



S-Trader





UO | Ultimate Oscillator

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Description

Developed by Larry Williams in 1976 and featured in the Stocks & Commodities Magazine in 1985, the Ultimate Oscillator is a momentum oscillator designed to capture momentum across three different timeframes. The multiple timeframe seeks to avoid the pitfalls of other oscillators. Many momentum oscillators surge at the beginning of a strong advance and then form a bearish divergence as the advance continues. This is because they are stuck with one timeframe. The Ultimate Oscillator attempts to correct this fault by incorporating longer timeframes into the basic formula. Williams identified a buy signal based on a bullish divergence and a sell signal based on a bearish divergence.

The difference between Ultimate Oscillator and Ultimate Oscillator ST indicators is that the first uses a summation function in the final calculation stage whereas the second uses smoothed values. Because of that the Ultimate Oscillator ST has one extra parameter – moving average type – than the Ultimate Oscillator.

Formula

Step 1: Calculate Buying Power = $BP = CLOSE - MIN(Low\ AND\ Prior\ Close)$;

Step 2: Calculate True Range = $TR = MAX(High\ AND\ Prior\ Close) - MIN(Low\ AND\ Prior\ Close)$;

Step 3: Calculate Cycle 1 = $Summation\ BP / Summation\ TR$ for cycle1 periods;

Step 4: Calculate Cycle 2 = $Summation\ BP / Summation\ TR$ for cycle2 periods;

Step 5: Calculate Cycle 3 = $Summation\ BP / Summation\ TR$ for cycle3 periods;

Step 6: Calculate $q = Cycle\ 3\ Periods / Cycle\ 1\ Periods$ and $r = Cycle\ 2\ Periods / Cycle\ 1\ Periods$;

Step 7: $UO = (q * Cycle\ 1 + r * Cycle\ 2 + Cycle\ 3) / (q + r + 1)$



Parameters

Cycle 1 Periods	Any number of periods
Cycle 2 Periods	Any number of periods
Cycle 3 Periods	Any number of periods

Output value(s)

There is one output value resulting from the formula, the Ultimate Oscillator.

Plot

The plot is in a separate panel at the bottom.

Quant Script™ Syntax

Short Form	<i>UO</i> (Cycle 1 Periods, Cycle 2 Periods, Cycle 3 Periods)
Long Form	<i>UltimateOscillator</i> (Cycle 1 Periods, Cycle 2 Periods, Cycle 3 Periods)



Dialogs

Chart Study Dialog

Ultimate Oscillator

Indicator Parameters

PeriodCycle1 7

PeriodCycle2 14

PeriodCycle3 28

Symbol ESM8

Series Configuration

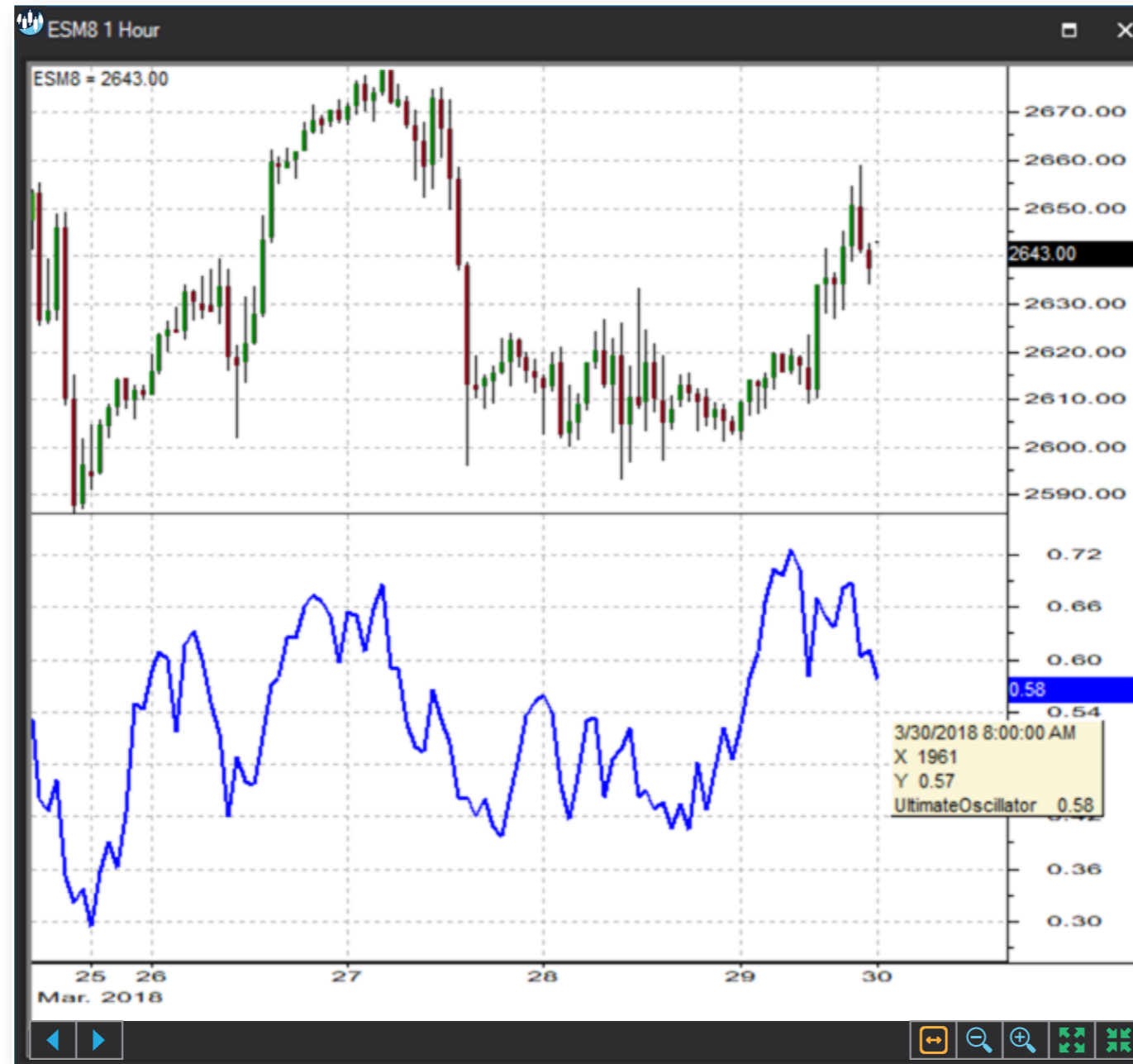
Main Line Solid 2

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 selection]
- Reverse_Result: Line, Solid, 2, [Color selection]
- Buttons: Add To New Panel (checked), 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 (Left):
 - StochasticOscillatorPCTDST
 - StochasticOscillatorPCTK
 - StochasticOscillatorPCTKST
 - TrueStrengthIndex
 - TrueStrengthIndexSmooth
 - TSI
 - TSIS
 - UltimateOscillator (Selected)
 - UltimateOscillatorST
 - UO
 - UOST
 - WilliamsPctR
 - WPR
 - Primitive - Extremes
 - Primitive - Logical Operators
 - Primitive - Summation
 - Primitive - Trend
- Parameters (Right):
 - PeriodCycle1: 7
 - PeriodCycle2: 14
 - PeriodCycle3: 28
- Preview: UltimateOscillator(7, 14, 28)
- Buttons: Create Script Line, OK, Cancel



Quant Script™ Study Dialog

Custom Study Editor [Close]

Save To Group: 3_OSCILLATORS_PRICE [Dropdown] A 14.25 [Dropdown]

Custom Study Name: UO

Password: [Text Field]

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 RESULT = UO(7, 14, 28)
SET REVERSE_RESULT = UltimateOscillator(7, 14, 28)
```

[OK] [Cancel]