



# **Studies Catalog**

# AVERAGES

Average Study MACD Study

## **CLASSIC**

Consecutives Closes Cooper study Di\_Napoli\_Trend Island Pattern Pivot Show RSI Study TRIX Study

## **TRENDFOLLOWING**

8020 Study Heikin Ashi Study Heikin Ashi Candlestick Key Reversal Shark32 Study

## **VOLATILITY**

IDNR4 Study Outside Bar-Close Thurstdays Study Trend Line Down Study Trend Line Up Study TTF Study

## **VOLUME**

Cumulative Volume Study



# Average Study

#### **Introduction**

The aim of this study it to distinguish the bars of a chart according to the position of their close in relation to two moving averages. The type of average can be chosen when inserting the study in the chart.

The bars with a close lower than the two moving averages will be painted in **red**, the ones with a close superior to the two moving averages in **blue** and finally the bars closing in between the two moving averages will be painted in **green**.

#### **Parameters**

**DataSource:** Data source to apply the study. **Average1:** Enables to select the period and the type of the first average. **Average2:** Enables to select the period and the type of the second average

#### **Chart example**



# **Macd Study**

#### **Introduction**

This studie tries to identify and appoint the médium/long term trend in order to find goog trades occasions in the shorter term.

The slope is defined by 2 bars (see first screenshot) providing buy trading signals when it is positive sell trading signals when negative.



The best trading signals occur when the MACD uprosses or downcrosses the 0 line. However, it is advisable to trade only in the direction of the main trend.

This study can be used individually or as a complement to other type of strategies.

#### **Parameters**

DataSource: Data source used to calculate the study.
PeriodMe\_1: Period applied to the first exponential moving average.
PeriodMe\_2: Period applied to the second exponential moving average.
PeriodME\_SIG: Period applied to the signal.
PriceSource: Field of the data series used for the calculation of the averages.
BandValue: Band draw for better representation of the study.
Thickness: Defines the width of the bar.

#### Chart example





This study must be inserted in a new window.

# CLASSIC

# Consecutives Closes

### **Introduction**

This study paints the bars with a closing price superior to the previous bar close in blue, and the bars in the opposite situation, in red.

While new consecutive bars are form and they match the previous characteristics, the width they are painted with increases (see screenshot).

#### **Parameters**

**DataSource:** Data source used to run the calculation.

#### Chart example



# Cooper Study

## **Introduction**

This study used the ADX, DIPositive and DINegative indicators.

These are the conditions to be fulfilled in order to paint a bar in **blue**:

- 1. The **ADX** must be above its band.
- 2. **DIPositive** must be higher than **DINegative**.
- 3. Three consecutive lows must occur.
- 4. Or two consecutive lows and an inside bar.
- 5. Or an inside bar and two consecutive lows.

Points 1 and 2 must be fulfilled mandatorily and at least one of the other points must also be fulfilled. In the following image we can see how point number for is fulfilled, 2 consecuve lows followed up by an inside bar.





These are the conditions to be fulfilled in order to paint a bar in red:

- 1. The **ADX** must be above its band.
- 2. **DIPositive** must be lower than **DINegative**.
- 3. Three consecutive high must occur.
- 4. Or formation of two consecutive high and an inside bar.
- 5. Or formation of an insde bar and two consecutive high.

Points 1 and 2 must be fulfilled mandatorily and at least one of the other points must also be fulfilled.

#### **Parameters**

**DataSource.** Data source used to calculate the study. **Period.** Period used for the calculation of the ADX. **AdxBandValue.** Band value.



# Di\_Napoli\_Trend

#### **Introduction**

This study paints in blue the bars with a close superior to the previous bar's close and in red the bars in the opposite situation.

While new consecutive bars matching these criteria appear the width with which they are painted increase (see image bellow).

The DMA must be included and compile in the indicator's catalog to be able to use this study.

#### **Parameters**

**DataSource.** Data source to run the study.







#### **Introduction**

This study draws **red circles** in the high or **blue** circles in the lows of the bars matching one of the following conditions:

#### Bullish island:

- 1. The high of the current bar must be lower than the low of the previous bar.
- 2. The close of the current bar must be above a certain percentage of the bar range. See first screenshot.

#### Bearish island:

- > The low of the current bar must be higher than the high of the previous bar.
- > The close of the current bar must be a bellow a certain percentage of the bar range. See second screenshot.

#### **Parameters**

**DataSource:** Data source used for the study calculation. **Tickness**: Definenes the width of the point. **Percentage**. Percentage applied to the range of the bar to verify the situation of the close.



# Pattern

#### **Introduction**

Next we describe a series of patterns represented in candlestick and bars that can help you while looking for continuation patterns, return patterns etc.

**Doji:** The Doji is the same pattern in both kind of representation. The asset opena at a certain prices and after moving in range for a certain time it closes at the opening price. Consequently this behavior denotes hesitation among the investors and a possible bullish or bearish breakout depending on the existing trend..

**Piercing line:** This is a bullish return pattern. The second bar opens bellow the low of the previous bar but closes above the medimum point of the range high/Low of the previous bar.

**Dark Cloud Cover:** This is the homologous pattern of the piercing line. The current bar opens above the high of the previous bar but closes bellow the middle point of the ranga Open/Close of the previous bar.

**Bullish Engulfing Pattern:** This is a very strong bullish pattern and in many of the cases do not need confirmation. It is an outside bar where the negotiation range exceeds the range of the previous bar's one. This figure preceded by a strong bearish trend forecasts a possible change in the market direction.

**Bearish Engulfing Pattern:** Patter opposite to the previous one.

#### **Parameters**

**DataSource:** Data source used to calculate the study. **Tickness:** Defines the width of the bar.



# Pivot Show

#### **Introduction**

We define as <u>Pivot Up</u> the bar with a high superior to the higher price of a certain number of previous and subsequent bars (see first image). Likewise a <u>Pivot Down</u> is the bar where the low is lower than the low of previous and subsequent bars (see second image).

#### **Parameters**

**DataSource:** Data source used to calculate the study.

**LateralBars**. Number of bars on the right and on the left of the pivot bar necessary to confirm the pivot.



# **RSI Study**

## **Introduction**

This study represents the bars of a certain estudy according to the value of the **RSI** in the same bar:

- $\checkmark$  If the value of the RSI is in between the upper and lower band the bar will be painted in red.
- $\checkmark$  If the RSI is above the upper band, the bar will be painted in **blue**.
- $\checkmark$  If the RSI is bellow the lower band, the bar will be painted in red.

#### **Parameters**

**DataSource.** Data source used to paint the study. **Period:** Period used for the balculation of the **RSI. UpperBand**: Value of the RSI upper band. **LowerBand:** Value of the RSI lower band.



# TRIX Study

## **Introduction**

Based on the indicator with the same name the **Trix** study is in charge of painting the bars where the oscillator is above its band.

The **Trix** is technically a momentum indicator and thus measures the percentage rate of change of a certain asset by using an exponential moving average applied to the close.

The following conditions could be taken into account to generate buy/sell signals:

- 1. Place the orders when the indicator changes its direction, in fact, buy when the indicator is bullish and sell when it is bearish.
- 2. Use a moving average applied to the **Trix** to generate a signal line (similar to the MACD). In this case buy when the indicator upcrosses this line and sell when it downcrosses it.
- 3. Divergencies between the price of the asset and the **Trix** inidcator can help to idenfity return points.

#### **Parameters**

**DataSource:** Data source to run the study.

Thickness: Width used to represent the bar.

**Period\_1:** Number of bars to be considered for the calculation of the first exponential moving average applied to the closes.

**Period\_2:** Number of bars to be considered for the calculation of the second exponential moving average applied to the first EMA.

**Period\_3:** Number of bars to be considered for the calculation of the second exponential moving average applied to the second EMA.

**Period\_C:** Period used for the calculation of the percentage rate of change on the last EMA. **BandValue:** Band value.



# TRENDFOLLOWING

# 8020 Study

## **Introduction**

This study was created by Steve Moore, and is based on the following idea:

When a bar opens or closes a certain percentage above/bellow its range there is between 80 and 90 per cent of possibilities that the trend will continue in the following bar (in fact the real possibilities are 50 per cent).

If we take this idea as a base for our trading system, goog possibilities will occur when the close and the open are in the opposite extremes of the bar and both are comprised between the high and low of the bar in relation with the applied percentage.

This study idenfities and paints the bar where the previously mentioned conditions are fulfilled.

The bar where the open is aboe 80 % of the toal range of the bar and the close is bellow 20% of the same range will be painted in **red** while the bars where the opposite conditions are fulfilled will be painted in **blue**.

#### **Parameters**

**DataSource:** Data source to run the study.

**Percentage:** Percentage applied to the extremes of the bar (high-low) to be able to consider a bar as a 80/20 (0-50%).

Thickness: Width used to paint the bar.





### **Introduction**

This is a visual technique that erases the irregularite of the chart offering a better vision of the trends and consolidations. Only by looking the the chart after this method has been applied, we can obtain a good vision of the state of the market and its strenght. In the image bellow we can see the chart at the beginning and the chart after the technique has been applied.

#### **Parameters**

**DataSource:** Data source to calculate the study. **Width.** Width of the bar.



# Heikin Ashi Candlestick

## **Introduction**

This study calculates an average of the open of the current bar and the close of the previous bar and calculates the close by making an average of the value of the fields in the current bar. The high and low are calculated by comparing the high and low value (respectivelly) with the open and alcose already calculated by the study. The novelty introduced in this study is that it enables the representation in candlestics replacing the traditional representation in bars.

#### **Parameters**

**DataSource:** Data source to calculate the study.

**RBullish, GBullish, BBullish.** Amount of Red, Green and Blue the bar is going to be drawn with. The difference amount ascribed to the colors red, , green and blue will configure the color of the candlestick to be drawn.

**RBearish, GBearish, BBearish.** Amount of Red, Green and Blue the bar is going to be drawn with. The difference amount ascribed to the colors red, green and blue will configure the color of the candlestick to be drawn.



# Key Reversal Study

#### **Introduction**

The use of this study together with some indicators as the **OBV** (On Balance Volume) and other indicators taking the volumen into account in order to determine the bullish and bearish strenght will provide the user with a good market vision.

#### Bulllish key reversal:

- 1. The low of the current bar must be lower than the low of the previous bar.
- 2. The close of the current bar must be higher than the close of the previous bar (see first screenshot).

#### **Bearish key reversal:**

- 1. The high of the current bar must be higher than the high of the previous bar.
- 2. The close of the current bar must be lower than the close of the previous bar (see second screenshot).

#### **Parameters**

**DataSource:** Data source to calculate the study. **Tickness.** Width of the pointer.

#### **Chart example**



# Shark32 Study

#### **Introduction**

The pattern recognition is one of the most ancient forms of technical analysis. Next, we present a study consisting on the search of three consecutive bar ranges (high-low) smaller than the previous ones. In the first image bellow we can observer how the bars are matching the previously mentionned criterias and also the médium point of the last bar and the distance between the high and low of the study bar are calculated. According to the author the direction of the incoming price breakout would be easy to find. To do so, all we'd had to do is calculating the médium point of the last bar mathing the criteria and verify if this point is included in the range of the study bar + the variable *symmetry*.

## **Parameters**

DataSource: Sata source used to calculate the study.

Tickness. Width of the bar.

**Summetry.** Factor applied to the high and low of the bar to determine the propability of the direction of the breakout. This parameter is used in percentage so if we'd like to apply 2% we will use 0.02.



# VOLATILITY

# IDNR4 Study

## **Introduction**

This study is based on the search of 2 patterns called "Inside Day" and "Narrow Range 4", Their concepts are defined next:

**Inside Day:** This is a day where the high and low are included in the range high-low of the previous day.

**Narrow Range 4:** This is a day where the range is smalller than the range of the three previous day (so 4 days are considered for the calculation). To run this calculation we determine the range of the three bars preceeding the current one and we compare this range with the current bar's range. Consequently a day (or a bar) that is an Inside **Day Narrow Range 4 (IDNR4)** is a day matching the previousl described conditions.

#### **Parameters**

**DataSource:** Data source to calculate and apply the study. **nBars.** Number of bars used to verify if it is a **"Narrow Range 4".** 



# Outside Bar-Close

## **Introduction**

Numerous patterns can generate benefits if they are identified adequately and negotiated consistently. Unfortunatelly these pattern do not appear frequently this is the reason why some investors get anxious and od not wait for good opportunities before taking their positions.

Those who consider the pattern as a combination of consecutive "victories", can make good Money with this pattern. These are the conditions to be matched by a bar of this type:

- 1. The high is higher than the previous high.
- 2. The low is lower than the previous low.
- 3. The closing price is higher/lower thant the high/low of the pevious bar.

In the image bellow we can see a valid situation and also an invalid situation.

#### **Parameters**

**DataSource:** Data source to calculate the study. **Tickness:** Width of the bar.

#### Chart example



# Thurstdays Study

#### **Introduction**

We consider an **UpThrust** bar the one where the close is higher than the high of a certain number of previous bar specified in the parameter PreviousBars. (See first image) A **DownThrust** is the bar where the close is lower thna the low of a certain number of previous bars (PreviousBars). (see second image)

The meaning of ThrustBar is linked to the concept that the close is the most important price of the quote. For this sentence, we can deduce that a simple bar matching this condition is not interesting, however, a serties of <u>UpThrustBar</u>, not necessarily consecutive will invole a strong bullish trend and also a sries of DownThrustBar will involve a strong bearish trend. In a bullish market the number of <u>UpThrustBar</u> is superior to the number of <u>DownThrustBar</u>, and viceversa in a bearish market.

#### **Parameters**

**DataSource:** Data source used to calculate the study.

**PreviousBars:** Number of previous bars to compare the current close with in order to check if the conditions for **DownThrustBar** or **UpThrustBar** are fulfilled.

#### Chart example



# Trend Line Down Study

#### **Introduction**

A **TD down** is defined as the line uniting 2 pivots down. A pivot down must match the following conditions:

1.- The pivot must have a certain number of bars on the right and on the left to be considered as a pivot.

2.- Also the lower point of the pivot must be lower than the n previous Closes.

#### **Parameters**

**DataSource:** Data source used to calculate the study. **PreviousCloses:** Number of previous closes since the bar producing the pivot. **NBars**: Number of bar son teh right and on the left of the pivot to make it happen. **Tickness**: Maximum width of the bar.



# Trend Line Up Study

## **Introduction**

A **TD up** is defined as the line uniting 2 pivots down, a pivot down matches the following conditions:

1.- Ha de haber un número determinado de barras a la izquierda y derecha del pivot (Barras) para que sea considerado como tal.

2.- 1.- The pivot must have a certain number of bars on the right and on the left to be considered as a pivot.

2.- Also the higher point of the pivot must be higher lower than the n previous Closes.

#### **Parameters**

**DataSource:** Data source used to calculate the study.

**PreviousCloses:** Number of previous closes since the bar producing the pivot. **NBars**: Number of bar son teh right and on the left of the pivot to make it happen. **Tickness**: Maximum width of the bar.

#### Chart example



# **TTF Study**

#### **Introduction**

This study is base don the indicator TFF(Trend Tigger Factor). We must define the following concepts for the representation of the study:

**Buy Power.** This is the difference between the high of the 15 most recent periods and the low of the 15 periods preceeding them. In fact if today is day 1, and yesterday day 2, before yesterday 3, etc. The buying power will be the difference between the high of the periods from 1 to 15 minus the low of the periods from 16 to 30.

**Sell Power.** This is the difference between the low of the 15 most recent periods and the high of the 15 periods preceeding them. In fact if todays are day 1 and yesterday was day to etc.....

This is teh formula:

TTF = ((BuyPower -SellPower)/(0.5\*( BuyPower + SellPower)))\*100

Depending of the value of this variable the bars are drawn in different color:

If TFF > 100 the study paints the bar in **blue**. If TFF > -100 y < 100 the study paints the bar in **red**. If TFF < -100 the study paints the bar in **yellow**.

#### **Parameters**

**DataSource.** Data source to apply and calculate the study. **Length.** Number of bars to be considered for the calculation.

# VOLUME

# Cumulative Volume Study

## **Introduction**

This study paints the bars in different colors according to the trend of the indicator *Cumulative Volumen* over the latest three bars. If, over the latest three bars, its value has increased the current bar will be painted in green, if on the contrary the value of the indicator has decreased the current bar will be painted in red. If none of the previous situations is mathed the bar will be painted in yellow.

## **Parameters**

**DataSource.** Data source to calculate and apply the study.

