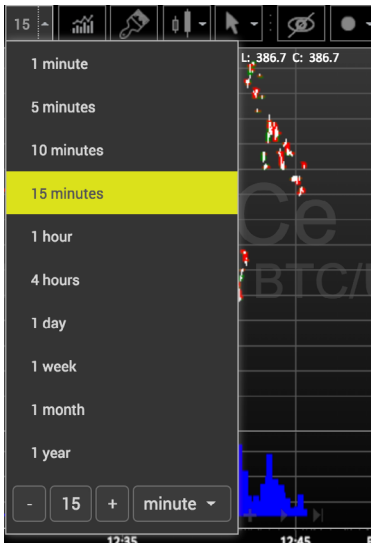
15. I'd like to cut "year" option from the custom time frames dropdown in the time frame picker. What should I do?

Open **/site/view/Toolbar.html** and comment out options you don't need. See example below.

```
</div>
<div class="scxTimeFramePicker-CustomValueWrapper">
    <button class="scxTimeFramePicker-CustomValueMinus btn btn-default">-</button>
    <input class="scxTimeFramePicker-CustomValueText form-control" value="" type="text">
    <button class="scxTimeFramePicker-CustomValuePlus btn btn-default">+</button>
    <select class="scxTimeFramePicker-CustomValueUnits">
        <option value="">minute</option>
        <option value="h">hour</option>
        <option value="d">day</option>
        <option value="w">week</option>
        <option value="m">month</option>
        <!--<option value="y">year</option>-->
    </select>
</div>
```

If you remove all `option` tags, the dropdown will be built depending on predefined values (see the previous paragraph).

16. How to customise the time frame picker?



Open file **/site/view/Toolbar.html**. Find there div with class `scxToolbarButton-dropdownWrapper` (approximately on line 12). It has many items inside like:

```
<div class="scxToolbarButton-dropdownElement" data-
scxvalue="15" data-scxunits="">
   <span class="scxToolbarButton-dropdownElement-
value">15</span>
   <span class="scxToolbarButton-dropdownElement-
units">minutes</span>
</div>
```

You can edit them as you want. It depends on the TimeFrame dropdown in UI.
List of possible `data-scxunits` (periodicity):

`SECOND` : “s”
`MINUTE` : “”
`HOUR` : “h”
`DAY` : “d”
`WEEK` : “w”
`MONTH` : “m”
`YEAR` : “y”

17. I would like to know how to add custom indicators to the chart.

See `MyIndicator` and `MyCustomMACD` in **/site/scripts/custom-indicator.js**.

18. How to display my custom indicator in the Indicators window?

See `registerCustomIndicators` function in **/site/scripts/custom-indicator.js**.

19. Is it possible to add/modify font type, size, etc.?

You can change fonts and sizes of HTML elements in the StockChartX.min.css and StockChartX.UI.min.css.

20. How can I change chart panel’s grid color, chart’s background color, etc.? How to define themes? I would like to load a theme similar to the “Light” theme at the startup of the page I am working on.

Look into global object `StockChartX.Theme.Dark`. Duplicate it and rename as you want. Don't forget to set the same name in the name property of this just created object. Then you can play with colors and fonts by changing values in your own theme. Assign this theme to the chart when you are initialising it. Example:

```
var myTheme = $.extend(true, {}, StockChartX.Theme.Dark);
myTheme.name = 'Custom';
StockChartX.Theme.Custom = myTheme;

chartContainer.StockChartX({
    theme: StockChartX.Theme.Custom,
    timeInterval: ...,
    instrument: ...
});
```

21. How can I change fonts in the chart area?

Use theme to change fonts of the chart area. Example:

```
gChart.theme.valueScale.text.fontFamily = 'Arial';
gChart.theme.dateScale.text.fontFamily = 'Arial';
```

See `StockChartX.Theme.Dark` or `StockChartX.Theme.Light` object for all available properties.

22. How can I turn off the watermark?

Update css and set `hidden` visibility for the class `scxWatermark`.

23. How can I draw text on a chart?

```
gChart.mainPanel.addDrawings(new StockChartX.
TextDrawing({
    text: 'Some string',
    point: {date: …, value: …}
}));
```

24. How can I change watermark theme?

See

```
gChart.theme.chart.instrumentWatermark.symbol
gChart.theme.chart.instrumentWatermark.details
```

E.g. to change symbol color

```
gChart.theme.chart.instrumentWatermark.symbol.fillColor =
'red';
```

25. I change line type for indicators or drawings, but it doesn't take into effect in IE 10.

Canvas in IE supports different line types only starting from version 11.