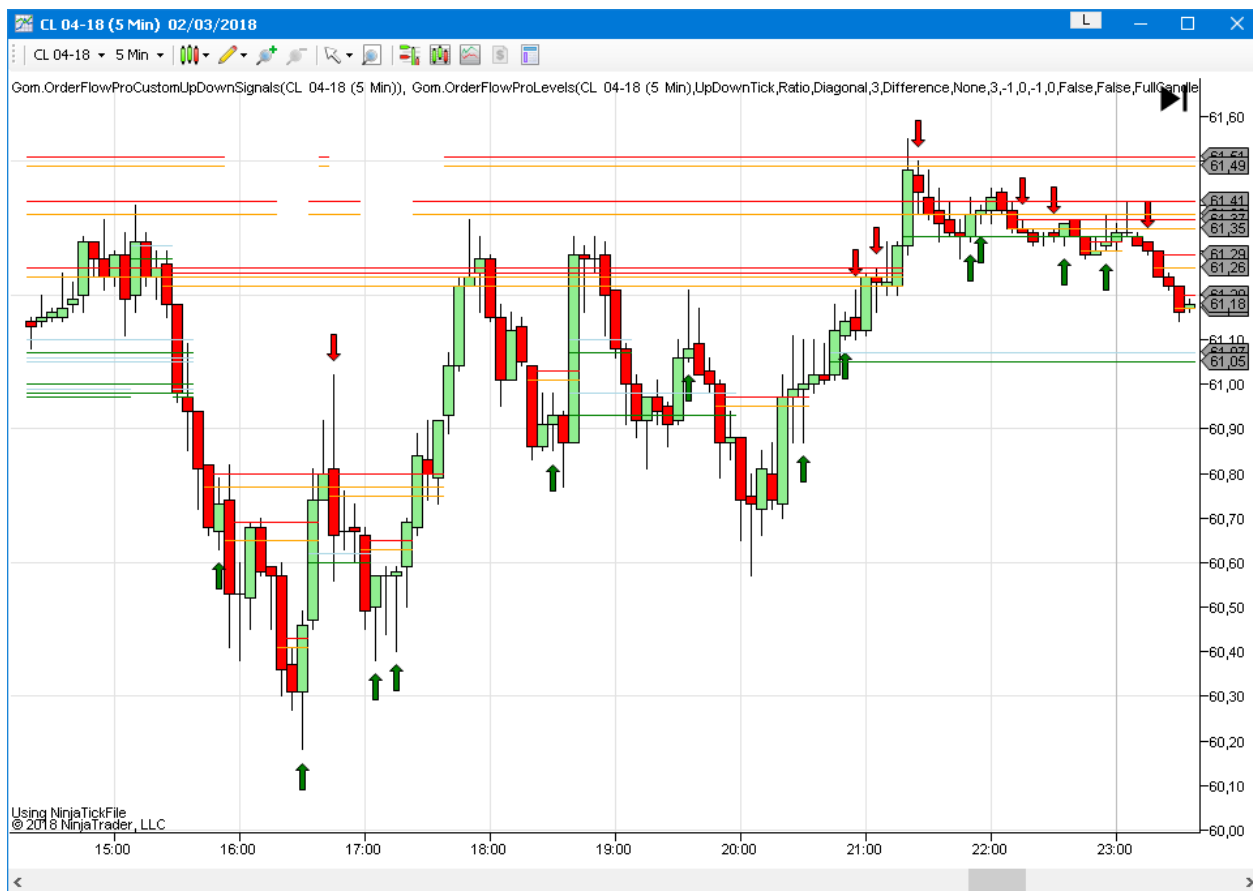


GOMORDERFLOW PRO ADDITIONAL INDICATORS

DOCUMENTATION OF ORDERFLOW ADDITIONAL INDICATORS

Version 2.5

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GOMORDERFLOWPRO-LEVELS

DESCRIPTION

This indicator exposes levels from the orderflow as plots, these levels can be called form custom indicators & strategies

Each exposed level has 5 associated plots, they are ordered from nearest to farthest from current market close

Example with NakedPOC



SETTINGS

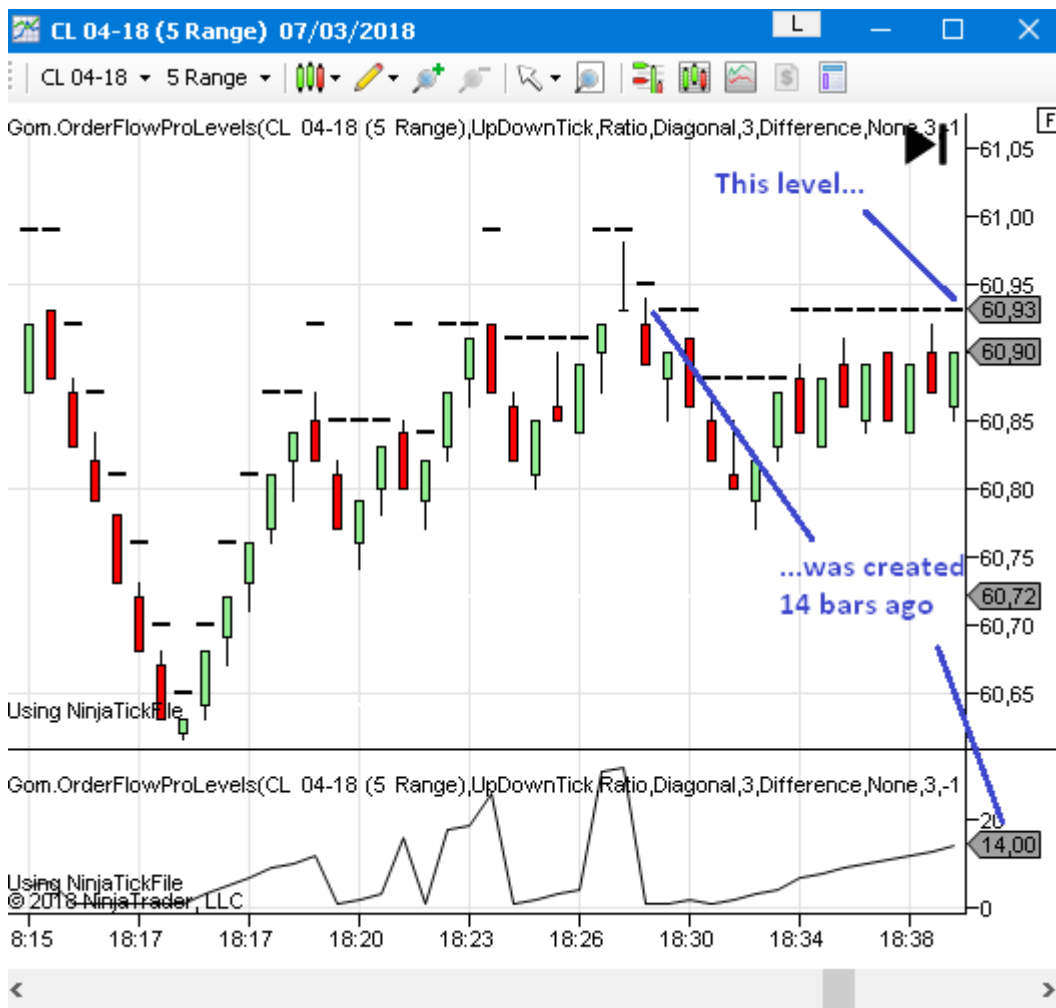
Same as OrderflowPro, see the relevant doc.

Added : **Plot POC** , **Plot SR Zones**, **Plot Unfinished Auctions** to select plots to plot.

EXPOSED PLOTS

NakedPOCHighX : the 5 closest naked POCs above current close.

NakedPochHighBarsAgoX : shows how many bars ago the level N° X was created



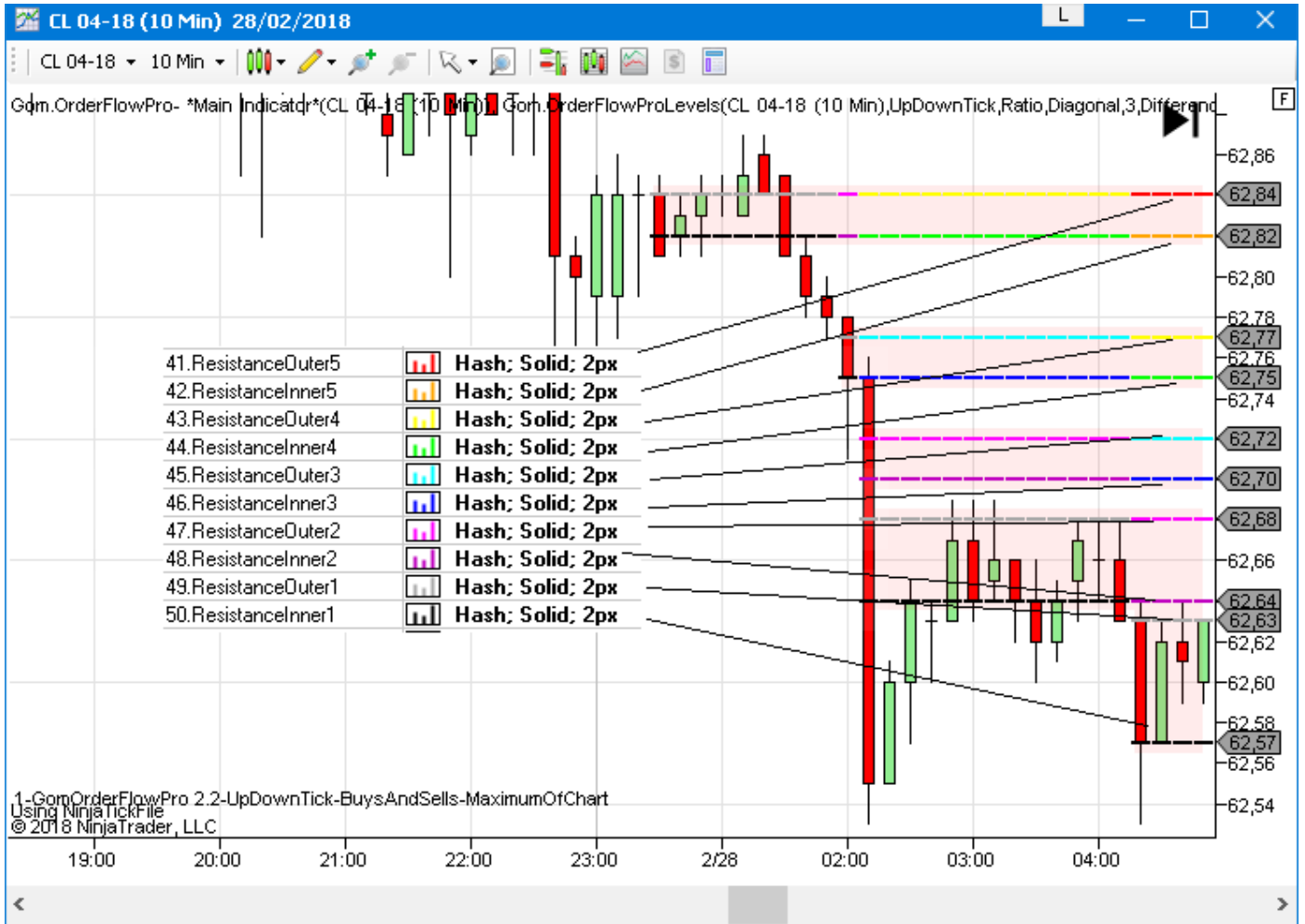
NakedPOCLowX, **NakedPOCLowBarsAgoX** :

Same with low POCs

NakedUAHighX, **NakedUAHighXBarsAgo**, **NakesUALowX**, **NakesUALowXBarsAgo** :

Same with naked Unfinished Auctions

ResistanceInnerX,ResistanceOuterX : 5 closest resistance zones



SupportInnerX,SupportOuterX : same with supports

CONSTRUCTOR NT7

```
GomOrderFlowProLevels Strategy.GomOrderFlowProLevels(DeltaCalcType deltaMode, ImbalanceComparisonType imbalanceCriterion1Comparison, ImbalanceDirectionType imbalanceCriterion1Direction, double imbalanceCriterion1Value, ImbalanceComparisonType imbalanceCriterion2Comparison, ImbalanceDirectionType imbalanceCriterion2Direction, double imbalanceCriterion2Value, int imbalanceMaxLosingSideVolume, int imbalanceMinWinningSideVolume, int maxTickSize, int minTickSize, bool resetNakedOnSessionStart, bool sRCancelOnNewSession, SRZoneEndConditionType sRExit, int sRHiLoThreshold, int sRMinTotalVolume, int sRNbLevels, int ticksPerPriceLevel)
```

Example (check GomOFNakedPOCSampleStrat)

```
gofl=GomOrderFlowProLevels(Gom.DeltaLib.DeltaCalcType.UpDownTick, Gom.OrderFlow.ImbalanceComparisonType.Ratio, Gom.OrderFlow.ImbalanceDirectionType.Diagonal, 3, Gom.OrderFlow.ImbalanceComparisonType.Ratio, Gom.OrderFlow.ImbalanceDirectionType.None, 3, -1, 0, -1, 0, false, false, Gom.OrderFlow.SRZoneEndConditionType.FullCandleCross, 1, 0, 3, 1);
```

CONSTRUCTOR NT8

```
GomOrderFlowProLevels Strategy.GomOrderFlowProLevels(DeltaCalcType deltaMode, int maxTickSize, int minTickSize, int ticksPerPriceLevel, bool resetNakedOnSessionStart, ImbalanceDirectionType imbalanceCriterion1Direction, ImbalanceComparisonType imbalanceCriterion1Comparison, double imbalanceCriterion1Value, ImbalanceDirectionType imbalanceCriterion2Direction, ImbalanceComparisonType imbalanceCriterion2Comparison, double imbalanceCriterion2Value, int imbalanceMinWinningSideVolume, int imbalanceMaxLosingSideVolume, int sRNbLevels, int sRMinTotalVolume, SRZoneEndConditionType sRExit, int sRHiLoThreshold, bool sRCancelOnNewSession)
```

Example (check GomOFNakedPOCSampleStrat)

```
gof= GomOrderFlowProLevels(Close, Gom.DeltaLib.DeltaCalcType.BidAsk, -1, 0, 1, false, Gom.OrderFlow.ImbalanceDirectionType.Diagonal, Gom.OrderFlow.ImbalanceComparisonType.Ratio, 3, Gom.OrderFlow.ImbalanceDirectionType.None, Gom.OrderFlow.ImbalanceComparisonType.Ratio, 3, 0, -1, 3, 0, Gom.OrderFlow.SRZoneEndConditionType.FullCandleCross, 1, false);
```

GOMORDERFLOWPRO-VALUES

This indicator exposes values and raw ladder data (**NEW in 2.3**) from the orderflow, which can be used in custom indicators or strategies

SETTINGS

Same as Orderflowpro, see the relevant doc.

EXPOSED PLOTS

Delta : Delta of the bar
Buys : Total Buys of the Bar
Sells : Total Sells of the Bar
TotalVolume : Total Volume of the Bar
MinDelta : Minimum value reached by the delta on bar creation
MaxDelta : Maximum value reached by the delta on bar creation
HighCOT : Current high COT
LowCOT : Current low COT
Finish : Delta Finish
POCPrice : POC of current bar.
POCVolume : Volume at the POC
IsHighUA : 1 if we have an Unfinished Auction on High of Bar
IsLowUA : 1 if we have an Unfinished Auction on Low of Bar
NbBuyImbalances : Number of Buy Imbalances on the bar
VolBuyImbalances : Total volume of Buy Imbalances
NbSellImbalances : Number of Sell Imbalances
VolSellImbalances : Volume of Sell Imbalances
NbResistZones: Number of Resistance Zones created in the bar
NbSupportZones: Number of Support Zones created in the bar
IsBuyingReversal: 1 if there is a buy reversal signal
IsSellingReversal : 1 if there is a sell reversal signal
IsSupportZoneOnHigh : 1 if a support zone was created on the high of the bar
IsResistanceZoneOnLow: 1 if a resist zone was created on the low of the bar.
IsSellImbalanceOnLow : 1 if there is a sell imbalance on the low of the bar
IsBuyImbalanceOnLow : 1 if there is a buy imbalance on the low of the bar
IsSellImbalanceOnHigh : 1 if there is a sell imbalance on the high of the bar
IsBuyImbalanceOnHigh : 1 if there is a buy imbalance on the high of the bar
RatioHigh : Ratio of the 2 highest buys
RatioLow : Ratio of the 2 lowest sells.
SellsAtHigh : Volume of Sells at top of bar
BuysAtHigh: Volume of Buys at top of bar
SellsAtLow: Volume of Sells at bottom of bar
BuysAtLow : Volume of Buys at bottom of bar
TimeSinceLastTouchedTop : Time in seconds since the price touched the bar High.
TimeSinceLastTouchedBottom : Time in seconds since the price touched the bar Low.
BarDuration: Duration of the Bar in seconds
SweepsAtBid : Number of 0 values on the Bid side (except at the High)
SweepsAtAsk : Number of 0 values on the Ask side (except at the Low)
CumDeltaOpen : Open value of Cumulative Delta in the bar
CumDeltaHigh : High value of Cumulative Delta in the bar
CumDeltaLow : Low value of Cumulative Delta in the bar
CumDeltaClose : Close value of Cumulative Delta in the bar

CONSTRUCTOR NT7

```
▲ 2 of 2 ▼ ● GomOrderFlowProValues Indicator.GomOrderFlowProValues(bool decliningTotVolSmallerThanOppositeSideTotVol, DeltaCalcType deltaMode, ImbalanceComparisonType imbalanceCriterion1Comparison, ImbalanceDirectionType imbalanceCriterion1Direction, double imbalanceCriterion1Value, ImbalanceComparisonType imbalanceCriterion2Comparison, ImbalanceDirectionType imbalanceCriterion2Direction, double imbalanceCriterion2Value, bool imbalanceInDecliningZoneAuthorized, int imbalanceMaxLosingSideVolume, int imbalanceMinWinningSideVolume, int maxTickSize, int minNumOfDecliningLevels, int minSizeOfCounterSideImbalance, int minTickSize, bool reinitSession, ReversalPocPositionType reversalPocPosition, int sRMinTotalVolume, int sRNbLevels, int ticksPerPriceLevel)
GomOrderFlowProValues
```

Example (check GomOFDeltaSampleStrat)

```
gof= GomOrderFlowProValues (true,
    Gom.DeltaLib.DeltaCalcType.UpDownTick, Gom.OrderFlow.ImbalanceComparisonType.Ratio
    ,Gom.OrderFlow.ImbalanceDirectionType.Diagonal, 3,
    Gom.OrderFlow.ImbalanceComparisonType.Ratio, Gom.OrderFlow.ImbalanceDirectionType.
    None, 3, false, -1, 0, -1, 3, 1, 0, false,
    Gom.OrderFlow.ReversalPocPositionType.Anywhere, 0, 3, 1);
```

CONSTRUCTOR NT8

```
ProValues(close, Gom.DeltaLib.DeltaCalcType.BidAsk, false, WilliamsR
GomOrderFlowProValues Strategy.GomOrderFlowProValues(ISeries<double> input, DeltaCalcType deltaMode, bool forceIntrabarCalc, int maxTickSize, int minTickSize, int ticksPerPriceLevel, ImbalanceDirectionType imbalanceCriterion1Direction, ImbalanceComparisonType imbalanceCriterion1Comparison, double imbalanceCriterion1Value, ImbalanceDirectionType imbalanceCriterion2Direction, ImbalanceComparisonType imbalanceCriterion2Comparison, double imbalanceCriterion2Value, int imbalanceMinWinningSideVolume, int imbalanceMaxLosingSideVolume, int sRNbLevels, int sRMinTotalVolume, int minNumOfDecliningLevels, bool imbalanceInDecliningZoneAuthorized, int minSizeOfCounterSideImbalance, ReversalPocPositionType reversalPocPosition, bool decliningTotVolSmallerThanOppositeSideTotVol, bool reinitSession)
```

Example (check GomOFDeltaSampleStrat)

```
GomOrderFlowProValues (Gom.DeltaLib.DeltaCalcType.BidAsk, false, -1, 0, 1,
    Gom.OrderFlow.ImbalanceDirectionType.Diagonal,
    Gom.OrderFlow.ImbalanceComparisonType.Ratio, 3,
    Gom.OrderFlow.ImbalanceDirectionType.None,
    Gom.OrderFlow.ImbalanceComparisonType.Ratio, 3, 0, -1, 3, 0, 3, false, 1,
    Gom.OrderFlow.ReversalPocPositionType.InDecliningSideHalfOfBar, true, false);
```

RAW LADDER DATA API (NEW IN 2.3)

This is intended for advanced developers.

The Values indicator also exposes raw data (buys and sells on each price level) allowing the coding of custom indicators using the individual buy/sell data.

The exposed property is a collection named *BarData*, each individual bar is accessed using *BarData[barsago]* like any other Ninja time series.

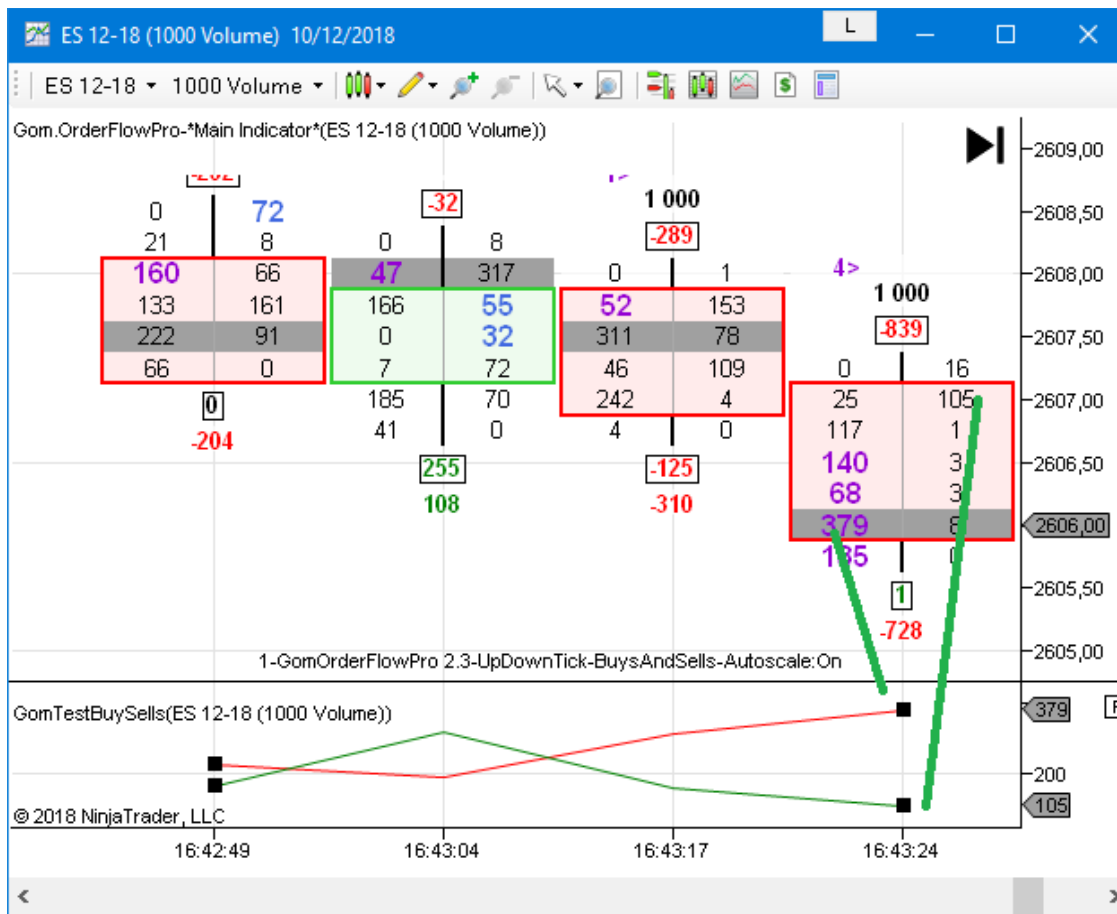
On each *BarData[i]*, you access each lever of price from *BarData[i].MinTick* to *BarData[i].MaxTick*

Buys and Sells on each price levels can be accessed using *BarData[i].Buys[j]* and *BarData[i].Sells[j]*, with *BarData[i].MinTick <= j <= BarData[i].MaxTick*

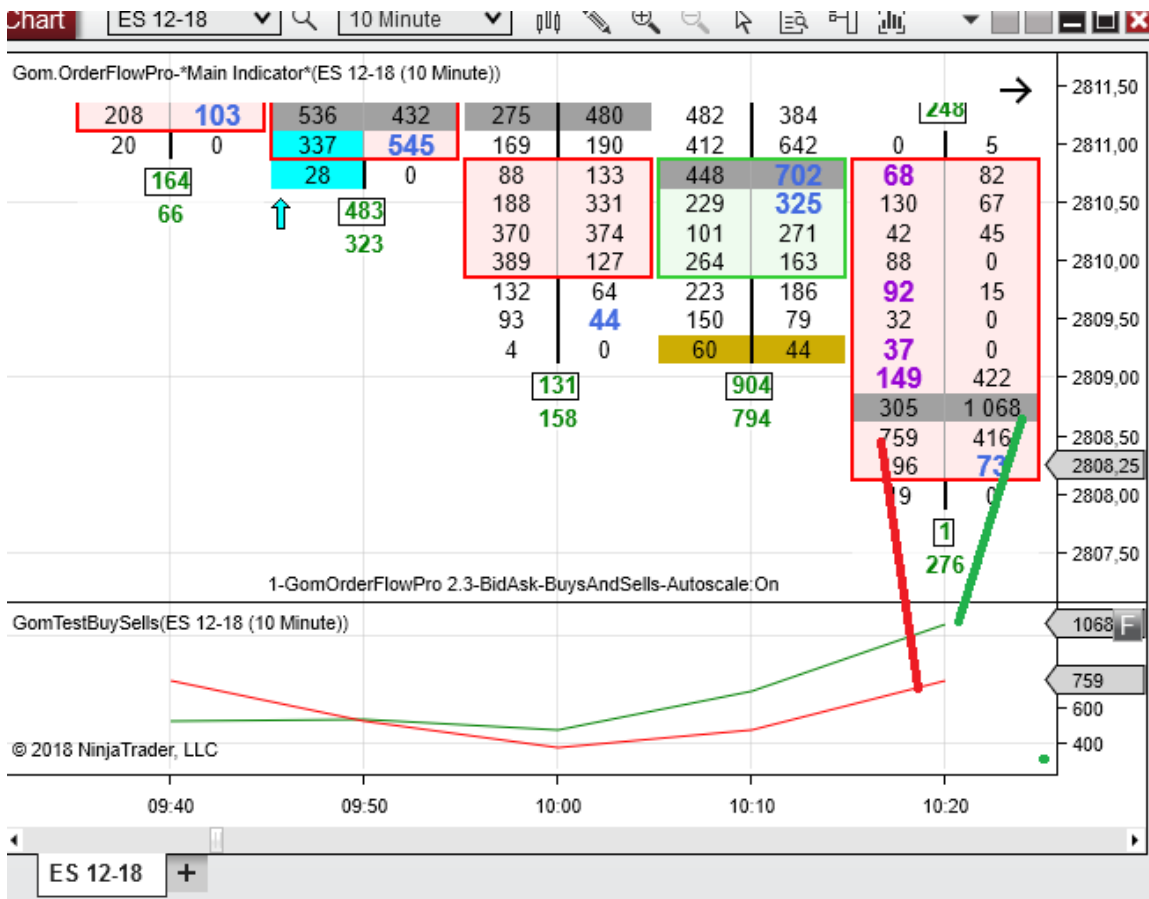
2 demo indicators named **GomTestBuySell.cs** are available in <https://www.gomicators.com/download/support-files/>.

These indicators compute the maximum buy and maximum sell volume on each bar.

NT7 :



NT8



GOMORDERFLOWPRO-CUSTOMUPDOWNSIGNALS (NINJATRADER ONLY)

This indicator allows creating custom up/down signals using the OrderFloProValues exposed data. Standard NinjaTrader likes Open, High, Low, Close, Volume, Time can be used as well. No coding is required.

This indicator uses the fleee expression evaluator to create custom classes on startup and provide native performance.

See <https://archive.codeplex.com/?p=flee> and <https://github.com/mparlak/Flee>

ORDERFLOW SETTINGS

Same as OrderflowPro, see the relevant doc.

GRAPHICAL SETTINGS

5. Graphical Settings	
01.Symbol Type	Arrow
02.Symbol Size	6
03.Shrink to Candle W	True
04.Price Offset in Pixe	10
05.Up Color	Green
06.Down Color	Red
07.Outline Color	DarkGray
08.Opacity 0-255	255

Graphical Settings	
Symbol Type	Arrow
Symbol Size	6
Shrink to Candle Width	<input checked="" type="checkbox"/>
Price Offset in Pixels	10
Up Color	Green
Down Color	Red
Outline Color	DarkBlue
Color Opacity (0-255)	128

Symbol Type : Arrow, Dot ,Diamond, Square, Triangle

Defines the symbol used to show the signals

Symbol Size :

Size of the symbol

Shrink to Candle Width :

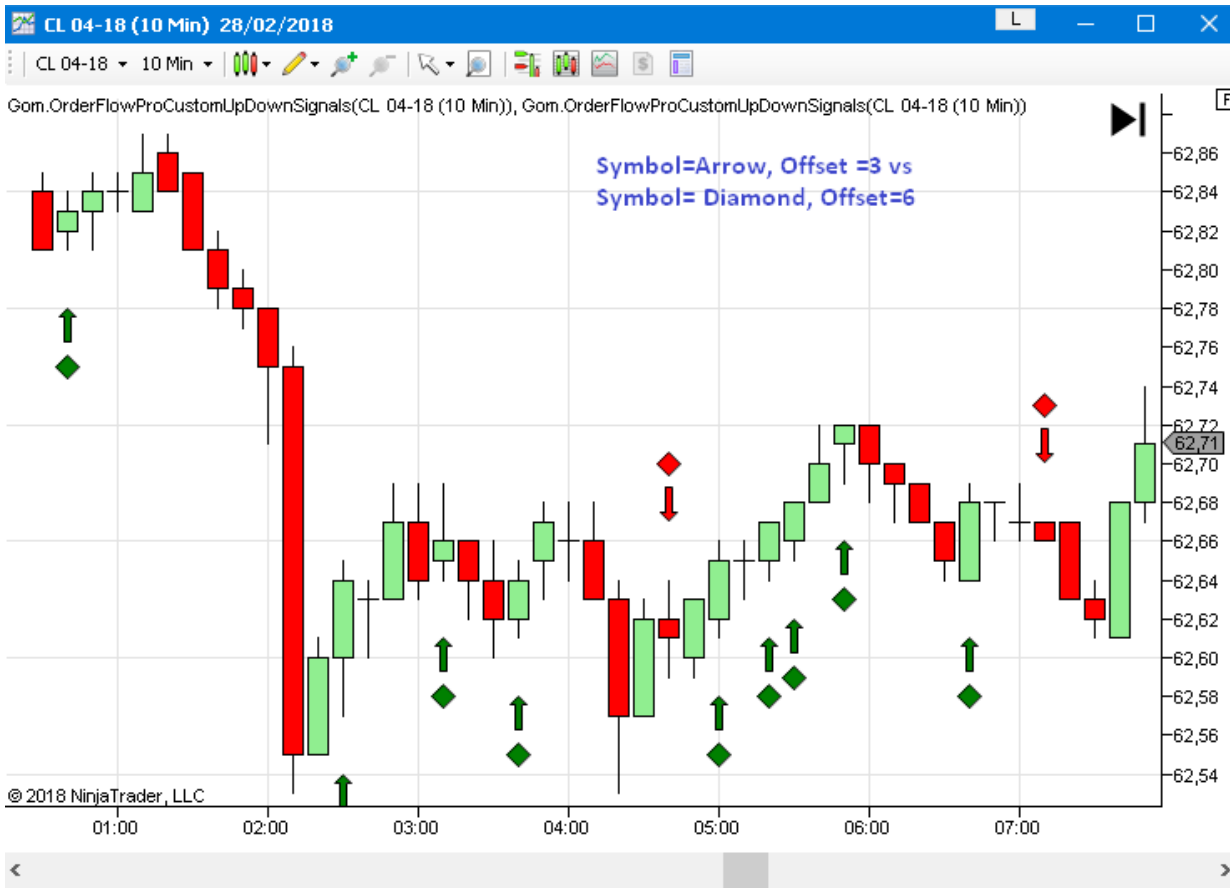
When the candle size is < Symbol size, shrink it.

Price Offset in Pixels :

Defines the offset from bar top/bottom to plot the symbol

UpColor/DownColor/OutlineClour/Color Opacity

Color and transparency of the symbol



SIGNAL SETTINGS

This is where are defined the formulas that define the signals.

Any exposed plot from GomOrderFlowProValues can be used , in addition to High,Low,Open, Close

For instance, the default settings show a delta divergence, formulas are :

Up Formula : $\text{Close}[0] > \text{Open}[0]$ and $\text{Delta}[0] < 0$

Down Formula : $\text{Close}[0] < \text{Open}[0]$ and $\text{Delta}[0] > 0$

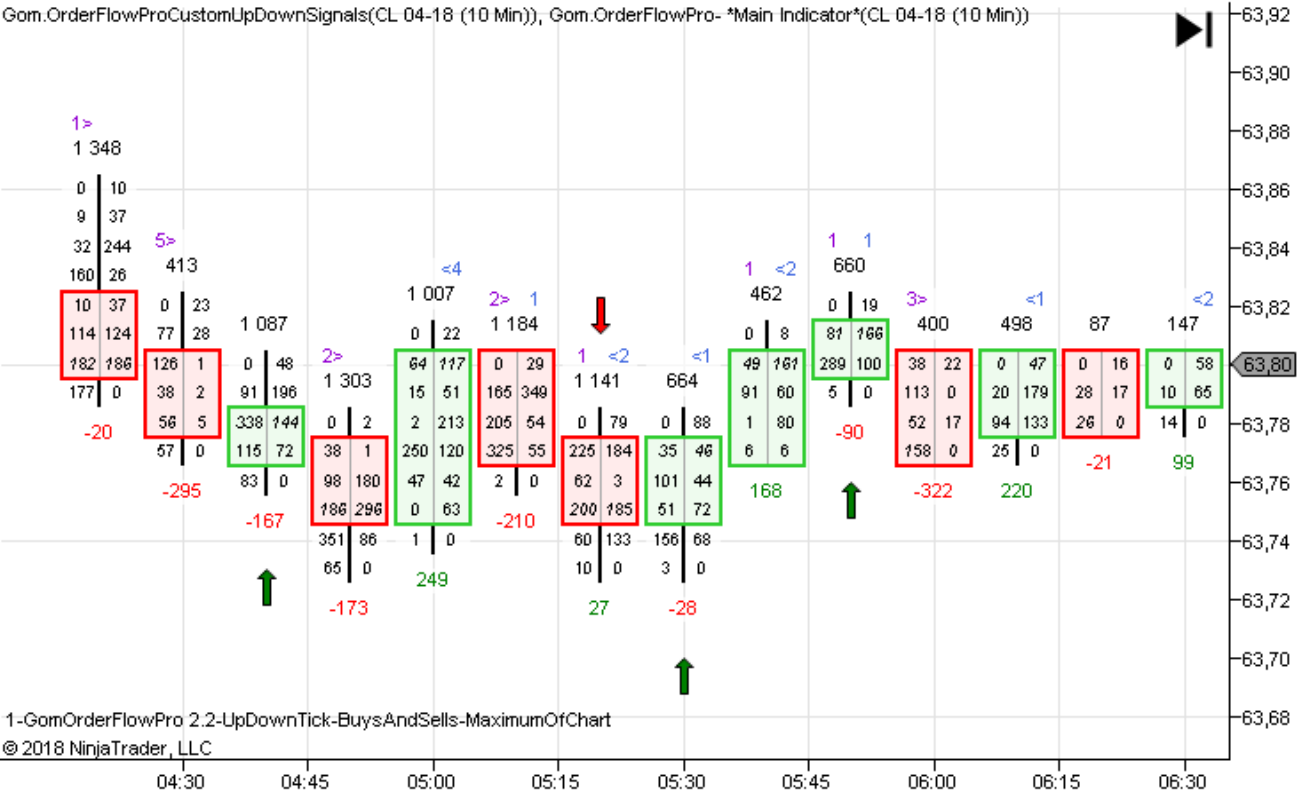
New in 2.3 : NinjaTrader indicators can be used as well, so $\text{SMA}(\text{Close}, 12)[0]$ is a valid formula

New in 2.3 You can access the indicator's own previous values using $\text{CustomUpSignal}[i]$ and $\text{CustomDownSignal}[i]$

You can check syntax examples on the provided free web sites.

Math expressions can also be used, like $\text{Abs}(\text{Delta}[0])$

Gom.OrderFlowProCustomUpDownSignals(CL 04-18 (10 Min)), Gom.OrderFlowPro- *Main Indicator*(CL 04-18 (10 Min))



1-GomOrderFlowPro 2.2-UpDownTick-BuysAndSells-MaximumOfChart
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GOMORDERFLOWPRO-CUSTOMUPDOWNSIGNALS (NINJATRADER ONLY)

Like the CustomUpDown indicator, this indicator allows to create custom indicator values with no coding, using values from the GomOrderFlowValues

ORDERFLOW SETTINGS

Same as Orderflowpro, see the relevant doc.

SIGNAL SETTINGS

This is where are defined the formulas that define the custom value

Any exposed plot from GomOrderFlowProValues can be used , in addition to High,Low,Open, Close

For instance, the default settings show a delta % of the bar

Formula : $\Delta[0]/\text{Volume}[0]*100$

New in 2.3 : NinjaTrader indicators can be used as well, so $\text{SMA}(\text{Close},12)[0]$ is a valid formula

New in 2.3 You can access the indicator's own previous values using $\text{CustomValue}[i]$

You can check syntax examples on the provided free web sites.

