



S-Trader





SO | Stochastic Oscillator

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Description

Developed by George C. Lane in the late 1950s, the Stochastic Oscillator is a momentum indicator that shows the location of the close relative to the high-low range over a set number of periods. According to an interview with Lane, the Stochastic Oscillator “doesn't follow price, it doesn't follow volume or anything like that. It follows the speed or the momentum of price. As a rule, the momentum changes direction before price.” As such, bullish and bearish divergences in the Stochastic Oscillator can be used to foreshadow reversals. This was the first, and most important, signal that Lane identified. Lane also used this oscillator to identify bull and bear set-ups to anticipate a future reversal. Because the Stochastic Oscillator is range bound, is also useful for identifying overbought and oversold levels.

Formula

Step 1: Calculate $K = (\text{Current Close} - \text{Lowest Low } n \text{ Period}) / (\text{Highest High } n \text{ periods} - \text{Lowest low } n \text{ periods});$

Step 2: Calculate %K = a moving average of K for the selected %K Periods and the selected moving average type using existing formulas;

Step 3: Calculate %D = a moving average of %K for the selected %D Periods and the selected moving average type using existing formulas;

Parameters

| | |
|-------------------|-----------------------------------|
| K Periods | Any number of periods |
| %K Periods | Any number of periods |
| %D Periods | Any number of periods |
| MA Type | Any available moving average type |



Output value(s)

There are two output values resulting from the formula, the Stochastic Oscillator %K and Stochastic Oscillator %D.

Plot

The plot is in a separate panel at the bottom.

Quant Script™ Syntax

| | |
|-------------------|--|
| Short Form | <i>SOPK</i> (K Periods, %K Periods, %D periods, MA Type) |
| | <i>SOPD</i> (K Periods, %K Periods, %D periods, MA Type) |
| Long Form | <i>StochasticOscillatorPCTK</i> (K Periods, %K Periods, %D periods, MA Type) |
| | <i>StochasticMomentumIndexD</i> (K Periods, %K Periods, %D periods, MA Type) |



Dialogs

Chart Study Dialog

Stochastic Oscillator

Indicator Parameters

Symbol: USDCAD.FXCM

K Periods: 13

%K Periods: 8

%D Periods: 3

%K Slowing MA Type: Simple

Series Configuration

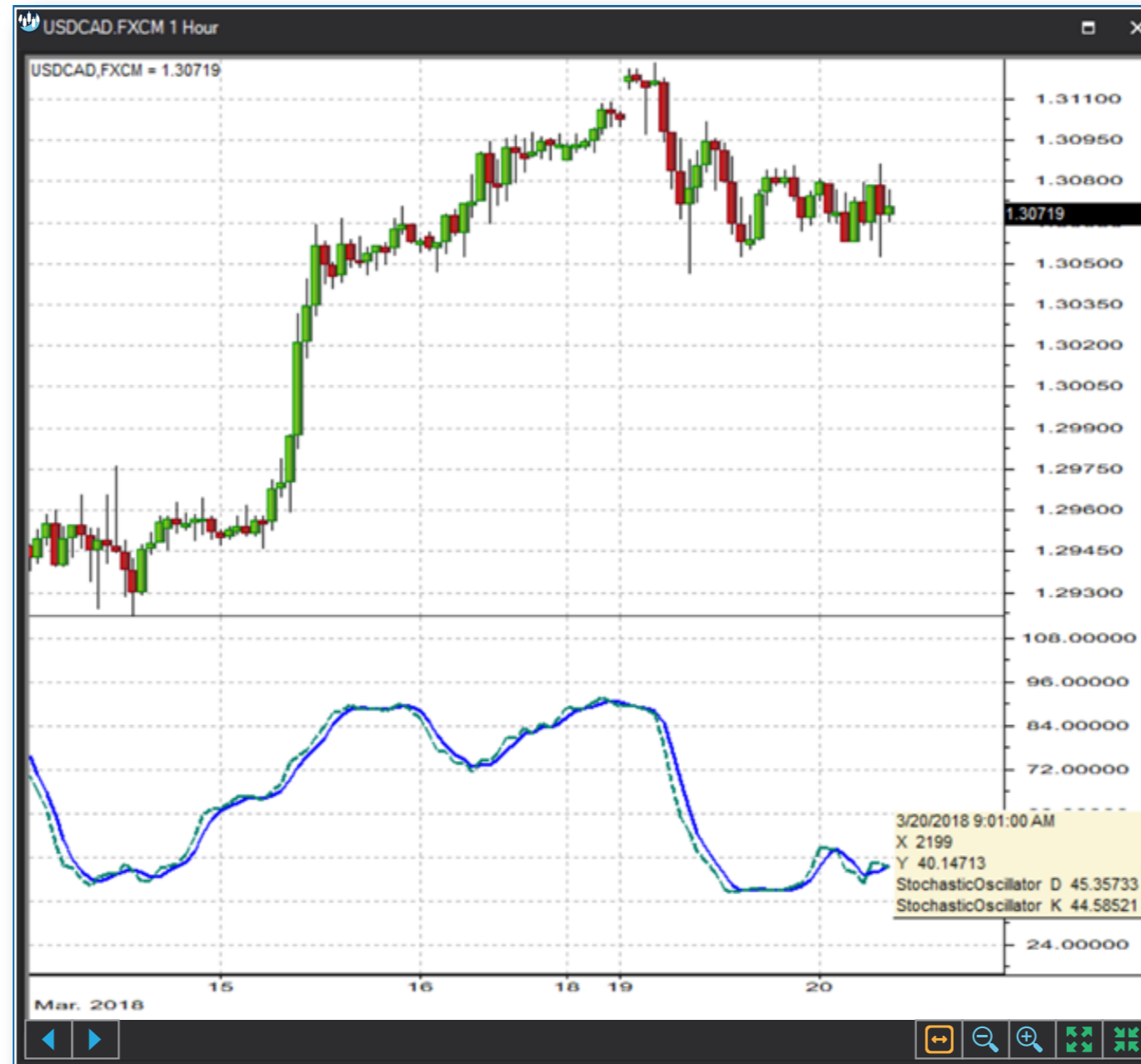
| Series | Type | Style | Width | Color | Background |
|--------|------|-------|-------|-------|------------|
| D | Line | Solid | 2 | Blue | White |
| K | Line | Dash | 2 | Green | White |

Save as Default Setting

Add Cancel



Sample Chart With Study





Quant Script™ Wizard Study Dialog

The image shows two overlapping dialog boxes in the S-Trader desktop platform. The 'Custom Study Wizard' dialog is on the left, and the 'Add Variable' dialog is on the right.

Custom Study Wizard

- Save To Group: Default
- Custom Study Name: [Empty text box]
- Password: [Empty text box]
- Result: Line, Solid, 2, [Color swatches]
- Reverse_Result: Line, Solid, 2, [Color swatches]
- Add To New Panel:
- Buttons: Add New Variable, Edit Selected Variable
- Table with columns: Name, Description
- Buttons: OK, Cancel

Add Variable

- Name: [Empty text box]
- Description: [Empty text box]
- Variable List: RainbowOscillator, RateOfChange, RBO, RelativeStrengthIndex, ROC, RSI, SMID, SMIK, SOPD, SOPDST, **SOPK**, SOPKST, StochasticMomentumIndexD, StochasticMomentumIndexK, StochasticOscillatorPCTD, StochasticOscillatorPCTDST, StochasticOscillatorPCTK, StochasticOscillatorPCTKST
- Parameters: K Periods (13), %K Periods (8), %D Periods (3), %K Slowing MA Type (Simple)
- Button: Create Script Line
- Preview: SOPK(13, 8, 3, Simple)
- Buttons: OK, Cancel



Quant Script™ Study Dialog

Custom Study Editor [Close]

Save To Group: 3_OSCILLATORS_PRICE [Dropdown] A 14.00 [Dropdown]

Custom Study Name: SOPK [Text]

Password: [Text]

Result: Line [Dropdown] Solid [Dropdown] 2 [Spinner] [Color Picker]

Reverse_Result: Line [Dropdown] Solid [Dropdown] 2 [Spinner] [Color Picker]

Formula [Add To New Panel

```
SET A1 = SOPK(13, 8, 3, SIMPLE)
SET B1 = SOPD(13, 8, 3, SIMPLE)

SET A2 = StochasticOscillatorPCTK(13, 8, 3, SIMPLE)
SET B2 = StochasticOscillatorPCTD(13, 8, 3, SIMPLE)
```

[OK] [Cancel]