DEFINE NOXA CSSA-CYCLES PARAMETERS
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CSSA-cycles is one most important indicator in Noxa CSSA, since all other indicator and signals are derived from this indicator. Refer to help file from Noxa, found the following important thing:

1. **Transaction Timing**: CSSA-Cycles is causal type of single spectrum analysis to capture the peak and valley of market represent in a wave cycle. It is core indicator of CSSA.

2. **Built in Signal** : CSSA-Long/Short Entries #0 & #2, *derived from CSSA-Cycle*, signal will appear when cycle on peak/valley or as result of cross over between CSSA-cycle and its lead.

3. **Crossover signal**: Oscillator CSSA-Qphase, *derived from CSSA-Cycle*, Qphase will be cross above 0 while CSSA-cycle on its peak and Qphase cross below 0 when CSSA-Cycle on its valley.

4. **Crossover signal**:CSSA-Oscillator, *derived from CSSA-Cycles*. Setting Mode to 2 in this indicator computes the oscillator derived from CSSA-QPhase.

5. **Support/Resistance violation**: long/short entries defined when cross over Open/Close or CSSA-Trendline with CSSA-Turning level. Parameter for turning level is High/Low with Built in signal Long/Short entries which are *derived from CSSA-Cycles*.

Prior setup the indicator, first we need to display our data on the chart as the rw material for CSSA-Cycle indicators (this step is very basic for all Neuroshell owner):

1. Load the data into NST chart (it can be from ASCII, DDE, or vendor data or broker). Select menu File, New, basic chart, price chart, on chart wizard, select the periodicity (example 5 minutes intraday), select data category (forex, indices, etc), select the file data that want to be charted on selected category.

2. After price data displayed on the chart, Insert CSSA-Cycles Indicators. Select menu Insert, New Indicator, on Indicator wizard window select Noxa, then Noxa CSSA-Cycles, keep the setting as default, then click finished. The Cycles indicator will be displayed below price chart.

3. Compare the price peak and valley whether match with the CSSA-Cycles.

4. Adjust CSSA-Cycles parameter, in order the cycle's peak and valley matched with price's peak and valley.

CSSA-Cycles parameters		Range
m-histories	Number of components	5-250
GroupStart	The first component# in group for reconstruction	Int >=2
GroupDepth	The number of components in group for reconstruction	Int >=1
Lead	The number of bars ahead to project the cycle	Int >0
Smoothing	The amount of smoothing (lagless) to apply to cycles	Real 0-1
TrainStart	The first bar# of training range	Int >=1
TrainBars	The number of bars in training range	Int>=10
Mode	Mode = 1: Amplitude not restored	
	Mode = 2: Amplitude restored	

As Patric's Advice (see http://www.trade2win.com/boards/software/29736-noxa-indicators-neuroshell.html), the default parameter value to be modified as the following procedure:

1. For Daily data the m-histories can be set at 50, but for intraday larger value should be given to catch more cycle pattern on price data example 100 or more.
2. Set the GroupStart value with large value example larger than 10
3. Set the GroupDepth value with large value example larger than 5
4. Set the Lead value with large number (example 5), this value will define the cross over of Cycles with its lead parameter value to define other indicator such Built-in signal.
5. Set the Smoothing to 1 as necessary.
6. Refer to Noxa help, we can define the TrainStart and TrainBars using CSSA-ShowRange indicator (insert from Noxa indicator group); select the range or adjust the range by dragging with mouse. The selected range should represent the cyclical pattern of overall price. This indicator also required to define the training range.

figure 1. ShowRange Indicator

7. Refer to above figure, Set the TrainStart = 374 and the TrainBars=2143.
8. Readjust step 2 to 4 above with objective to catch the peak and valley.
9. Using Noxa-CSSA-Long/Short Entries #0 & #2, where all parameter shall be equal with CSSA-Cycles parameter to catch the peak and valley.
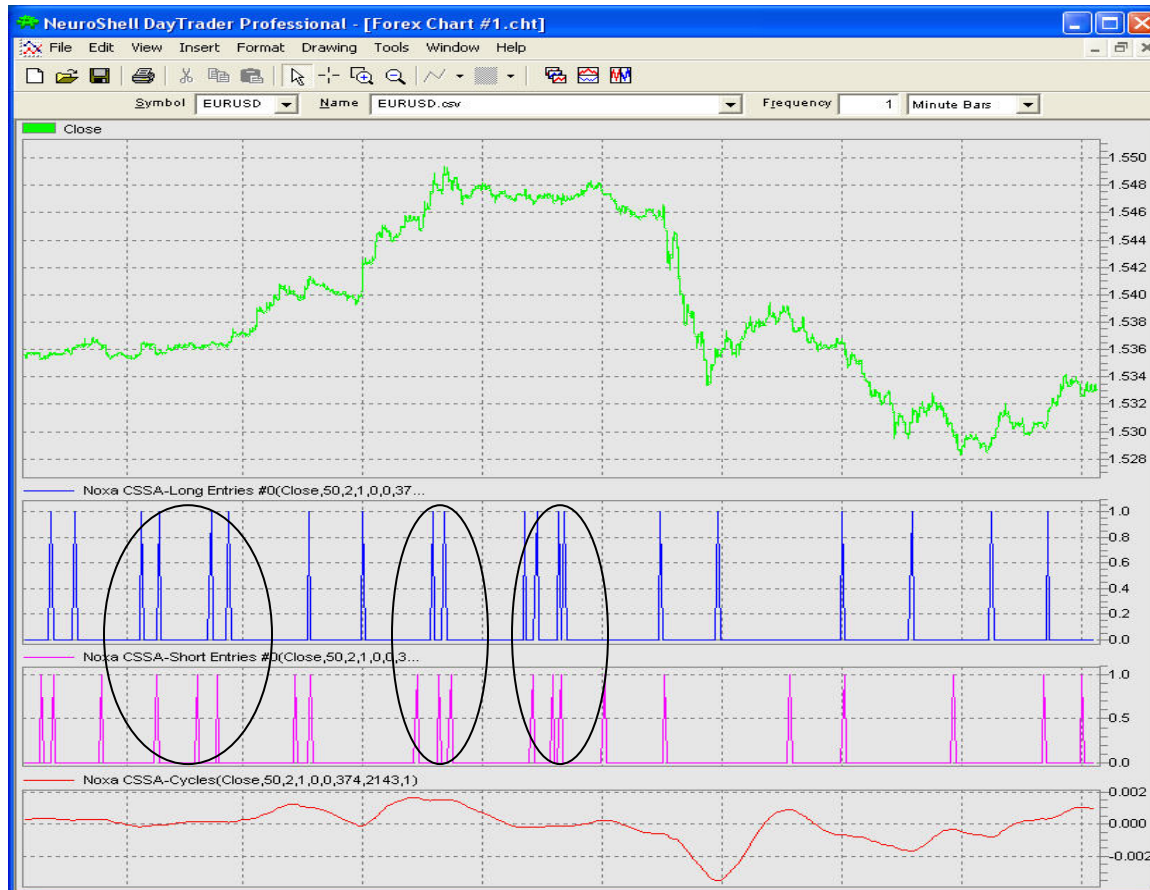
Below is sample for the Initial chart setup:

figure 2. Initial Setup Chart

The enlarged display of above chart,

As you can see on above chart there are some false signals generated (see indicated by circle mark), where buy and sell generated almost nearby.

Our Objective here is to update the cycle parameters as above procedure.

By Adjusting Cycles parameter manually, we can get the better signal generation as below chart, step by step.
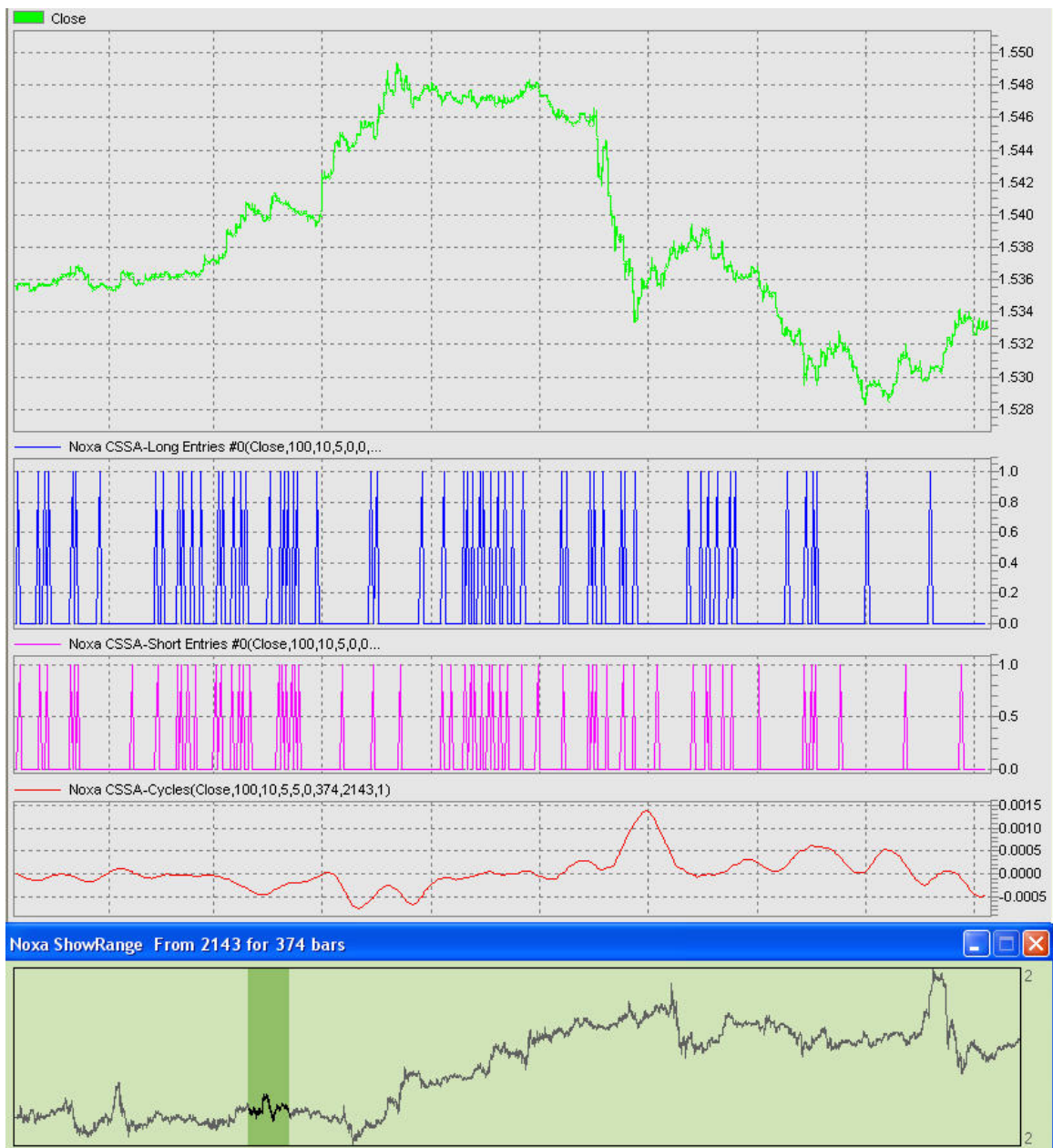
figure 3 Step 0

Note: Larger GroupStart and GroupDepth giving large noise (Noxa CSSA-Cycles(Close, 100, 10, 5, 5, 0, 374, 2143,1) as well as Noxa Long and Short #0.