User Guide

SYMPHONY

+ Chart IQ

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Symphony is the new financial community for users to discuss, analyze, collaborate, and transact trade data via chat messaging. Symphony transforms an individual workflow via messaging windows that can be arranged into a flexible, modular workspace. The ChartIQ app – available in the Symphony app marketplace - adds comprehensive, visual charting that can be shared instantly across Symphony's secure messaging software. ChartIQ enhances the Symphony marketplace with one of the industry's most trusted, visually and technically advanced charting solution for traders.

The Symphony ChartIQ App is a powerful, shareable, and 100% customizable technical chart. Users have access to multiple chart types for variation of views, hundreds of studies, drawing tools, callouts, and more. Institutions can choose to have the app ready to go with data out-of-the-box or choose to connect their own preferred data source.

Traders can choose from 13 chart types (candle, bar, mountain, line, etc.), 23 drawing tools, and over 100 technical indicators and studies. Charts are easily accessible through $cashtags in Symphony chats. Fully interactive charts can be shared with others in the Symphony community, complete with analysis and annotations. View, analyze, and share beautiful, interactive charts with the buy side and sell side for accelerated secure communication and trades.

Have Symphony but don't have ChartIQ? Learn how to activate the app in the marketplace here.

We are available if you have any questions or would like to schedule a demonstration of Symphony + ChartIQ. We're here to help – contact us anytime by email - Symphony@chartiq.com or call 800-821-8147.

Why add ChartIQ to Symphony?

ChartIQ's interactive charting solution was designed for ease-of-use. Our chart is built for the modern trader with the most advanced technology. You'll notice the difference immediately in our charts – our chart is interactive and can be panned and zoomed quickly so traders are immersed in visual data that is relevant to their decision making. Users can easily add content using chart studies, indicators and comparison symbols, flip between symbols, change chart type, range, interval, and more. We specialize in providing the very best charts to display capital market data – charts with precise functionality and beautiful data visualizations.

Getting Started

ChartIQ's HTML5 toolkit delivers a wide range of data visualizations and technical analysis with unparalleled performance. With over 110 technical indicators and patterns, multiple chart views, and a flexible backend, when risk is high – ChartIQ is the industry's vendor of choice.

Our charting solution intuitively puts macro, fundamental, social and proprietary data into visual context across all asset classes and significantly improves the end user experience and trade execution overall.

We built ChartIQ's interactive charting solution for ease-of-use and quick technical analysis. You'll notice the difference immediately in our charts – pan and zoom quickly and discover in-depth visualizations of capital market data. Easily add content using chart studies, indicators and comparison symbols and flip between assets, views, and chart types, as well as set range, intervals, and periodicity. You can also save your favorite views and studies within a chart and quickly return for reference. ChartIQ's advanced Charting Library has the technical tools, studies and data visualizations to accomplish the most sophisticated charting and technical analysis for any trader.

DATA

ChartIQ is data agnostic. Users connect the data feed of their choice – contact us for more info. An off-the-shelf product is included for free and comes with built in market data from Xignite.

Getting to Know our Workspace

The ChartIQ app consists of an advanced technical chart, a watch list, and a financial statement. Launching the ChartIQ app from your Symphony Marketplace will create an instance of the advanced chart. From there, users can build and customize their workspace using the Navigation Menu.

NAVIGATION MENU

The Navigation Menu is consistent across all ChartIQ elements. It can be used to add new windows or to group windows together.

New Chart: Launch a chart window

Watch List: Launch a configurable Watch List window

Financials: Launch a financial statement window

Groups: Assigns a window to a group. Windows in the same group will become associated by symbol; for instance, selecting a symbol in a watch list will automatically instruct a grouped chart to display price action for that same symbol.

Default Components: The Chart, The Watch List, and The Financial Statement

The Chart, Watch List, and Financial Statement included with our free app will be familiar to most traders and compose some of the most essential elements of a terminal-like interface. They are powered by free Xignite data by default. Below is a brief overview of their features.

> **Important Note: Free data and turnkey tools are not sufficient for all financial professionals. Most capital markets firms already have advanced/proprietary data streams, unique algorithms, and/or intelligent workflows at their disposal. ChartIQ is designed to integrate seamlessly with those systems.
> Contact symphony@chartiq.com for more details.

THE CHART

The chart's navigational features have been carefully designed by ChartIQ to be intuitive, yet flexible. Performance, accuracy, and responsiveness combine to give the charts a "tactile" sensation. A detailed description of advanced chart types, studies, and drawing tools are in the next section. First, we'll focus on charting elements that are unique to the Symphony + ChartIQ experience.

TOOLBAR NAVIGATION

Symbol Look up

Periodicity

Chart Views & Preferences

Studies

Crosshair

Callouts

Drawings

Select Tool *[None, Clear Drawings, Measure]*

Choose Drawing Tools

Trade from the Chart
(Not in Symphony)

Panning

Zooming

Tool selection

Bottom Navigation

BOTTOM NAVIGATION

Share Chart: One of the most powerful functions of our tools is the ability to share to your analysis across your financial network immediately. Share fully interactive charts with other users or broadcast across entire channels.

Periodicity change:

The Watch List: The watch list offers users a simple way to monitor price movement for multiple symbols simultaneously. When a Watch List is grouped with other windows, it provides a one-click method of drastically changing the workspace. Symbols can be grouped together in customized lists (e.g. Forex, Metals), and persist between sessions.

THE FINANCIAL STATEMENT

The financials consist of detailed income statements, balance sheets, and cash flow information. Both annualized and quarterly financials are available. Financials can be grouped alongside charts and watch lists for ease of access.

MULTIPLE CHART VIEW NAVIGATION

Save Multiple Views

Chart Style & Preferences

Studies

Fundamentals

Menu Expansion
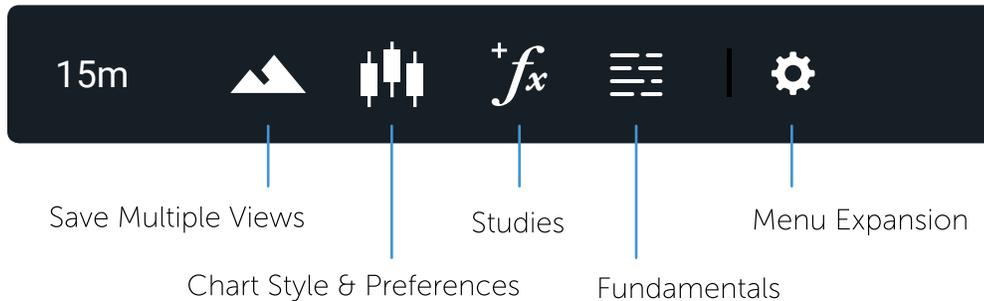
SYMBOL LOOK UP / SEARCH BAR

Quickly find preferred stocks by typing first letters of stock within the search bar. This search bar will autocomplete your symbol lookup and find your stock. Outside of the search bar, type anywhere in the chart and autocomplete symbol lookup will be activated.

PERIODICITY

Select your preferred periodicity from the dropdown menu. The chart natively supports minute, daily, weekly and monthly periods and custom periodicities may be added.

VIEWS

Save multiple chart views. Select your favorite indicators and chart views and save for quick access to your preferred studies.

CHART STYLES & TYPES

ChartIQ supports various chart styles and types. We use the term "styles" to describe the various ways that a chart can visually represent data. Examples include "candle", "line" and "mountain". We use the term "types" to describe charts that display data that has been modified through aggregation or recalculation. Examples include "Heikin Ashi", "Kagi" and "Point & Figure". In some cases, a chart "type" implies a chart "style". For instance, a Point & Figure chart aggregates data and also requires a specific display style.

You can switch between chart styles and types without disturbing chart state. For instance, drawings and studies are maintained and can be saved as you cycle through chart types.

CHART STYLES

Candle	Hollow Candle
Bar	Mountain
Colored Bar	Baseline
Line	

CHART TYPES

Heikin Ashi	Renko
Kagi	Range Bars
Line Break	Point and figure

CANDLE

Like bar charts, candle charts represent OHLC except in the form of colored rectangles called 'candles'. When the open is lower than the close, the candle is shaded green. When the open is higher than the close, the candle is shaded red. If the open and close are the same, a thin horizontal line segment is drawn at that price (this type of candle is called a 'doji'). Each candle has a 'wick' that extends beyond the candle to indicate the high and low, respectively.

BAR

Bar charts consist of vertical lines sandwiched between two 'shelves'. One "bar" is created for each interval (period) on the chart. Each bar represents the OHLC (Open, High, Low, Close) for the period. The top and bottom of the vertical line represent the high and low for the period. The left shelf is the opening price while the right shelf is the closing price. The bars are a single color.

COLORED BAR

A colored bar chart draws a bar chart with the bars colored to indicate price action. The algorithm is the same as colored line (see below).

LINE

A line chart consists of segments that connect at the "Close" price for each time period. The line is a single color. Any value in your data that has a null value for Close will result in a gap within the line.

COLORED LINE

A "colored line" is a line chart with segments of various colors. Each color indicates a price action. If the close for a period is higher than that of the previous close, the line between the periods is shaded green. If the close is lower than the previous close, the line between the periods is shaded red. If the close was equal to the previous close, the line between the periods is shaded gray.

HOLLOW CANDLE

Hollow candle charts are a special type of candle chart that displays additional information and changes the meaning of the colors. In a hollow candle chart, a green candle occurs when the closing price is higher than the prior bar's closing price. It is red when the closing price is lower than the prior bar's closing price.

Price action within the candle is indicated by whether the candle is hollow or filled. When the candle is hollow, it means that the close was higher than the open (upward price action). When the candle is filled, it means that the close was lower than the open (downward price action). If the close is the same as the open, only a gray horizontal line is drawn.

VOLUME CANDLE

A volume candle chart is a hollow candle chart where the width of a candle varies to indicate volume. Each candle's shading and fill follow the same conventions as those in hollow candle charts. Wide candles indicate high volume, while narrow candles indicate low volume.

MOUNTAIN

Mountain charts (sometimes called area charts) are line charts with a shaded section that extends to the bottom of the chart. The result is a chart which looks like a mountain.

BASELINE DELTA

A baseline delta chart draws a line chart that oscillates across a dotted baseline. The area above the baseline is shaded green, and the area below the baseline is shaded red. The baseline initializes to the left most closing value on the chart but can be adjusted by dragging the handle located on the right side of the chart. This chart style is meant to highlight the positive and negative distance from the set baseline. It is typically used for "intraday" charts where the left side (baseline) is set to the opening of the market day.

SCATTERPLOT

Scatterplot draws a single 'dot' at every close and does not connect them.

CHART TYPES

Chart "types" offer alternative ways of viewing Open High Low Close data. Each chart type will either aggregate data or apply a formula that transforms the data. Some of these charts are "time-independent", meaning that a single bar may encompass multiple bars of price movement, resulting in an x-axis that is not linear!

HEIKIN-ASHI

Heikin-Ashi charts are time series charts that resemble candle charts. In a normal candle chart, each candle is calculated independent of the other candles. However, in Heikin-Ashi charts, the candles appear to link together because of how they are calculated. The candles are calculated as such:

Open = the mean of the previous open and the previous close
Close = the mean of the current open, close, high, and low
High = the maximum of the current high, open and close
Low = the minimum of the current low, open and close

Upward trends are indicated by green candles with wicks on top, but almost no wick on bottom. Downward trends are indicated by red candles with wicks on the bottom and almost no wick on top. Reversal points are indicated by candles, red or green, with small bodies and wicks on top and bottom. This chart type is useful in spotting trends more clearly and easily than regular candle charts.

KAGI

Kagi charts appear as vertical bars connected by small horizontal segments at right angles. These charts are independent of time and progress forward based on price action. Thick green bars, called 'Yang' bars, indicate that a price has broken-out above the previous high price. Thin red bars, called 'Yin' bars, indicate that the price has fallen below the previous low. Unlike the other chart types, the colors of kagi lines do not directly communicate upward or downward trends.

Bars move upward or downward depending on closing prices. A bar will shift direction when a reversal limit is reached. Reversal limits are input by the user as a fixed percentage of the price. For example, imagine you have a stock valued at 10 dollars and you are drawing a kagi chart with a reversal of 10%. Depending on what trend was currently established, a cumulative 1 dollar movement in the opposite direction will break the current trend and cause a reversal.

Pressing the Auto Select button will set the reversal limit to one of two defaults. If the chart is daily, a reversal of 4% is set. If the chart is intraday, a reversal of 0.4% is set.

LINE BREAK

Line break charts appear as vertical bars that ascend and descend. These charts are independent of time and are determined only by price action. Ascending bars are colored green and indicate upward price action. Descending bars are colored red, and indicate downward price action.

Line break charts are constructed by looking at the close of a bar and comparing it to a previous bar's close (which bar to compare is determined by the user, see below). If the current bar's close is higher than the one it is being compared to, a green ascending bar is drawn. If the current bar's close is lower than the one that it is being compared to, a red descending bar is drawn. If the current close is the same, or if the price does not move enough in one direction or the other to signify a reversal, then no bar is drawn.

Line break charts default a value of 3, meaning it compares the current bar's close to the bar that came 2 periods earlier.

STUDIES

Technical indicators (studies) come in two varieties: panel and overlay. Panel studies appear stacked in windows below (or above) the chart. When multiple panel studies are active, they can be repositioned by pressing the "up" or "down" icons. They can be expanded by pressing the full screen ("solo") icon. Pressing the "solo" icon on the chart panel will hide all other panels. Study settings for panel studies can be modified by pressing the "gear" icon. Press the "X" icon on a panel to remove it and destroy its underlying study.

The size of panels can be changed by dragging the horizontal borders. It is possible to annotate and create drawings on panels.

Overlays (and underlays) are studies that are superimposed over the chart itself. Hovering over the line or shapes that make up a study will highlight that study. Right click a highlighted overlay to get a context menu that allows editing and deleting. On touch devices, highlight the study by tapping it, then tap the trash can icon to delete or the cog icon to edit.
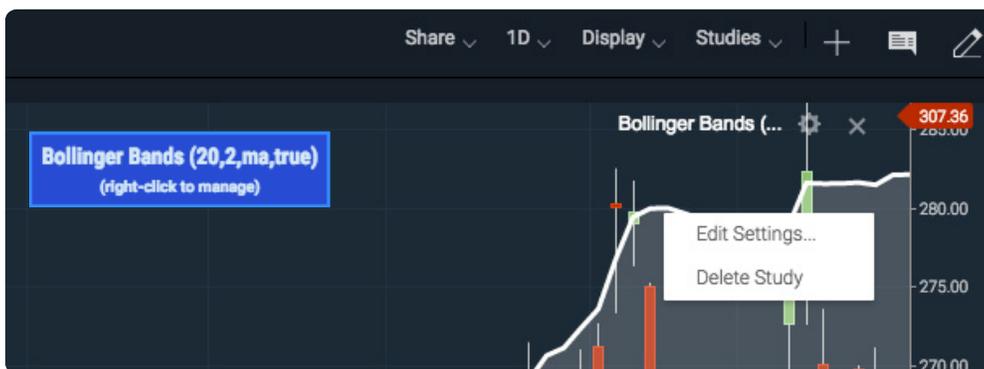
CROSSHAIR & HEADS-UP DISPLAY (HUD)

To access the crosshair function, click on the plus sign and hover over data points of interest for details. A heads-up display (HUD) is a method of displaying detailed information for a specific bar on the chart itself. The information for the bar that the mouse is currently hovering over is presented in the HUD.

The crosshair HUD appears when the crosshairs are enabled. This HUD is a transparent rectangle that follows the mouse. It displays the highlighted bar's date/time, close, open, high, low, and volume. If a study is enabled, information pertaining to the study will also be displayed in this HUD.

DRAWING

Drawing mode is activated by selecting a tool from the drawing toolbar. Once drawing mode is activated, the crosshairs will automatically be displayed

By default, drawing mode remains in effect until you "unselect" drawing mode by choosing "none" tool or by closing the drawing toolbar.

Drawings retain their shape and scale across different periodicities. Clicking and dragging the body of a drawing will move it to another location. Hovering over a drawing, or tapping a drawing, will reveal its endpoints. The endpoints can be dragged to change the drawing's shape. To delete a drawing, hover to highlighted and right click. On touch devices, tap the drawing to highlight and then tap "the trash" can icon.

> Note: On touch devices, your crosshair will be positioned slightly up and to the left of the finger. This is important because it allows you to see what you are highlighting.

DRAWING TOOLS

Measure	Fibonacci Fan	Rectangle	Speed Resistance Arc
Annotation	Fibonacci Time Zone	Regression Line	Speed Resistance Line
Callout	Gann Fan	Segment	Time Cycle
Channel	Gartley	Shapes	Tirone Levels
Continuous	Horizontal	Arrow	Vertica
Crossline	Line	Check	
Doodle	Pitchfork	Cross	
Ellipse	Quadrant Lines	Focus	
Fibonacci	Ray	Heart	
Fibonacci Arc		Star	

PANNING

In general, navigation of the chart is similar to the navigation of Google maps. A chart is panned (scrolled) by "dragging" the chart. On desktop devices grab the chart with the mouse and drag it left, right, up, or down. On a touch device, a single finger touch will move the chart from side-to-side or up and down.

On laptop touchpads, a two-finger horizontal stroke will pan the chart left or right. On all devices, a "swipe" action will rapidly scroll the chart in the swipe direction, slowing with an easing animation.

When a chart is panned so that the most recent bar is hidden, a "home" icon appears on the screen. Pressing this icon will animate the chart back to the home position.

> Note: On touch devices, when the crosshair is enabled, two fingers can be used to pan the chart.

ZOOMING

The mouse or touchpad is the primary interface for zooming a chart. A two finger up/down stroke on a laptop touchpad will zoom the chart. Likewise, mouse movement allows rapid zooming. On touch devices zooming is done by pinching the screen.

Zooming either the x or y axis can be accomplished by grabbing either axis with the mouse and moving to the desired zoom level.

FUNDAMENTALS

Overlay relevant fundamental data directly on the chart. The free app contains 5 years of data for a variety of revenue and income data for applicable symbols. The premium version is able to display virtually anything that can be tied to a time, date, and/or symbol; examples include proprietary data sets, third-party projections, or news videos.

Top 10 Indicators / Studies

1. Moving Average

Moving averages are used to smooth out market volatility and identify changes in trend.

Indicator Type - Trend follower

Markets - All cash and futures, not options

Works Best - Trending markets

FORMULA

Moving averages can be calculated from open, high, low, close or some combination of these data. Simple averages are means of the data. Other averages assign higher significance to recent data than to older data.

You also have a choice of several average types as follows:

Simple: mean (average) of the data.

Exponential: newer data are weighted more heavily geometrically.

Time Series: Calculates a linear regression trend line using the "least squares fit" method.

Triangular: Weighted average where the middle data are given the most weight, decreasing linearly to the end points.

Variable: An exponential moving average with a volatility index factored into the smoothing formula. The Variable Moving average uses the Chande Momentum Oscillator as the volatility index.

VIDYA: An exponential moving average with a volatility index factored into the smoothing formula. The VIDYA moving average uses the Standard Deviation as the volatility index. (Volatility Index Dynamic Average)

Weighted: newer data are weighted more heavily arithmetically.

Welles Wilder: The standard exponential moving average formula converts the time period to a fraction using the formula EMA% = 2/(n + 1) where n is the number of days.
For example, the EMA% for 14 days is 2/(14 days +1) = 13.3%. Wilder, however, uses an EMA% of 1/14 (1/n) which equals 7.1%. This equates to a 27-day exponential moving average using the standard formula.

THEORY

The direction of the moving average (higher, lower or flat) indicates the trend of the market and its slope indicates the strength of the trend. Longer averages are used to identify longer-term trends and shorter averages are used to identify shorter-term trends. Many trading systems utilize moving averages as independent variables and market analysts frequently use moving averages to confirm technical breakouts.

2. Bollinger Bands

Bollinger bands are used to find market turning points, potential trading range breakouts, and trend exhaustion.

Indicator Type - Moving average envelope

Markets - All cash and futures, not options

Works Best - All market types and time frames although daily is the most popular

Formula - The bands form an envelope drawn a number of standard deviations above and below a moving average.

THEORY

The theory behind the bands is that the width of an envelope should be determined by the data-series itself rather than by the assumptions of the speculator, as done with percent envelopes. In this way, the envelope's distance from the mean is a function of the market's volatility.

3. Moving Average Convergence-Divergence (MACD)

MACD is used to identify overbought and oversold conditions.

Indicator Type - Momentum oscillator

Markets - All cash and futures, not options

Works Best - Wide-swinging trading ranges and at the conclusion of strong trends.

FORMULA

The Moving Average Convergence-Divergence (MACD) indicator makes use of three moving averages, usually of the exponential variety. Two are averages of price and the third is an average of the difference of the other two.

The MACD line is generated from the first two averages, subtracting the longer from the shorter. The Signal Line is simply a moving average of the MACD line.

THEORY

In an upward and smoothly trending market, a longer average will be increasing. A short average, being more sensitive to normal price fluctuations within the trend, will show more changes in direction. If the two averages are plotted together, the shorter average will oscillate around the longer average. A strong near-term rally will cause the difference between the two moving averages to increase until an extreme value is reached. This signals an overbought condition. Conversely, in a down market, spreads will become negative until an extreme is reached indicating an oversold condition.

4. Relative Strength Index (RSI)

RSI is used to measure underlying strength of a market move.

Indicator Type - Momentum oscillator

Markets - All cash and futures, not options

Works Best - Trending markets, all time frames

FORMULA

The RSI looks at a ratio of average size of the up-closes over the past "n" periods and compares to the average size of the down-closes. The result is indexed between 0 and 100.

RSI values are smoothed exponentially using the same "n" period parameter.

THEORY

Prices are generally considered to be elastic in that they can move only so far from a mean price before reacting or retracing. The slope and values of

the RSI are directly proportional to the velocity and magnitude of the price move and are extremely helpful in identifying overbought and oversold situations. The number of periods (days, hours, 5-minutes) was originally based on half of a normal cycle. For example, Welles Wilder originally presumed Gold to have a 28-day cycle so a 14-day RSI was used. This has been replaced by the speed of the market. Faster markets use smaller (more sensitive) parameters.

5. Volume

Volume is used to quantify trading activity each period in a market, market sector, or individual instrument. It can be added as an underlay on the chart or in a separate window.

Indicator Type - Activity indicator

Markets - All cash, futures and options although futures and forex may substitute end of day summaries and trade count data.

Works Best - All markets and all time frames.

THEORY

Volume is simply the number of shares, contracts, or units changing hands in a given period (day, week, hour). It is reported in real-time (or delayed) with each trade. Markets that do not have trade-by-trade reported volume substitute daily summary data or trade count data. Trending markets should be accompanied by rising volume. Exhausted markets are usually accompanied by falling volume or unusually high volume spikes.

6. Stochastics

Stochastics is used to identify market strength, overbought/oversold.

Indicator Type - Momentum oscillator

Markets - All cash and futures, not options

Works Best - Flat markets or trading ranges

FORMULA

The calculation (fast) tells us where price is in its recent range. It is then smoothed with a 3-period moving average (slow) leaving both lines on the chart.

Most traders smooth the smoothed line again to create a slower version of the indicators.

THEORY

A stochastic is the measurement of the placement of a current price within a recent trading range.   The theory is that as prices rise, daily (or hourly, minute, etc.) closes tend to occur closer to the high end of their recent range. When prices trend higher or are flat and daily closes begin to sag within the range, it signals internal market weakness.

7. Average Directional Index and Directional Movement System (ADX/DMS)

ADX/DMS is used to identify the direction and strength of a trend.

Indicator Type - Trend finder

Markets - All cash and futures, not options

Works Best - All markets and time frames although this study can excel in determining if a visually flat market is starting to develop a trend.

FORMULA

Directional Movement (DM) is defined as the largest part of the current period's price range that lies outside the previous period's price range. Each period will either be positive (larger range above previous range), negative (larger range below previous range) or zero if moves above and below the previous period's range are the same or price stay within the previous day's range.

The value of the Plus Directional Indicator (+DI) is the DM, if above the previous range) divided by the average true range. The value of the Minus Directional Indicator (-DI) is the DM (if below the previous range) divided by the average true range. Each period with have only one result, either plus, minus or zero. Calculate the Average Directional Index by taking a simple moving average of the past +DI and -DI values. ChartIQ defaults to 14 periods. You can also select colors for the ADX, +DI and −DI lines by selecting the appropriate box to bring up a color palette. Green and red are often used for +DI and −DI, respectively.

THEORY

Most technical tools fall into one of two categories, oscillators and trend followers. RSI and Stochastics are examples of the former and moving averages and bands are examples of the latter. However, not all studies are effective in the different types of markets. Trend following studies often cause false signals, and hence losses, in flat or erratic markets. This study helps determine whether the market is in a trending mode and if so, how strong that trend is, so the proper technical tools can be applied. The study seeks to find if the item spent more time above or below its previous period's range. In this case, more time really means a bigger foray in one direction or the other. If moves higher start to accumulate even if closes are not really changing we get an idea that bulls are trying to move the item higher.

8. Aroon/Aroon Oscillator

Aroon/Aroon Oscillator is used to identify the strength of a trend and especially when a trend is beginning.

Indicator Type - Trend Finder

Markets - All cash and futures, not options

Works Best - All market types and time frames although daily is the most popular.

The Aroon indicators are shown in percentage terms and fluctuate between 0 and 100. Aroon Up is based on recent highs and Aroon Down is based on recent lows. The Aroon Oscillator is simply a plot of Aroon Up minus Aroon Down.

"Aroon" means "Dawn's Early Light" in Sanskrit, a name chosen for the indicator's ability to spot the beginning of a new trend, either higher or lower. Developed by Tushar Chande, both the Aroon Up and the Aroon Down fluctuate between zero and 100, with high Aroon Up values indicating a strong rising trend. High Aroon Down values indicate a strong falling trend. Zero indicates a no trend. The main assumption underlying this indicator is that a stock's price will close at relative highs in an uptrend, and relative lows in a downtrend. A 25-day Aroon Up measures the number of days since a 25-day high. A 25-day Aroon Down measures the number of days since a 25-day low. This means the indicator analyzes price relative to itself that than price relative to time, as many other indicators measure. It can spot emerging trends, identify consolidations, and anticipate reversals.

9. Average True Range (ATR)

ATR incorporates the change from the previous close into calculating the periods range (volatility).

Indicator Type - Volatility measure

Markets - All cash and futures

Works Best - All market types in daily and weekly time frames, although it can be used intraday, as well.

The True Range is the largest of (high – previous close), (previous close – low) or (high – low).

Although it can be used alone to help determine a market's volatility, ATR is usually used as a qualifier in other indicators by, for example, adapting their parameters to a stock's volatility. A stock experiencing a high level of volatility will have a higher ATR, and a low volatility stock will have a lower ATR. In any time period, the range is often used as a measure of volatility. However, if the range occurred at a significantly different level than the prior range the jump up or down would not be factored in using simple range formulas. Intraday time frames do not see the jumping or gapping action as daily or weekly time frames so ATR would be less important there.

10. Supertrend

Supertrend is used to time buys and sells based on changes in the trend

Indicator Type - Trend following indicator

Markets - All cash and futures, not options. Most popular in forex

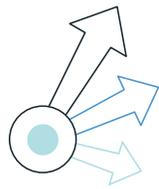**Works Best** - Trending markets

FORMULA

The upper band is the average price plus the volatility-based multiplier (usually average true range (ATR)). The lower band is the average price minus the volatility-based multiplier. Only one band is drawn for any period and it switches when price crosses it similar to the parabolic stop-and-reverse. Similar to any trailing stop, the upper band can never move higher once established and the lower band can never move lower once established. Each is continued at the same price level as the previous period. Arrows are drawn pointing to the close of the bar when direction changes.
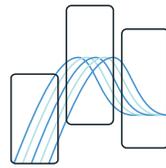
THEORY

The supertrend indicator measures trend direction but not strength. It gives buy or sell signals when price crosses the indicator. In a sense, it is similar to a moving average and trailing stop hybrid. Since the indicator flips sides from above to below price action and back it adds an element of the parabolics stop-and-reverse for actually making the trade. Because it measures trend, it is not useful during flat or choppy markets.
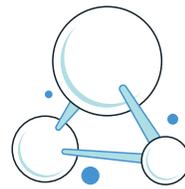
Don't have Chart|**IQ** yet? Contact us at **symphony@chartiq.com**.

IDENTIFY   **ANALYZE**   **SHARE**

SYMPHONY

+ Chart|IQ