The complete list of ZUP parameters.

# • "Parameters for ZigZag"

ExtIndicator – selects the version of indicator based on which Pesavento patterns are built.

0 - ZigZag of Metatrader, standard, slightly optimized

1 - ZigZag by Alex

2 - Indicator similar to the one built in Ensign

3 - ZigZag Ensign with a variable number of minBars

4 - ZigZag, developed by Tauber

5 - A variation based on Gann swings

6 - DT-ZigZag with external ZigZag\_nen3.mq4. It is based on the standard ZigZag

7 - DT-ZigZag - DT\_ZZ.mq4 (developed by Klot)

8 - DT-ZigZag - CZigZag.mq4 (developed by Candid)

9 – A version of the fractal zigzag

10 - DT-ZigZag - GannSwing - like algorithm ExtIndicator = 5 in DT mode

11 - Includes a search of patterns Gartley on the basis of the standard ZigZag

12 - ZigZag, developed by Talex

13 - SQZZ zigzag developed by Tovaroved (Товаровед)

14 - ZZ\_2L\_nen, developed by Wellx (automatic calculation of levels - nen)

15 – “Wave based ZigZag”

\*Notes

1. Values ​​of ExtIndicator between 6 and 10 are applied to the output of zigzags from a higher time frame in relation to the currently selected time frame.

2. Value of 15 is used only for wave marking. Wave marking can be applied over any type of ZigZag, as well. It means it is possible in all the above 16 modes.

(The ZigZag codes earlier were stored in external files. Currently, all the codes are embedded in the ZUP. External zigzags \* .mq4 are not used.)

Parametres ZZforDMLEWA - defines a set of parameters minBars - ExtBackstep for ExtIndicator = 0 and ExtIndicator = 6 modes are used in the DML & EWA approach.

1 - minBars = 5 ExtBackstep = 8

2 - minBars = 8 ExtBackstep = 13

3 - minBars = 13 ExtBackstep = 21

4 - minBars = 21 ExtBackstep = 34

5 - minBars = 34 ExtBackstep = 55

6 - minBars = 55 ExtBackstep = 89

7 - minBars = 89 ExtBackstep = 144

8 - minBars = 144 ExtBackstep = 233

0 - value defined by the minBars - ExtBackstep parameters

minBars - filter bars (specified by number of bars)

minSize - filter on the number of points (specified by number of points)

ExtBackstep - setting the remainder of the parameters from the ZigZag from MT4

noBackstep – excludes from the calculations the ExtBackstep parameter in the standard ZigZag algorithm in the following modes:

ExtIndicator = 0,

ExtIndicator = 6 and

ExtIndicator = 11

RecoverFiltr – sets the definition of extremes (swings) with a distance defined by parameter ExtBackstep.

externalBar – the way of processing an external bar in the standard ZigZag

0 - external bar in a way of single buffer ZigZag,

1 – according to MZZ (9),

2 - special processing of the external bar

GrossPeriod - the value of the time frame, expressed in minutes (number of minutes), the data from which the input for ZigZag in mode DT-ZigZag are taken from.

minPercent - percentage filter (set percentage, e.g. 0.5) If you use percentages - define the number and set minSize = 0

ExtPoint = 11 - the number of points of the ZigZag for ZigZag Talex

StLevel - the first level of the ZigZag (Wellx)

BigLevel - the second level of the ZigZag (Wellx)

auto – task to automatically calculate the levels of StLevel and BigLevel

minBar -% value to calculate StLevel

maxBar -% value to calculate BigLevel

Two variables to set the parameters for fractal based ZigZag

ExtBarLeft - the number of bars on the left below the maximum

ExtBarRight - the number of bars on the right below the maximum

ExtStyleZZ -

true = sets ZigZag lines (color, thickness, style) visible, according to the selection in the Color tab in the indicator parameters

false = intermediate ZigZag lines do not show up on the chart, all the ZigZag points will be shown only at extremes

ExtMaxBar - specifies the number of bars to be considered in the calculation of the ZigZag.

When “0” - ZigZags are calculated on the entire history

ExtMinBar - sets the minimum number of bars, how far back the ZigZag will be calculated

ExtNumberPeak - includes numbering the ZigZag swings

ExtNumberPeak10 - enables to show numbers only for the first 10 fractures / swings

ExtNumberPeakLow – shows numbers only at Low, or High and Low

ExtNumberPeakColor - the color of the numbers

ExtNumberPeakFontSize - size numbers

# • "Parameters for fibo Levels"

ExtFiboDynamic - enables output dynamic Fibo levels. Dynamic Fibo levels are displayed on the first ray of ZigZag.

ExtFiboStatic - enables the output of static Fibo levels

ExtFiboStaticNum – number of ZigZags based on which, will be calculated and displayed the static Fibonacci levels. This range must be between 2 and 9.

1 < ExtFiboStaticNum <= 9

ExtFiboCorrectionExpansion

= false - Fibonacci correction  
= true - Fibonacci expansion

ExtFiboD and ExtFiboS - color selection of dynamic and static Fibo level information (lines and corresponding fibo numbers).

ExtFiboStyle - sets the line style for Fibo levels

ExtFiboWidth - sets the line thickness for Fibo levels

# • "Parameters for Pesavento Patterns"

ExtPPWithBars - specifies what information to display based on Pesavento patterns

0 – Displays the value of retracement at patterns Pesavento

1 – Displays the number of bars between points of retracement in a Pesavento pattern

2 - Displays the number of bars for the first and second conditional ZigZag legs and the retracement levels of Pesavento pattern in between those.

3 – Displays the time of retracement after the price retracement. Retracement of time is calculated as the ratio of the number of bars on the second leg of a ZigZag to the number of bars on the first leg of ZigZag

4 – Displays the time of retracement, calculated as the ratio of the time the second leg to the time of the first leg formation required

5 – The ratio of speed of development of the 2nd leg compared to the speed of development of the 1st leg.

6 - Displays the calculated number of points and the percent value of deviation from the Pesavento retracements

7 - Displays the speed of the first and second legs. This option can also be used to determine the scale values  
automatic scaling of fibo arcs.

8 – Displays the ratio of the length of the second leg compared to that of the first leg

9 - Displays the percentage change in price on the first and second legs

10 - Displays the time and cost of the extremes located right

ExtHidden –

0 – All the Pesavento numbers, lines and patterns are hidden – not displayed

1 – Displays all the lines between the extremes where retracement > 0.14 and <5.

2 – Displays only those lines where the Pesavento retracement numbers are equal (and 0.447, 0.886, 2.236, 3.14, 3.618 for the construction of Gartley patterns)

3 – Displays the items listed under point 2 above (Pesavento numbers and related lines)

4 – Displays the non Pesavento numbers and corresponding lines

5 - Hides all elements. One can only see ZigZag and Gartley patterns

ExtFractal - the number of swing points (extremes, i.e. highs, lows), which are connected to other swing points by lines

ExtFractalEnd - the number of swing points (extremes, i.e. maximums and minimums), which are connected to other swing points and past this swing point there are no more connecting lines  
If ExtFractalEnd = 0 then the last swing equals to the maximum number of swing points. Thus the minimum value must be ExtFractalEnd = 1

ExtFiboChoice - selecting a set of numbers to construct Pesavento patternsFibonacci numbers

1. Pesavento numbers
2. Gartley numbers
3. GilmorQuality numbers
4. GilmorGeometric numbers
5. GilmorHarmonic numbers
6. GilmorArithmetic numbers
7. GilmorGoldenMean
8. Square numbers
9. Cube numbers
10. Rectangle numbers
11. Ext

ExtFiboZigZag - enables displaying "Fibonacci ZigZag"

ExtDelta – defines the tolerance. If the current retracement is different from the values ​​of the nearest Pesavento within the value of tolerance, it displayed on the graph as a Pesavento pattern. It defines the value of the potential reversal zone. This value should be 0 <ExtDelta <1

ExtDeltaType –

0 - Shows recovery percentages "as is" rounded to 2 decimal places

1 - Tolerance calculation (the number Pesavento %) <ExtDelta

2 - ((% the number Pesavento) / number Pesavento) <ExtDelta

3 - Shows recovery percentages "as is" rounded up to 3 decimal places

ExtSizeTxt – defines the font size for the numbers displayed

ExtLine – defines the color for connecting lines

ExtLine886 - defines the color for connecting lines of the Pesavento numbers

ExtNotFibo – defines the color of all other numbers

ExtPesavento – defines the color of the Pesavento numbers

ExtGartley886 – defines the color for numbers .886 and the other additional ones

# • "Parameters for Gartley Patterns"

AlgorithmSearchPatterns - choose a search algorithm for the pattern scanner according to the search mode selected for the ExtIndicator = 11

0 - matching algorithm ExtIndicator = 0 – standard zigzag

1 - corresponds to ExtIndicator algorithm = 1 - zigzag leg size of Alex is defined in point values

2 - matching algorithm ExtIndicator = 1 - zigzag leg size of Alex is defined in percentage values

3 - corresponds ExtIndicator algorithm = 2

4 - corresponds ExtIndicator algorithm = 4

5 - corresponds ExtIndicator algorithm = 5

6 - corresponds ExtIndicator algorithm = 12

PotencialsLevels\_retXD - enables displaying the retracement levels of XD for potential 5 point patterns.

This will work in ExtIndicator = 11 mode only, when pattern found, this level will be displayed from point C on

0 – disables displaying potential levels

1 - potential pattern levels are displayed along the patterns when parameter ExtGartleyOnOff = true

2 - the potential levels are displayed. At the same time it disables displaying the patterns

visibleLevelsABCD - specifies various options for displaying levels for developing D points of potential five-point patterns

0 - no additional levels displayed

1 - displays all possible BD retracement levels on the graph

2 - displays all possible levels of different versions of AB = CD on the graph

3 - displays both BD retracement levels and AB=CD versions (as described under points 1 and 2)

maxDepth – defines the maximum value Depth(minBars), for the parameter Depth ZigZag with the active scanning to find Gartley patterns.  
This option is better to use smaller, to a smaller load on the processor. But on the other hand, too small value will not allow to find some patterns. Parameter needs to find experimentally.  
It is applicable when AlgorithmSearchPatterns = 0

minDepth - defines the minimum value of Depth to search for Gartley patterns.

FiboStep – enables calculation of the Backstep parameter for pattern search, based on the formula Backstep = Depth \* 1.618

IterationStepDepth - iteration step change for ZigZag Depth parameter when searching for Gartley pattern

maxSize\_ - the maximum value of leg size in points. It is used for pattern scanning when the following values ​​are set to:

AlgorithmSearchPatterns = 1

AlgorithmSearchPatterns = 3

AlgorithmSearchPatterns = 4

AlgorithmSearchPatterns = 6

minSize - the minimum leg size defined in points.

IterationStepSize –- iteration step change for ZigZag Size parameter when searching for Gartley

maxPercent\_ - the maximum percentage used for the calculation of ZigZag of Alex.   
It is used for pattern scanning when the following value is set to:  
AlgorithmSearchPatterns = 2

minPercent\_ - the minimum percentage used for the calculation of ZigZag of Alex

IterationStepPercent - - iteration step (percent) for changing the parameter ZigZag Percent

DirectionOfSearchMaxMin - sets the direction of the search:

false - from minDepth to maxDepth  
true - from maxDepth to minDepth

SelectPattern - Group of five point patterns to search for "fuzzy" and "accurate" patterns.

0 - Search all patterns

1 - Search only the classic patterns - Gartley, Butterfly, Bat, Crab, except TOTAL patterns

2 - Search classic and non-classic patterns, except TOTAL patterns.

3 - Search exotic patterns and exotic anti-pattern except TOTAL patterns

4 - Search only anti-patterns except TOTAL patterns

5 - Search for all patterns except TOTAL patterns

6 - Search only for TOTAL patterns

7 – Search specific five-point patterns based on setting the visiblePattern value sequence.

8 – Disables the search for five-point patterns  
  
Further here, it is possible to select individual single patterns to be searched for, based on the same list of patterns listed in the following visiblePattern point.

visiblePattern - specifies individual patterns to search for. Default is off, i.e. no pattern to search for is selected.  
This parameter is sequence of zeros and ones. If in a certain position it is set to “1”, a pattern associated with this position of parameter will be included in search.

* + "Gartley"
  + "Bat"
  + "Alternate Bat"
  + "Butterfly"
  + "Crab"
  + "Deep Crab"
  + "Leonardo"
  + "Shark"
  + "Cypher"
  + "Nen STAR"
  + "5-0"
  + "A Gartley"
  + "A Bat"
  + "A Alternate Bat"
  + "A Butterfly"
  + "A Crab"
  + "A Deep Crab"
  + "A Leonardo"
  + "A Shark"
  + "A Cypher"
  + "A Nen STAR"
  + "A 5-0"
  + "Black Swan"
  + "White Swan"
  + "Navarro 200"
  + "max Bat"
  + "max Gartley"
  + "max Butterfly"
  + "TOTAL 1"
  + "TOTAL 2"
  + "TOTAL 3"
  + "TOTAL 4"
  + "TOTAL"

000000000000000000000000000000000 – 33 patterns, none will be searched for when SelectPattern = 7  
110110011000000000000000000000000 – when SelectPattern = 7 based on the sequence of patterns  
Gartley, Bat, Butterfly, Crab, Shark and Cypher will be searched for.

NumberPattern - the number of the pattern by which the zigzag is calibrated and parameters which are displayed through the InfoTF.  
NumberPattern = 0 - Displays the zigzag with parameters same as in ExtIndicator = 0 mode

ExtGartleyTypeSearch – defines the way patterns are searched for

0 - search ends after the first pattern found

1 - displays all patterns in the area specified by parameter maxBarToD.   
Search is repeated for each swing of the zigzag. “The Chinese Toy 1”

2 - displays all patterns in the area specified by parameter maxBarToD. The search is performed only once. “The Chinese Toy 2”

ExtHiddenPP - Zigzag display mode for ExtIndicator = 11 setting

0 - the zigzag is not displayed. Shows points of the zigzag peaks. Patterns Pesavento not displayed.

1 - shows a zigzag pattern calibrated by pattern defined by the parameter NumberPattern. Pesavento patterns displayed in the usual way.

2 - the zigzag is not displayed. Displays only points at the swing of a zigzag. Patterns Pesavento only displayed for the swings of Gartley patterns

ExtGartleyOnOff - includes display of patterns Gartley. Not in the scanner mode.

maxBarToD - sets the maximum number of candles from zero candle to D point of pattern

patternInfluence –

0 - displays patterns when the zero bar to the D point has no more than maxBarToD candles

1 - takes into account the effect of the pattern, in this case the effect of maxBarToD parameter will be overridden.

2 - search patterns is carried out throughout all the zigzag legs

patternTrue = true - displays patterns satisfying the condition:

for bearish patterns in the area from the point D to zero candle should be no candles with high of the candle above the maximum of the zone of the D point;

for bullish patterns in the area from the point D to zero candle should be no candles with low of the candle below the minimum of the zone of the D point.

AllowedBandPatternInfluence – this is a coefficient based on the size of the distance between the X and D points of the pattern. This factor determines the distance from the point D to the point where the effect of the pattern supposedly ends

RangeForPointD – enables displaying the D point development zone (PRZ).

OldNewRangeForPointD – selecting options for building development zones (PRZ) of the pattern

ExtColorRangeForPointD – defines the color of the rectangle of PRZ (Potential Reversal Zone – D point development zone)

VectorOfAMirrorTrend = 1 shows the trend vector

VectorOfAMirrorTrend = 2 displays mirroring the trend vector

VectorOfAMirrorTrendColor - sets the color of the mirror trend line

VectorOfAMirrorTrendStyle - sets the style of the mirror trend line

shortNamePatterns – enables display of abbreviated pattern names

visibleLineOrTriangle - enables displaying patterns outlined by lines (true) or in the form of triangles (false), except for patterns AB = CD displayed in both cases by lines.

PatternLineStyle - sets the line style for five-point patterns and ABCD

PatternLineWidth - sets the line thickness for five-point patterns and ABCD

ExtColorPatternsBullish – defines the color of bullish patterns

ExtColorPatternsBearish – defines the color of bear patterns

ExtColorPatternList - a list of colors defining the colors of Gartley when “Chinese Toy” mode selected. Commas separate the colors. If any color is mistyped, the color is automatically set to red

ExtDeltaGartley - tolerance for price deviation for pattern search. By default, this value is set to 9% - 0.09

ExtDeltaGartleyPRZ - the special allowance for the range of the PRZ of the pattern, D point rectangle.

levelD – enables the display of the different possible XD retracement levels of the currently developing exact pattern.

colorLevelD – defines the color for XD retracement

Equilibrium – displays lines for Equilibrium, Reaction1 and Reaction2

ReactionType – defines the reaction line style

EquilibriumStyle - defines the equilibrium line style

EquilibriumWidth - sets the line thickness for the equilibrium

ColorEquilibrium - sets the color for equilibrium

ColorReaction - sets the color for Reaction1 and Reaction2

Ext\_3Drives - enables the display of 3 Drives pattern

Ext\_xO - defines the ratio to find 7-point pattern i.e. 3 Drives

Dragon – enables the display of Dragon pattern

PeakZZDragon – defines the zigzag swing extremes for Dragon pattern search

Ext\_4PointPattern – enables search for 4-point continuation pattern

maxXB – defines the maximum XB retracement level. Find more information about this pattern from the author here: <http://kanetrading.com/>

ABCD - enables search for AB = CD pattern

0 - AB = CD pattern is enabled

1 - any AB = CD pattern is displayed

2 - displays only harmonic AB = CD, i.e. its ratios correspond to Fibonacci levels within tolerance range

searchABCDAlternate - enables output alternate AB = CD pattern

ABCDAlternate - defines a list of alternate ABCD patterns. In this list, comma separated, the coefficients X are listed based on the formula X \* AB = CD

visibleABCDrayZZ - enables displaying ABCD patterns in form of lines (not triangle forms, see VisibleLineOrTriangle parameter description)

Ext\_noname - allows search for unknown five-point patterns, where all four retracement levels correspond to some Fibonacci levels

CustomPattern – enables or disables the display of a user defined custom pattern

0 – user pattern is not displayed

1 – user pattern is displayed along with other patterns

2 – displays only user patterns

NameCustomPattern - the name of the user pattern

minXB - sets the minimum value of retracement XB

maxXB - sets the maximum retracement XB

minAC - sets the minimum value of retracement AC

maxAC - sets the maximum retracement AC

minBD - sets the minimum value of retracement BD

maxBD - sets the maximum retracement BD

minXD - sets the minimum value of retracement XD

maxXD - sets the maximum value of retracement XD

The minimum and maximum retracement define the range for the pattern search

filtrEquilibrium – enables the display of a filter line passing through point X and B of the pattern. When this filter is enabled, the pattern will be displayed when the price breaks through this line, on the way from the C point of the pattern to point D. This only works with “Custom” and “Noname” patterns.

readFromFileListPatterns – enables to read pattern definition from a file located and named as:   
\\ ZUP \ ListPatterns \ listpatterns.csv

0 – disables reading the file data

1 – enables search of five-point patterns listed in the file

2 – enables search of patterns including both, patterns included in ZUP, as well as, the patterns from the file.

NameFileListPatterns - specifies the name of the .csv file to read the pattern parameters from

writeToFileListPatterns - allows recording Patterns five-point list:

1 - if readFromFileListPatterns = 0 in the file: \\ ZUP \ ListPatterns \ listpatternsdefault.csv

2 - if readFromFileListPatterns = 1 to the file: \\ ZUP \ ListPatterns \ listpatternscustom.csv

3 - if readFromFileListPatterns = 2 in the file: \\ ZUP \ ListPatterns \ listpatternsmixt.csv

picture - enables to save the image of the pattern from the graph, into an image file

writeInfoPatternsToFileXML – enables to write into a .XML file the parameters of the current five-point pattern

0 – parameters are not saved into file

1 - time parameters are written in expanded form

2 - time parameters are written in number of seconds

writeInfoPatternsToFileCSV - enables to write into a .CSV file the parameters of the current five-point pattern

0 – parameters are not saved into file

1 - time parameters are written in expanded form

2 - time parameters are written in number of seconds

namefileSymbolPeriod = true – the filename where the image of the pattern is saved is defined: Symbol () + "\_" + Period () + "\_ Patterns

InfoPointD – enables display of the point D information of a pattern in large print

MonitorPatterns – turns on monitoring of patterns

TextSize - defines the font size of the monitored patterns

ExtGlobalVariableSet – enables writing pattern information into the global variables of the terminal

# • "Parameters for Andrews’ Pitchfork"

ExtPitchforkDynamic

0 – disables display of dynamic Andrews’ Pitchfork

1 – enables display of dynamic Andrews’ Pitchfork

2 - displays the dynamic pitchfork along with the Schiff lines

3 - 50% of the dynamic pitchforks

4 - displays the dynamic Schiff lines

AutoAPDynamicTestRedZone = true – displays automatically the dynamic Andrews’ Pitchfork after testing the red dynamic pitchfork area

ExtPitchforkDynamicCustom – selecting the position of the first anchor point for the dynamic fork ExtPitchforkDynamic = 3

ExtLinePitchforkD - sets the color of the dynamic pitchfork

ExtPitchforkStatic

0 – disables display of static Andrews’ Pitchfork

1 – enables display of static Andrews’ Pitchfork

2 - displays the static pitchfork along with the Schiff lines

3 - 50% of the static pitchforks

4 - displays the static Schiff lines

ExtPitchforkStaticNum  
 Value 3-9 – defines the number of peaks of the ZigZag to start building the static pitchfork from

ExtPitchforkStaticCustom - selecting position of the first anchor point to the static pitchfork when ExtPitchforkStatic = 3

ExtLinePitchforkS – defines the color of static pitchfork

ExtMasterPitchfork - defines the main forks, forks laid on the wave level of the current chart

0 - no main pitchforks are displayed

1 - dynamic main pitchfork displayed

2 - static main pitchfork displayed

ExtPitchforkDynamicColor - defines the color of the channel of the dynamic pitchfork

ExtPitchforkStaticColor - defines the color of the channel of the static pitchfork

ExtPitchforkStyle – defines the line style for the pitchfork display

0 - solid line

1 - dashed line

2 - dotted line

3 - dash-dot line

4 - dash-dot line with double dots

ExtPitchforkWidth - defines the line thickness to display the pitchforks with

## Reaction Lines - RL

ExtRLDynamic – enables the display of the reaction line RL for the dynamic Andrews’ Pitchfork

ExtRLStyleDynamic – defines the line style for RL of the dynamic Andrews’ Pitchfork

ExtVisibleRLDynamic – enables display of the Fibonacci levels for the reaction lines of the dynamic Andrews’ Pitchfork

ExtRLStatic – enables display of the reaction lines for the static Andrews’ Pitchfork

ExtRLStyleStatic – defines the line style for the RL display for static Andrews’ Pitchfork

ExtVisibleRLStatic - enables display of the Fibonacci levels for the reaction lines of the static Andrews’ Pitchfork

ExtRL146 - enables display of additional RL 14.6 and RL 23.6

ExtRLineBase - hides guiding reaction lines RL 0

## Red Zone

ExtRedZoneDynamic – enables the display of RedZone of the dynamic pitchfork

ExtRedZoneStatic - enables the display of RedZone of the static pitchfork

0 - RedZone off

1 - RedZone displayed as a box

2 - RedZone displayed by line RL

ExtRZDynamicValue – defines the minimum value of RL for the right side limit of the RedZone of the dynamic Andrews’ Pitchfork

ExtRZStaticValue - defines the minimum value of RL for the right side limit of the RedZone of the static Andrews’ Pitchfork

ExtRZDynamicColor - defines the color for RedZone dynamic Andrews’ Pitchfork

ExtRZStaticColor - defines the color for RedZone static Andrews’ Pitchfork

## Internal Signal Lines - ISL

ExtISLDynamic – enables the display of internal signal lines for dynamic Andrews’ Pitchfork

ExtISLStyleDynamic – defines the style, how to display the dynamic ISL lines of the pitchfork

ExtVisibleISLDynamic – enables to display the values ​​of the Fibonacci numbers in the internal signal lines for dynamic Andrews’ Pitchfork

ExtISLStatic - enables the display of internal signal lines for static Andrews’ Pitchfork

ExtISLStyleStatic - defines the style, how to display the static ISL lines of the pitchfork

ExtVisibleISLStatic - enables to display the values ​​of the Fibonacci numbers in the internal signal lines for static Andrews’ Pitchfork

ExtISLWidth – defines the line thickness of ISL

ExtISLChannelDynamicColor - defines the color of the balancing channel between ISL .382 and .618 for dynamic Andrews’ Pitchfork

ExtISLChannelStaticColor - defines the color of the balancing channel between ISL .382 and .618 for static Andrews’ Pitchfork. Channel ISL gets enabled when color is set.

## Signal line at 50% of the median - SLM

## Balancing channel 50% of the median - SLM

ExtSLMDynamic – enables the display of SLM in the dynamic Andrews’ Pitchfork

ExtSLMDynamicColor - defines the color of SLM in the dynamic Andrews’ Pitchfork

ExtSLMStatic - enables the display of SLM in the static Andrews’ Pitchfork

ExtSLMStaticColor - defines the color of SLM in the static Andrews’ Pitchfork

## FSL line, Schiff lines for Andrews' Pitchfork

ExtFSLShiffLinesDynamic = true - enables the display of FSL Schiff lines for the dynamic Andrews’ Pitchfork

ExtFSLShiffLinesDynamicColor - defines the color of the (dynamic) FSL Schiff lines

ExtFSLShiffLinesStatic = true - enables the display of FSL Schiff lines for the static Andrews’ Pitchfork

ExtFSLShiffLinesStaticColor - defines the color of the (static) FSL Schiff lines

## Warning and Control lines of the static Andrews’ Pitchfork

ExtUTL – enables the display of upper control line Andrews' Pitchfork

ExtLTL – enables the display of lower control line Andrews' Pitchfork

ExtUWL – enables the display of upper warning line

ExtVisibleUWL – enables the display of Fibonacci values ​​for the upper signal lines

ExtLWL - enables the display of upper warning line

ExtVisibleLWL - enables the display of Fibonacci values ​​for the lower signal lines

ExtLongWL - controls the length of the warning lines

## Pivot Zone

ExtPivotZoneDynamicColor – defines the color of the dynamic Pivot Zone

ExtPivotZoneStaticColor - defines the color of the static Pivot Zone

ExtPivotZoneFramework – displays the Pivot Zone as an outline of a rectangle (default = false) or, as a filled rectangle (true)

## Building Andrew’s Pitchfork on arbitrary candles

ExtCustomStaticAP - true – enables to move the fork by the mouse

AutoMagnet - enables automatic magnet for the fork anchor points

AMBars - defines the number of candles on the right and left of the current anchor point candle. In this area of candles will automatically search for the highest/lowest (extreme).

## Building Andrew’s Pitchfork on selected candles

ExtPitchforkCandle – enables the display of forks based on selected set of candles

ExtDateTimePitchfork\_1, ExtDateTimePitchfork\_2, ExtDateTimePitchfork\_3 – defines the date and time of the candles on which Andrews’ Pitchfork is being built.

ExtPitchfork\_1\_HighLow – enables picking the high/low candles around the selected candles for the first point of building Andrews’s Pitchfork

## Fibonacci fans

ExtFiboFanDynamic - enables the display of dynamic Fibonacci fans

ExtFiboFanStatic - enables the display of static Fibonacci fans, displayed only with static pitchforks enabled

ExtFiboFanD - defines the color of dynamic Fibonacci fans

ExtFiboFanS - defines the color of static Fibonacci fans

ExtFiboFanExp – defines the number of rays of Fibonacci fans (true = 6, false = 4)

ExtFiboFanHidden - enables the display of Fibonacci values on Fibonacci fan rays

ExtFiboFanMedianaDynamicColor and ExtFiboFanMedianaStaticColor - define the color of Fibonacci fans on the median line of dynamic and static pitchforks

## Fibonacci time zones (only displayed for the static Andrews’ Pitchforks)

ExtFiboTime1 – enables the display of Fibonacci time zone 1

ExtFiboTime2 - enables the display of Fibonacci time zone 2

ExtFiboTime3 - enables the display of Fibonacci time zone 3

ExtFiboTime1C - defines the color of the lines for time zone 1

ExtFiboTime2C - defines the color of the lines for time zone 2

ExtFiboTime3C - defines the color of the lines for time zone 3

ExtVisibleDateTime – enables the display of date and time of the Fibonacci time zone

ExtVisibleNumberFiboTime - allows you to identify those Fibonacci time zones you want to display date and time information for

1 - displays the date and time  
0 - does not displays the date and time

the first figure - for Fibonacci Time 1  
the second figure - for Fibonacci Time 2  
the third digit - for Fibonacci Time 3  
(e.g. when set to “010” date and time will be displayed only on Fibonacci time zone 2 lines)

## Setting custom values ​​Fibonacci parameters

ExtFiboFreePitchfork -   
true – always applies user defined custom ​​Fibonacci values  
false – applies the Fibonacci values defined in ZUP for all the tools in ZUP

ExtFiboFreeRLDynamic - defines the value of the user reaction line for dynamic Andrews' Pitchfork

ExtFiboFreeRLStatic - defines the value of the user reaction line for static Andrews’ Pitchfork

ExtFiboFreeISLDynamic - defines the value of internal user warning lines for dynamic Andrews' Pitchfork

ExtFiboFreeISLStatic - defines the value of internal user warning line for static Andrews’ Pitchfork

ExtFiboFreeUWL, ExtFiboFreeLWL - defines the custom values ​​of the upper and lower warning lines

ExtFiboFreeFT1, ExtFiboFreeFT2, ExtFiboFreeFT3 - defines custom values for ​​Fibonacci time zones

## Target levels and areas (label / price tag)

All parameters for the Andrews' Pitchfork, starting with the letters m, designed to generate tags/labels

mSelectVariantsPRZ - defines the type of tags displayed  
= 0 - displays tags "inside" the current (single) fork  
> 0 – tags are displayed at the intersection of the current (baseline) fork with external forks  
= 1 - SSL crossing tags  
= 2 - the intersection of the median tags  
= 3 – FSL crossing tags   
= 4 – zone of median channel crossing  
= 5 – zone of intersection of the channel of forks  
= 6 – tags of intersection of the 1/2 median   
= 7 – zone of the channel of ½ median   
= 8 – zone of intersection of the channel with Schiff lines  
= 9 – UTL crossing tags

mTypeBasiclAP - defines the type of basic forks  
= 0 - static forks from the current formation  
= 1 - dynamic fork of the current formation

mTypeExternalAP - defines the type of external forks  
= 0 - dynamic or static current forks (opposite the base forks)  
= 1 - saved from the current formation of forks  
= 2 - any forks of the currently developing formations  
= 3 - static forks from other ZUP formations on the current chart  
= 4 - dynamic forks from other ZUP formations on the current chart  
= 5 - any of the other forks of ZUP on the current chart  
= 6 - forks with the current chart, defined manually without using ZUP  
= 7 - any external forks

mExternalHandAP – selection of manually defining the elements of pitchfork by setting the labels at the intersection of the given forks  
= 0 – display labels only at the intersection of the median and SSL / FSL of given forks  
= 1 – displaying the lines of the fork tools which define where to set the labels to  
= 2 - displaying only labels without displaying the elements of external fork

mAuto\_d, mAuto\_s - enables automatic display of labels in static and dynamic Andrews’ Pitchfork

mSaveWL\_TL – when automatic display of labels selected, when it is enabled (=true) saves the automatically drawn warning lines – UWL and LWL- and the control lines – UTL and LTL –until new pitchfork is drawn

mOutRedZone – enables the display of price tags when price exits outside the red zone

mExitFSL\_SSL = false - enables the display of UTL-LTL-UWL-LWL lines only after touching the FSL and SSL lines

mPivotPoints – connecting points of Andrews’ Pitchfork

mPivotPointsChangeColor -   
= true - enables changing the color of PivotPoints Labels depending on the current market  
= false - disables changing the color of PivotPoints Labels

The following twelve parameters can be any value from 0 to 9

Names of labels for the static pitchforks

mSSL - starting signal line (initial signal line)

m1\_2Mediana - 1/2 median (50% of the median)

mISL382 - internal signal line 38.2%

mMediana - median

mISL618 - internal signal line 61.8%

mFSL - final signal line

mSLM - 38.2 and 61.8 signal lines of the 50% of the median

mFSLShiffLines - line FSL Schiff lines for static Andrews’ Pitchfork

mUTL - Control line (upper) UTL

mLTL - Control line (lower) LTL

mUWL - warning line (upper)

mLWL - warning line (lower)

mCriticalPoints - crossing point 50% of the median with ISL 38.2 and an initial signal line.

The following eight parameters can be any value from 0 to 9

Names of labels for the dynamic pitchforks

mSSL\_d - starting signal line (initial signal line)

m1\_2Mediana\_d - 1/2 median (50% of the median)

mISL382\_d - internal signal line 38.2%

mMediana\_d - median

mISL618\_d - internal signal line 61.8%

mFSL\_d - final signal line

mSLM\_d - 38.2 and 61.8 signal lines of the 50% of the median

mFSLShiffLines\_d - FSL line, Schiff lines for dynamic Andrews' Pitchfork

mCriticalPoints\_d - crossing point 50% of the median with ISL 38.2 and initial signal line.

mAllLevels - on / off all the labels

mColorUP – defines the color when the point is above the current price

mColorDN - defines the color when the point is below the current price

mColor - defines the color when the point is at the current price

mColorRectangleUP - defines the color when the price is above the rectangle

mColorRectangleDN - defines the color when the price is below the rectangle

mColorRectangle - defines the color when the price is in the rectangle

mBack – enables the display of labels as background the output of Labels as background

mBackZones – enables the display of rectangle (lines) as background

mLineZonesWidth – defines the thickness of labels in modes 8 and 9

mVisibleST - enables output labels on theft of the first connecting points of the pitchfork

mVisibleISL - enables the display of ISL names for external manual fork

WriteToFile – enables to write the label values ​​in a \* .csv file  
 labels for the dynamic pitchforks are recorded in the directory Price Label D   
 labels for the static pitchforks are stored in the folder Price Label S

mPeriodWriteToFile - defines the number of minutes, the interval how often the new label values are recorded in the file

# • "Parameters for micmed Channels"

The micmed channels are constructed using Andrews' Pitchfork

ExtCM\_0\_1A\_2B\_Static, ExtCM\_0\_1A\_2B\_Dynamic - micmed channels. The value can be 0-5

ExtCM\_FiboStatic, ExtCM\_FiboDynamic – defines the position of the median line for the construction of Andrews' Pitchfork micmed channels

# • "Parameters for fibo Fan"

ExtFiboFanColor – defines the color of the Fibonacci fan lines

ExtFiboFanNum - defines the number of ZigZag swing for how many swing before the Fibonacci fan will be built on   
1 <ExtFiboStaticNum <= 9

ExtFanStyle – defines the line style for Fibo fans

ExtFanWidth - defines the thickness of the lines for Fibo fans

# • "Parameters for fibo Expansion"

ExtFiboExpansion - Fibonacci extension as in MetaTrader  
<2 Fibonacci extension are not displayed   
= 2 - dynamic Fibonacci expansion  
> 2 <= 9 - static Fibonacci extension

ExtFiboExpansionColor - defines the line color of the Fibonacci extensions

ExtExpansionStyle – defines the line style for the Fibonacci extension level

ExtExpansionWidth – defines the line thickness for the Fibonacci extensions

# • "Parameters for Versum Levels"

ExtVLDynamicColor – defines color for dynamic Versum Levels

ExtVLStaticColor - defines color for static Versum Levels

ExtVLStaticNum – defines the number of swings from where Versum Levels are originated

ExtVLStyle – defines the line style for Versum Levels

ExtVLWidth – defines the line thickness for Versum Levels

# • "Parameters for Fibonacci Arc"

ExtArcDynamicNum - defines the number of swings of ZigZag from where Fibonacci arcs are originated

ExtArcStaticNum - defines the number of swings of ZigZag from where Fibonacci arcs are originated

ExtArcDynamicColor - defines the color of dynamic Fibonacci arcs

ExtArcStaticColor - defines the color of static Fibonacci arcs

ExtArcDynamicScale - defines the scale of the dynamic Fibonacci arcs  
0 - auto scaling   
> 0 - scale defined by the user

ExtArcStaticScale - defines the scale of the static Fibonacci arcs  
0 - auto scaling   
> 0 - scale defined by the user

ExtArcStyle – defines the line style for Fibonacci arcs

ExtArcWidth - defines the line width for Fibonacci arcs

# • "Logarithmic Spiral"

ExtSpiralNum - defines the number of swings of ZigZag from where the logarithmic spiral originates

SpiralCycle - defines the distance between the spiral arms. The higher the number, the smaller the distance between the turns of the spiral.

SectorSize - defines the length of straight line segments that build spiral

turns - defines the number of spiral windings

clockWiseSpiral - defines the direction of spiral windings  
= true - spiral twisted clockwise  
= false - spiral twisted counterclockwise

spiralColor1 - defines the color of the first spiral line

spiralColor2 - defines the color of the second spiral line

ExtSpiralStyle - defines the style of the spiral line

ExtSpiralWidth - defines the line thickness of the spiral line

\* Note. All existing spirals are stored in the archive. Remove or hide the spirals is possible only through the graphical interface.

# • "Parameters for Pivot ZigZag"

ExtPivotZZ1Color - defines the color of the Pivot ZigZag 1

ExtPivotZZ2Color - defines the color of the Pivot ZigZag 2

ExtPivotZZ1Num - specifies the number of the ray based on which Pivot ZigZag 1 is calculated

ExtPivotZZ2Num - specifies the number of the ray based on which Pivot ZigZag 1 is calculated

ExtPivotZZStyle - defines the style of the Pivot ZigZag

ExtPivotZZWidth - defines the line thickness of the Pivot ZigZag

# • "Parameters for Channels"

ExtTypeChannels - defines the channel type.

1 - trend line passes through the zigzag swings and at a tangent to the market. The target line runs parallel to the trendlines. This channel is built on one ray, or two consecutive ones

2 - the trend line and the target line run parallel to the zigzag line and is tangential to the market. Zigzag ray may pass between any swings from 1 to 9

ExtTypeLineChannels - defines the type of trend line and target line. It can take values ​​from 0 to 3

ExtChannelsNum - defines the number of zigzag swings to build the channel on

ExtLTColor - defines the color of the trend line

ExtLCColor - defines the color of the target line

ExtLTChannelsStyle - defines the style of the trend line

ExtLTChannelsWidth - defines the thickness of the trend lines

ExtLCChannelsStyle - defines the style of the target line

ExtLCChannelsWidth - sets the thickness of the target line

ExtRay – enables or disables the display of the channel on the right side

## • "Parameters for Fibo Time"

ExtFiboTimeNum – defines the number of zigzag swings from where the ExtFiboTime is built, these are not related to Andrews’ Pitchfork

ExtFiboTime1x – enables Fibonacci time zone 1

ExtFiboTime2x - enables Fibonacci time zone 2

ExtFiboTime3x - enables Fibonacci time zone 3

ExtFiboTime1Cx – defines the color of Fibonacci time zone 1

ExtFiboTime2Cx - defines the color of Fibonacci time zone 2

ExtFiboTime3Cx - defines the color of Fibonacci time zone 3

ExtVisibleDateTimex – enables to display the date and time for the time zones

ExtVisibleNumberFiboTimex - allows you to identify those Fibonacci time zones you want to display date and time information for

1 - displays the date and time  
0 - does not displays the date and time

the first figure - for Fibonacci Time 1  
the second figure - for Fibonacci Time 2  
the third digit - for Fibonacci Time 3  
(e.g. when set to “001” date and time will be displayed only on Fibonacci time zone 3 lines)

## • "Parameters Exp"

chHL = true – enables the display of confirmation levels when the mode set to ExtIdicator = 1, ExtIdicator = 2, ExtIdicator = 3

PeakDet = true – enables the display of previous highs for any mode set for ExtIndicator

chHL\_PeakDet\_or\_vts   
= true – by default enables the display of confirmation lines (price channel) and the levels of the previous ZigZag highs  
= false - displays indicator i-vts

NumberOfBars - the number of bars for the calculation (0-all) by i-vts.

NumberOfVTS - the smoothing parameter for i-vts.

NumberOfVTS1 - smoothing parameter for the second instance of i-vts.

ExtLabel   
= 0 - normal zigzag display mode  
= 1 - display tags in a predetermined location of the appearance of a new ray for the DT mode - as a character strip  
= 2 - display tags in a predetermined location of the appearance of a new ray for the DT mode - as a single character

ExtCodLabel - character code for label display

## • "Common Parameters"

ExtFiboType – defines what Fibonacci levels to be used by the Fibonacci tools  
= 0 - standard Fibonacci levels  
= 1 - Fibonacci with Pesavento numbers, etc.  
= 2 – user defined Fibonacci levels

ExtFiboTypeFree - defines the user selected Fibonacci for the Fibonacci fans along the median of Andrews' Pitchfork, arbitrary Fibonacci fans, Fibonacci levels, Fibonacci extensions, Fibonacci arcs

ExtObjectColor – defines the line color for connecting the anchor points of objects

ExtObjectStyle - defines the line style for connecting the anchor points of objects

ExtObjectWidth - defines the line thickness for connecting the anchor points of objects

ExtDynamic - enables displaying static tools as dynamic, i.e. when a new ray appears, static tools move to the other Zigzag swing

ExtVisibleDynamic – this is a bit map based parameter, allowing the user to define which static tools to enable to work in dynamic mode  
Total 11 tools sequentially enabled (1) or disabled (0) in the sequence of the following list:  
1 - numbering zigzag swings  
2 - static Fibonacci levels and the first type of Fibo extension  
3 - static Andrews’ Pitchfork and all that is associated with a pitchfork  
4 - static Fibonacci fans  
5 - static Fibonacci extension  
6 - static Versum Levels  
7 - static Fibonacci arc  
8 - static Fibonacci spiral  
9 - static Pivot ZigZag  
10 – channels  
11 - Fibonacci time zone

Default ExtVisibleDynamic = "10000000000" (i.e. the “1 - numbering zigzag swings” enabled in dynamic mode)  
0 - displayed in static mode  
1 - displayed in a dynamic mode

RefreshStaticNewRayZZ - allows redrawing static tools in cases, when instead of three first rays of zigzag formed, there is only one ray formed

AutoTestRedZone - when   
= true, and   
ExtDynamic = true, and   
ExtVisibleDynamic = "00100000000"   
static forks change position only after the price getting out of the red zone, in a new position of Andrews' Pitchfork

ZigZagHighLow – defines the points from which the Pesavento patterns, Andrews’ Pitchfork etc. are built from  
= true – from extreme (high/low) candles  
= false - from ZigZag swings just forming (currently not available)

ExtSendMail – send email alert about new pattern

ExtAlert - enables sound and pop-up alert when new ZigZag leg appears

ExtPlayAlert - enables sound and pop-up alert when new a new pattern appears

AlertText – enables pop-up alert when new pattern appears

ExtPushNotification - enables a push notification alert when a new pattern appears

ExtPushNotificationZigZag - enables a push notification alert when a new ZigZag leg appears

ExtBack – defines all objects to be displayed as background

ExtSave – enables storing data of static pitchforks and static Fibonacci time

info\_comment - this is a bit map based parameter, allowing the user to define what to display in the information line, based on the following list (5 groups of parameters):  
0 - parameter group is not displayed  
1 – parameter group settings displayed

Parameter groups:  
1 - information on the candles from higher timeframes  
2 - % change of rays for beam tactics  
3 – zigzag parameters  
4 – information about found Gartley pattern  
5 - display the calculated values ​​of RL, if the right border RedZone of Andrews’ Pitchfork prolong to tangent to the market

infoMerrillPattern   
= true – enable display information about the Merrill patterns  
= false - disable display information about the Merrill patterns

infoTF - enables information about 5 higher time frames  
displays the name of the timeframe and the size of the candle in points  
current price level with respect to the minimum price  
displays also the swing height of zigzag leg, as a percentage  
displays the operating parameters of the indicator, as well as, the zigzag parameters  
displays the name of Gartley patterns and size of a possible price zone for D of the pattern  
displays the size of RedZone of Andrews' Pitchfork for values of ExtRedZoneDynamic ​​= 1 and ExtRedZoneStatic = 1

Display vertical line on the zero bar:  
CursorLine – enables display of vertical line on the zero bar  
CLColor - defines the color of the vertical line  
CLWidth - defines the thickness of the vertical line  
CLStyle - defines the style of the vertical line  
CLBack - sets the output of the line above or below the chart

The next group of parameters displays the name Gartley patterns in large print. Also enables the display of Merrill patterns in large print.  
  
bigText – enables to display pattern name in large print  
bigTextSize - defines the font size  
bigTextColor – defines the font color for Bullish Gartley Patterns  
bigTextColorBearish - defines the font color for the Bearish Gartley Patterns  
bigTextX – defines the horizontal display position for bigText  
bigTextY - defines the vertical display position bigText  
ExtVisible – disable ZUP outputs without unloading it from the memory  
ExtReset – restet the work with zigzag waves  
ExtPanel - on / off for wave symbol panel  
ExtComplekt (ExtSet?)- specifies the number of the indicator. When several ZUP indicators are applied to the same graph this parameter identifies the objects on the graph of the individual ZUP indicators.  
This is to make sure all the different copies of the indicator are working correctly.