

Market Profile

MetaTrader indicator – is a classic Market Profile implementation that can show the price density over time, outlining the most important price levels, value area, and control value of a given trading session. This indicator can be attached to timeframes between M1 and D1 and will show the Market Profile for daily, weekly, monthly, or even intraday sessions. Lower timeframes offer higher precision. Higher timeframes are recommended for better visibility. It is also possible to use a free-draw rectangle session to create a custom market profile on any timeframe. Six different color schemes are available to draw the profile's blocks. Drawing profiles as a plain color histogram is also possible. Alternatively, you may choose to color the profile based on bullish/bearish bars. This indicator is based on bare price action and does not use any standard indicators. It is available for MetaTrader 4, MetaTrader 5, and cTrader platforms.

A system of alerts is available for prices crossing the levels of Value Area high and low, Median, and Single Print zones.

Input parameters

Main

Session (default = Daily) – trading session for market profile: Daily, Weekly, Monthly, Intraday, and Rectangle. For a rectangle session to get calculated, a rectangle chart object with the name starting with *MPR* should be added to the chart. Pressing 'r' on the keyboard will add a properly named rectangle object automatically.

StartFromDate (default = __DATE__) – if **StartFromCurrentSession** is *false*, then the indicator will start drawing profiles from this date. It draws to the past. For example, if you set it 2018-01-20 and **SessionsToCount** is 2, then it will draw the profiles for 2018-01-20 and 2018-01-19.

StartFromCurrentSession (default = true) – if *true*, then the indicator starts drawing from today, else – from the date given in **StartFromDate**.

SessionsToCount (default = 2) – for how many trading sessions to draw the market profiles.

SeamlessScrollingMode (default = false) – if *true*, the **StartFromDate** and

StartFromCurrentSession parameters are ignored; the sessions are calculated and displayed

starting from the current chart position's rightmost bar. This allows scrolling back in time indefinitely to view past sessions.

EnableDevelopingPOC (default = false) – if *true*, multiple horizontal lines will be drawn to depict how the Point of Control developed through the session.

ValueAreaPercentage (default = 70) – a percentage share of the session's TPOs to include in the Value Area.

Looks and colors

ColorScheme (default = Blue to Red) – color scheme for profile's blocks:

blue to red

red to green

green to blue

yellow to cyan

magenta to yellow

cyan to magenta

SingleColor (default = clrBlue) – if **ColorScheme** is set to *Single Color*, this color will be used to draw market profiles.

ColorBullBear (default = false) – if *true*, the color of the profile blocks depends not on the age of the origin bar but on its direction.

MedianColor (default = clrWhite) – the color of the control value (median).

ValueAreaSidesColor (default = clrWhite) – the color of the value area side borders.

ValueAreaHighLowColor (default = clrWhite) – the color of the value area top and bottom borders.

MedianStyle (default = STYLE_SOLID) – the Point of Control (median) line style.

MedianRayStyle (default = STYLE_DASH) – the Point of Control (median) ray line style.

ValueAreaSidesStyle (default = STYLE_SOLID) – the style of the value area side borders.

ValueAreaHighLowStyle (default = STYLE_SOLID) – the style of the value area top and bottom borders.

ValueAreaRayHighLowStyle (default = STYLE_DOT) – the style of the value area top and bottom rays.

MedianWidth (default = 1) – the Point of Control (median) line width.

MedianRayWidth (default = 1) – the Point of Control (median) ray line width.

ValueAreaSidesWidth (default = 1) – the width of the value area side borders.

ValueAreaHighLowWidth (default = 1) – the width of the value area top and bottom borders.

ValueAreaRayHighLowWidth (default = 1) – the width of the value area top and bottom rays.

ShowValueAreaRays (default = None) – can be set so that the value area's High and Low price levels are projected to the right side of the chart. Can be set to the previous session, current, previous and current, all previous, or all.

ShowMedianRays (default = None) – can be set so that the median is projected to the right side of the chart. Can be set to the previous session, current, previous and current, all previous, or all.

RaysUntilIntersection (default = Stop_No_Rays) – defines the way median and value area rays will be cut off when they meet the next trading session's price range:

Stop_No_Rays – no rays are stopped anywhere.

Stop_All_Rays – all rays are stopped at an intersection with the price of another session.

Stop_All_Rays_Except_Prev_Session – all rays except the previous session's rays are stopped at an intersection with the price of another session.

Stop_Only_Previous_Session – only rays of the previous session are stopped at an intersection with the price of another session.

HideRaysFromInvisibleSessions (default = false) – if *true*, rays from sessions starting behind the left edge of the screen won't be displayed until you scroll back to them.

TimeShiftMinutes (default = 0) – time shift for the sessions, in minutes. Positive value will move the session start to the left; negative – to the right.

ShowKeyValues (default = true) – if *true*, Value Area High, Value Area Low, and Point of Control are displayed on the left of the market profile.

KeyValuesColor (default = clrWhite) – the color for Value Area High, Value Area Low, and Point of Control printout.

KeyValuesSize (default = 8) – the font size for Value Area High, Value Area Low, and Point of Control printout.

ShowSinglePrint (default = No) – can be set to Leftside or Rightside and will mark the single print profile – a part of the profile, which is only one TPO wide.

SinglePrintRays (default = false) – if *true*, single print edges are marked with rays.

SinglePrintColor (default = clrGold) – the color for single print marking if **ShowSinglePrint** isn't set to *No*.

SinglePrintRayStyle (default = STYLE_SOLID) – the single print ray line style.

SinglePrintRayWidth (default = 1) – the single print ray line width.

ProminentMedianColor (default = clrYellow) – the color for the prominent median (PPOC) if

ProminentMedianPercentage is set to *100* or less.

ProminentMedianStyle (default = STYLE_SOLID) – the style for the prominent median (PPOC)

if **ProminentMedianPercentage** is set to *100* or less.

ProminentMedianWidth (default = 4) – the width for the prominent median (PPOC) if

ProminentMedianPercentage is set to *100* or less.

RightToLeft (default = false) – if *true*, the current session's market profile has its histogram drawn from right to left. In case **Session** is set to *Rectangle*, market profiles of all sessions are drawn right-to-left.

Performance

PointMultiplier (default = 0) – the higher it is, the wider are the profile's price boxes and the fewer are the chart objects. You can use it to reduce the indicator's load on CPU. When the value is zero, an adaptive multiplier is used – the indicator attempts to calculate the optimal value automatically.

ThrottleRedraw (default = 0) – a delay in seconds that will be applied before each redraw of the profiles. You can use it to reduce the indicator's load on CPU.

DisableHistogram (default = false) – if *true*, no market profile histogram is drawn, but Value Area and Median are still marked. This makes indicator work extremely fast, but is less useful for thorough market analysis.

Alerts

AlertNative (default = false) – if *true*, the indicator will issue the platform's native pop-up alert when some alert conditions are met.

AlertEmail (default = false) – if *true*, MetaTrader's email alerts will be sent when some alert conditions are met. Email should be properly configured in MetaTrader via

Tools->Options->Email

AlertPush (default = false) – if *true*, MetaTrader's push notification alerts will be sent to your mobile device when some alert conditions are met. Notifications should be properly configured in MetaTrader via *Tools->Options->Notifications*. This alert type is not available in the cTrader version of the indicator.

AlertArrows (default = false) – if *true*, MetaTrader will draw arrows on the chart when some alert conditions are met.

AlertCheckBar (default = Current) – controls the bar to check the alert conditions on. *Current* – the indicator will check the current unfinished bar; expect a lot of alerts. *Previous* – the indicator will check the previous (closed) bar; alerts will be delayed but more concise.

AlertForValueArea (default = false) – if *true*, alerts will be issued whenever a Value Area ray (high or low) is crossed by the price.

AlertForMedian (default = false) – if *true*, alerts will be issued whenever a Median ray is crossed by the price.

AlertForSinglePrint (default = false) – if *true*, alerts will be issued whenever a Single Print ray is crossed by the price.

AlertOnPriceBreak (default = false) – if *true*, alerts will be issued when the price breaks any of the trigger levels but then returns back behind it.

AlertOnBarClose (default = false) – if *true*, alerts will be issued when the bar opens on one side the trigger level and closes on the other side of it.

AlertOnGapCross (default = false) – if *true*, alerts will be issued when the trigger level appears inside a price gap between the last two bars.

AlertArrowCodePB (default = 108) – arrow code for price break alert arrows.

AlertArrowCodeCC (default = 110) – arrow code for candle close alert arrows.

AlertArrowCodeGC (default = 117) – arrow code for gap crossover alert arrows.

Intraday sessions

EnableIntradaySessionN (default = true) – if *true* and **Session** is set to *Intraday*, then the indicator will attempt to draw the intraday market profile #N on the chart.

IntradaySessionNStartTime (default = "HH:MM") – start time in HH:MM format for the intraday session #N.

IntradaySessionNEndTime (default = "HH:MM") – end time in HH:MM format for the intraday session #N.

IntradaySessionNColorScheme (default = Blue_to_Red) – color scheme for the intraday session #N.

Miscellaneous

SaturdaySunday (default = Normal sessions) – how to treat Saturday and Sunday sessions:

Normal sessions – Saturday and Sunday will be treated as normal sessions with their own daily and intraday sessions.

Ignore Saturday and Sunday – Saturday and Sunday candlesticks will be ignored.

Append Saturday and Sunday – Saturday candlesticks will be appended to the Friday session; Sunday candlesticks will be appended to the Monday session.

DisableAlertsOnWrongTimeframes (default = false) – if *true*, no pop-up alerts will appear on using Market Profile with wrong timeframe/session combination.

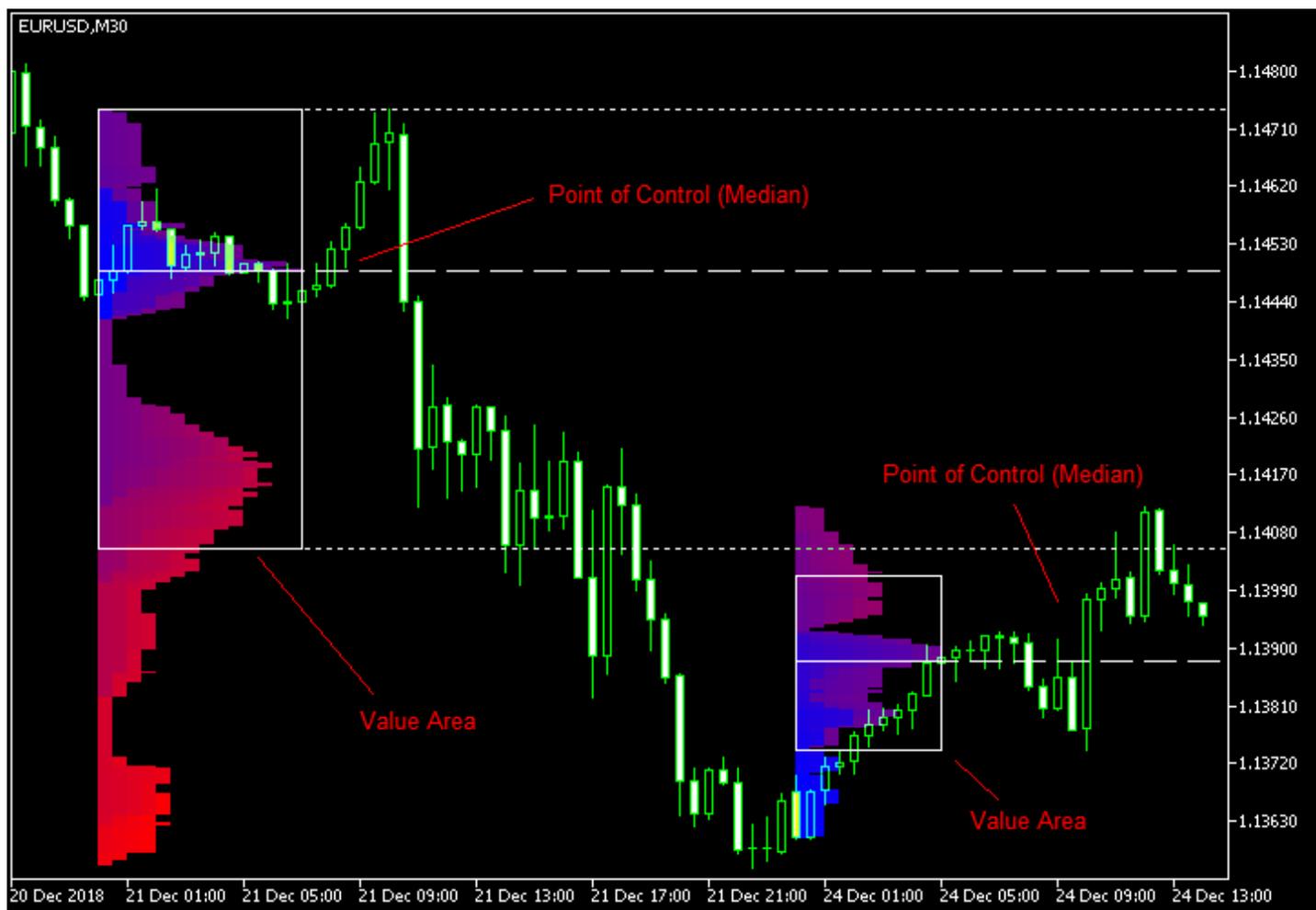
ProminentMedianPercentage (default = 101) – percentage of TPOs out of all possible that should occur inside a median for it to be considered prominent (PPOC). For example, if you set it to 50%, a median will be marked as prominent if it contains at least 24 TPOs in a daily session on M30 timeframe. If it is set to *101*, no prominent median is possible.

Examples

Daily sessions

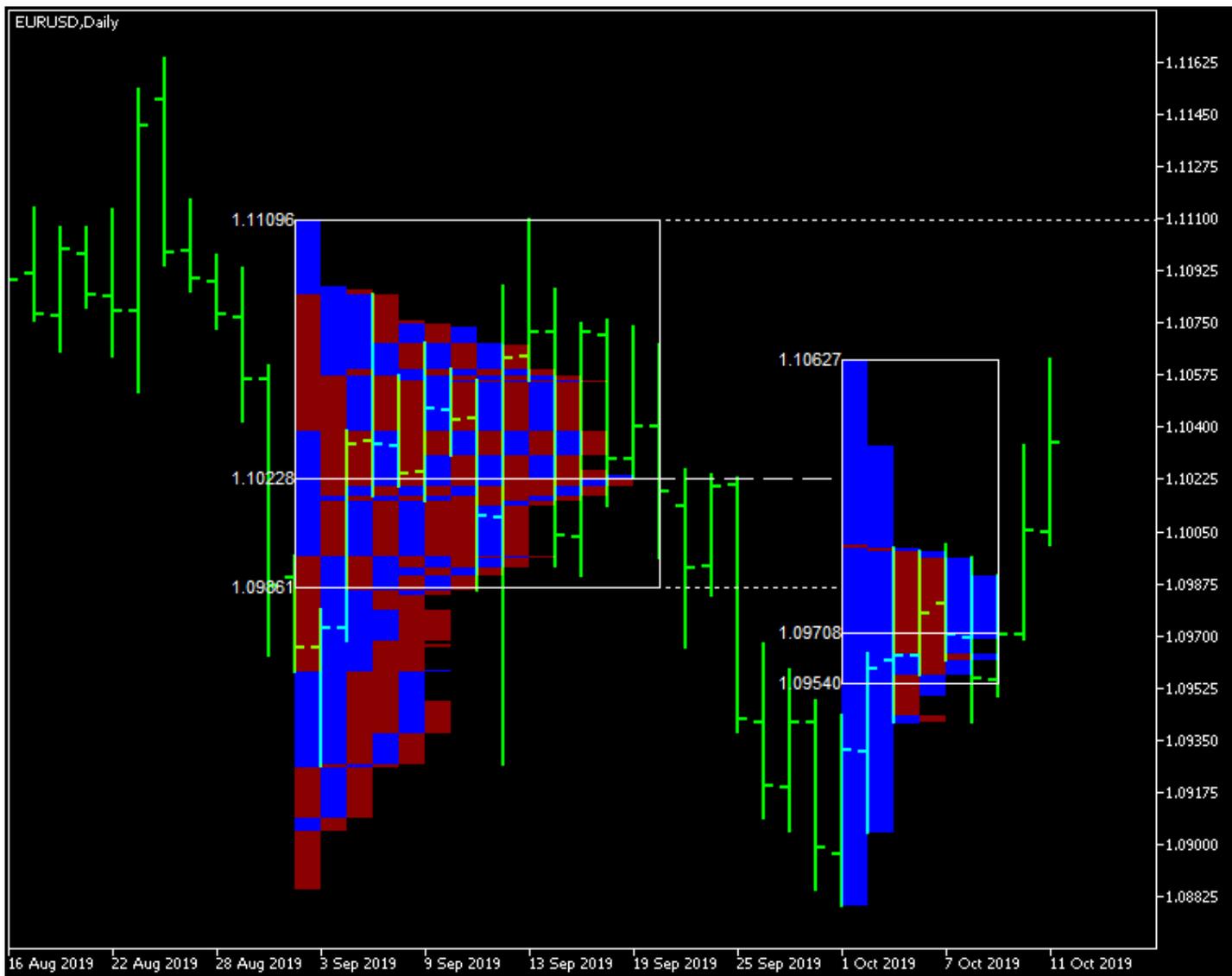
The chart screenshot shows market profiles calculated and displayed for two daily Forex trading sessions. The timeframe is M30 and the right-hand daily session is still in progress. The earliest prices are blue and the latest prices are red. The medians and the value areas are marked with the white lines and display the most important price areas. Traders tend to return to those areas if the

volume of the breakout movement is not too high. High-volume breakout out of these areas signifies a real breakout. You can read more about Market Profile in this short e-book: [Book on Market Profile](#).



Bullish/bearish coloring

The example below demonstrates how the Market Profile can be colored according to the direction of each bar in the session rather than its age. This is done when **ColorBullBear** is set to *true*.



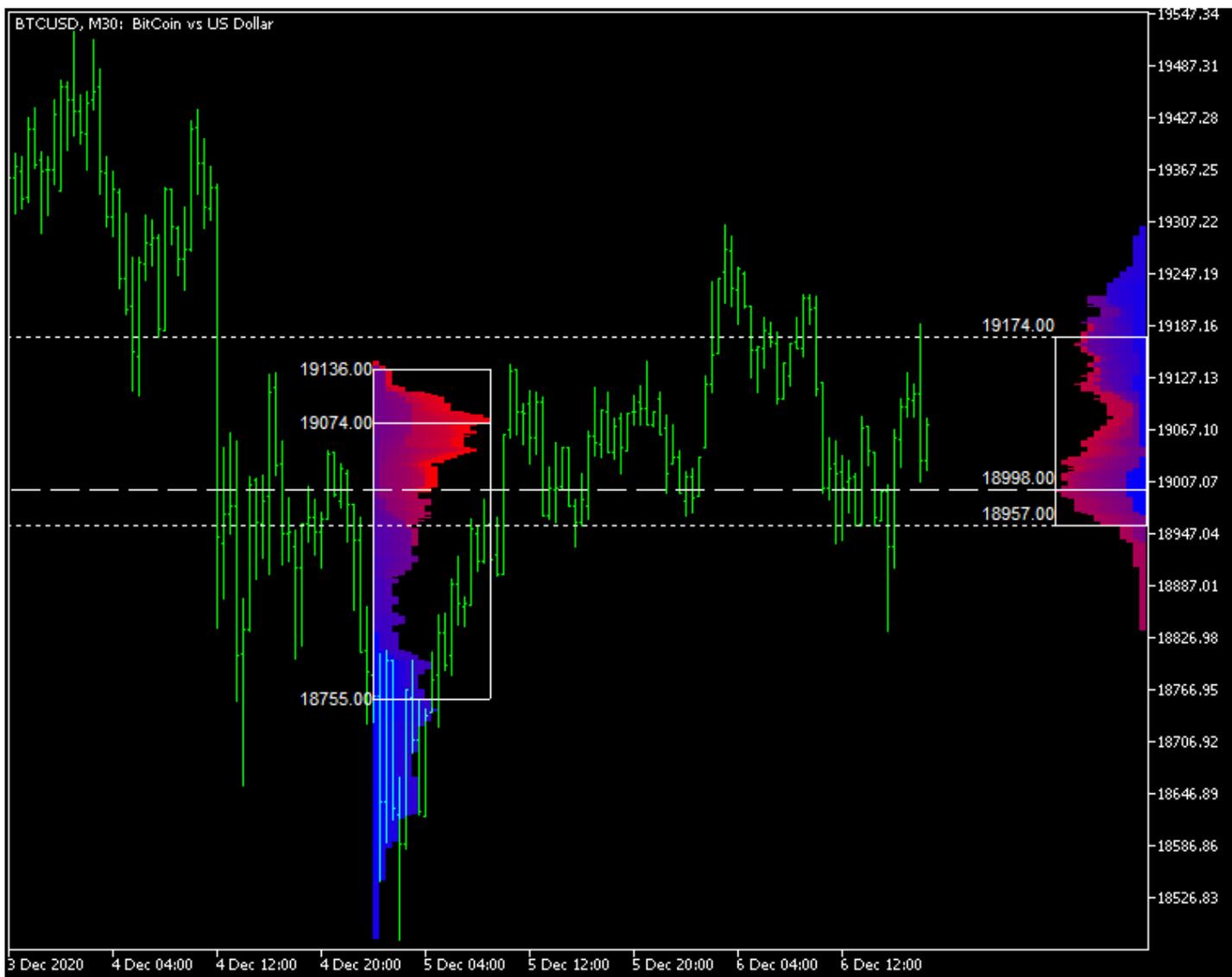
Rectangle sessions

This example demonstrates how the indicator can display a market profile based on the rectangle chart objects freely drawn by a trader. For this to work, a rectangle object's name has to start with *MPR* and the **Session** input parameter has to be set to *Rectangle*. You can press 'r' on your keyboard to add such a rectangle to the chart automatically.



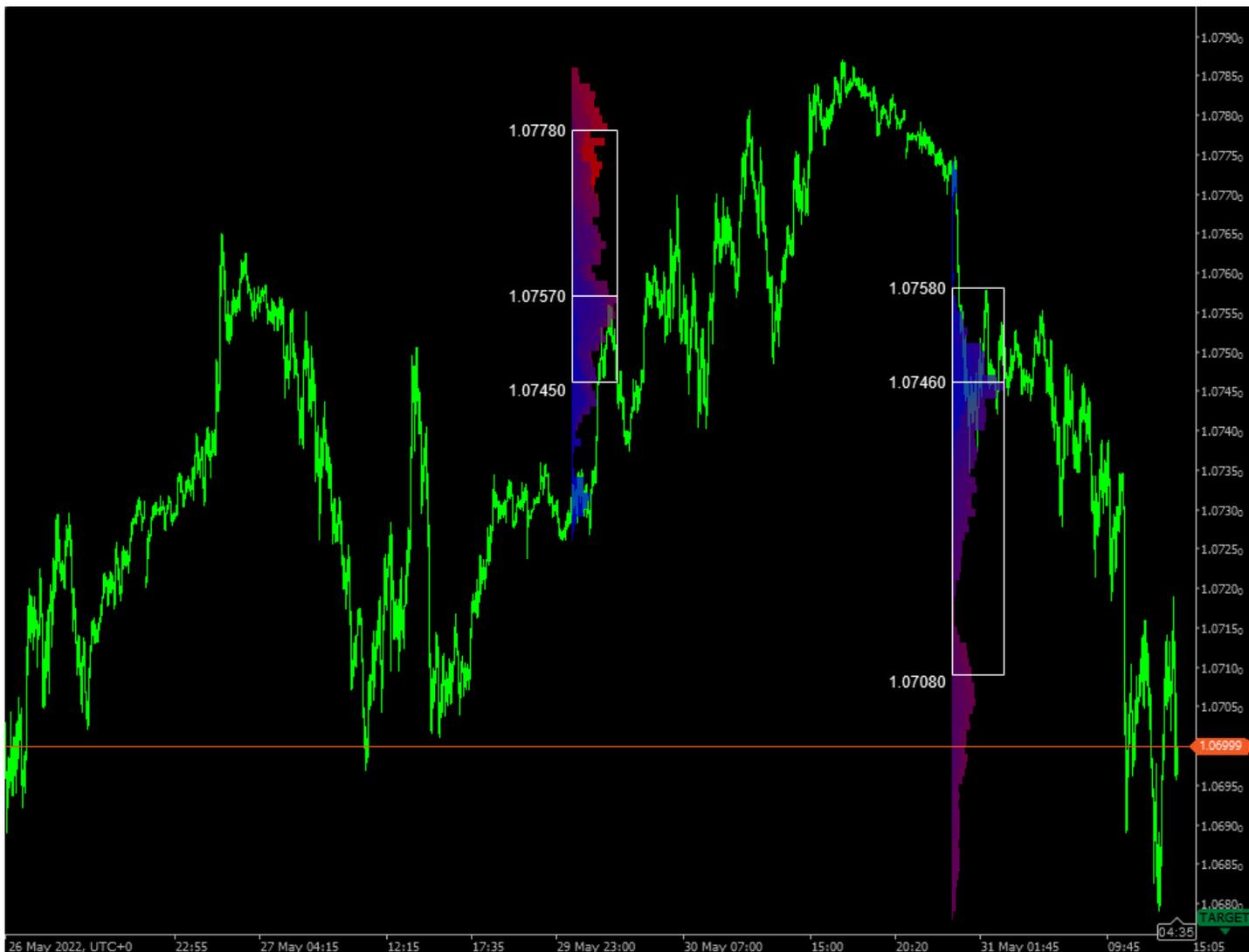
Right-to-left display

Market Profile indicator can also draw histogram from right to left. Unlike the traditional left-to-right display, it can be helpful to focus on the current trading session, without obscuring its chart. You can see how this works on the chart screenshot below.



cTrader

Market Profile indicator is also available as a free cTrader indicator. It is very similar to its MetaTrader siblings, but cannot work with push notification alerts.



Downloads (ver. 1.19, 2022-05-17)

MarketProfile indicator is being developed via a [dedicated GitHub repository](#). You are encouraged to actively participate in the improvement of this indicator by submitting your own features via pull-requests and reviewing existing suggestions, changes, fixes, and so on.

MT4/MT5

[Market Profile for MetaTrader 4 in .zip](#)

[Market Profile for MetaTrader 4 in .mq4](#)

[Market Profile for MetaTrader 5 in .zip](#)

[Market Profile for MetaTrader 5 in .mq5](#)

cTrader

[Market Profile for cTrader in .algo \(compiled file including source code\)](#)

[Market Profile for cTrader in .cs \(source code only\)](#)

How to use Market Profile in Forex trading?

Market Profile indicator is a powerful tool developed by a [CBOT](#) trader. Its original purpose was to graphically organize price and time information obtained during a trading session in a manner useful to traders. Today's Forex market is quite different from what commodity futures trading was back in 1985 when Peter Steidlmayer introduced his charting instrument to the public. Can Market Profile be a useful tool to Forex traders?

Issues with Forex

The main difference between today's currency market and the futures market of 80's is the lack of daily trading sessions. Fortunately, it does not produce any real problems. The lack of strict daily close and daily open can be compensated by one of the following methods:

A rolling 24-hour window for Market Profile calculation. Each new bar, the Market Profile calculation window is shifted right by one bar as well. This way, a trader is always looking for the graphical profile of the recent 24 hours of trading. Unfortunately, this would require a complete recalculation of the whole curve with every new bar arriving. Still, this can be accomplished by using the **Rectangle** session type in our Market Profile indicator.

Smaller geographically-bound time windows. The Forex market operates through several widely recognized [trading sessions](#). The most prominent of them are: London, New York, and Tokyo. A trader operating mainly inside the New York trading session could use a 10-hour window based on the NY open and close to calculate and display Market Profile. A trader operating within a mix of New York and Asian sessions could use the span of both. The good thing is that with this method, the calculation process is much simpler than with a rolling

window. The bad thing is that it ignores all the market data that is left outside of the target trading sessions.

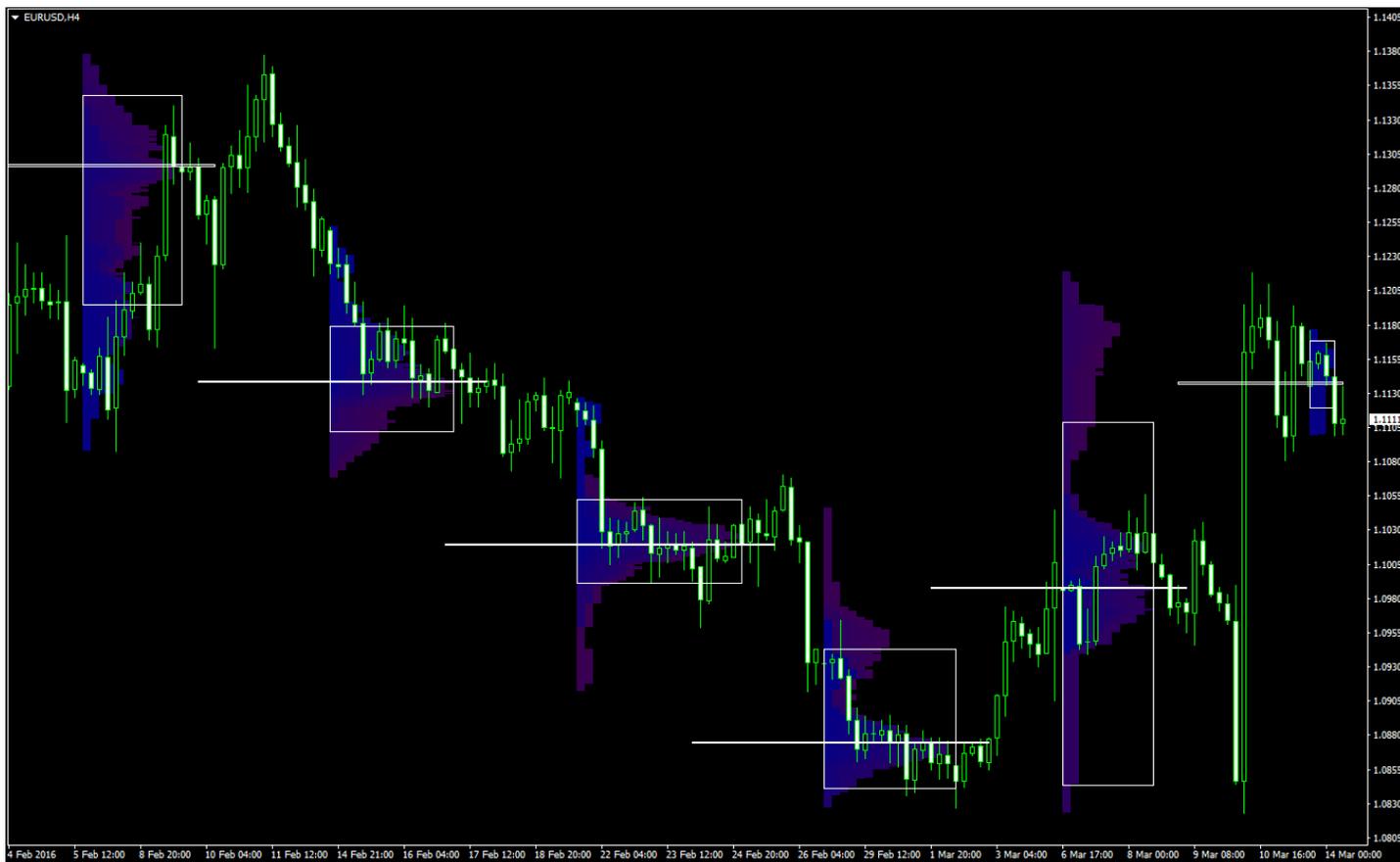
Weekly trading sessions. Unlike days, the weeks in Forex are clearly defined. The minor difference of Sunday/Monday open and Friday/Saturday close between different [brokers and liquidity providers](#) is small enough to ignore (one or two hours of thin-volume trading). Weekly Market Profile is easy to calculate and offers a lot of data to traders. However, it is rarely suitable to short-term intraday traders, less so to scalpers.

Apparently, it is still possible to apply Market Profile to modern foreign exchange market. The most consistent approach seems to be the third one, which is based on weekly sessions.

Another important issue to solve when using this indicator in analysis is whether to apply it to the current session – and suffer from the lack of data during the early hours – or to the previous session, which could be based on stale data. In reality, this is no issue at all. As outlined in the CBOT's [A Six-Part Guide to Market Profile](#), the most important profile is based on the current session, but the profile built during the previous one is also relevant and should be analyzed by a trader.

Moreover, it is possible (and useful) to look at several previous profiles at once, analyzing how the trend developed across more than one value area. The multi-session Market Profile analysis is also a key to detecting long-term areas of balance and states of imbalance. In fact, long-term traders should be looking at Market Profiles of many sessions to determine possible points of entry and exits.

The following example shows Market Profile calculated for six weekly sessions of the EUR/USD currency pair:



Usage

As the indicator's author stated, the Market Profile should not be used as a buy/sell signal generator. It is a tool for analyzing the market and getting information that isn't evident from a bare chart. Here is how the main parts of the Market Profile can be used in Forex trading:

Value area – the area of market acceptance. The price spent a hefty amount of time at those levels – the market *likes* it. The edges of the value area form strong support and resistance levels.

Median – the middle of the value area offers a strong [pivot point](#). It serves both as the attractor for the price and as the bounce level. The median is also called a *fair price*. If market is below the level, it is considered *undervalued*. If it is above the median, it is *overvalued*.

Areas of low volume – the long tails below and above the value area show the price areas rejected by the market. The bottom tail is telling us of long-term buyers outperforming long-term sellers at those price levels. The top tail is telling us about the long-term sellers doing better than buyers at the respective price levels.

Even if you aren't a regular user of Market Profile indicator and your main trading strategy is based on a different concept or if your strategies are either automated with [expert advisors](#) or use fundamental indicators, you can still consult the long-term market profiles in times of doubt when lacking accurate information on where to put an entry order, take-profit, or stop-loss.

Discussion

Warning! If you do not know how to install this indicator, please read the [MetaTrader Indicators Tutorial](#).

Do you have any suggestions or questions regarding this indicator? You can always [discuss Market Profile](#) with the other traders and MQL programmers on the indicators forums.

Changelog

1.19 – 2022-05-17

Added the arrow alerts option.

Added the seamless scrolling mode to display sessions starting from the rightmost bar of the current chart window. This can be helpful to analyze past sessions without going back to the indicator's input parameters constantly.

Fixed input parameter types for SinglePrint ray style and width.

Fixed a bug with when value area and POC rays could be shown for a wrong session in some cases.

Fixed description of the **RaysUntilIntersection** parameters' values.

Fixed a glitch when random indicator plot values could be displayed in the MT5 version of the indicator.

Fixed a glitch when value area rays could be disappearing and appearing again in the MT5 version of the indicator.

Fixed a bug when single print wasn't properly removed for the current trading session.

1.18 – 2022-01-12

Added alerts for crossing Median (Point of Control), Value Area, and Single Print zones.

Added a new ray drawing mode (via the **HideRaysFromInvisibleSessions** input parameter) where rays are not shown on the chart if their source sessions are behind the left edge of the screen. This helps to reduce chart clutter when working with many sessions at once.

Improved performance in both MT4 and MT5 version of the indicator.

Fixed a bug with session colors in latest MT5 builds.

Fixed Value Area lowest edge – it is now drawn at its real level.

Fixed a bug when all rays could disappear when a new session started.

1.17 – 2021-07-17

Added a developing POC option to show how the Point of Control (median) developed during the session.

Added style and width input parameters for all lines and rays.

Added a hotkey (**r**) to place a properly named rectangle chart object in the Rectangle session mode.

Added an input parameter (**ValueAreaPercentage**) to control how many TPOs (the profile's building blocks) should be captured by the Value Area.

Added an option for Single Print rays to mark the edges of single print profile ranges.

Fixed time zone shift parameter (**TimeShiftMinutes**) to work properly with Intraday sessions.

1.16 – 2020-12-07

Added an input parameter (**DisableHistogram**) to prevent the indicator from drawing profile histograms (TPO's). Value area and point of control are still drawn in this mode.

Added an input parameter (**RightToLeft**) for right-to-left histogram display. Works for the current trading session for non-Rectangle session types, and for all trading sessions for Rectangle session type.

Added adaptive point multiplier option via setting the **PointMultiplier** input parameter to 0 (which is now default).

1.15 – 2020-07-14

Added *Rectangle* session type to display market profile based on rectangle objects added to the chart. It works on any timeframe. A rectangle should have a name starting with *MPR* to be detected by the indicator.

Added single print highlighting (**ShowSinglePrint** and **SinglePrintColor** input parameters).

Added prominent median (PPOC) highlighting (**ProminentMedianPercentage** and **ProminentMedianColor** input parameters).

1.14 – 2020-01-26

Replaced **ValueAreaColor** input parameter with two separate parameters:

ValueAreaSidesColor and **ValueAreaHighLowColor** to provide more control over how the value area is shown on the chart.

Changed **RaysUntilIntersection** input parameter to provide more control over which value area or point of control (median) rays are cut off at intersection with other sessions.

Fixed a rounding error in MT5 version, which resulted in value areas being biased towards higher prices.

Fixed a bug in MT5 version, which resulted in profile blocks being displayed in white color rather than not displayed at all when *Single_Color* scheme is used and **SingleColor** parameter is set to `clrNone`.

Bypassed a coloring bug in MT4 version that would cause the chart discoloring and blinking along with visible gaps showing in the profile.

1.13 – 2019-10-18

Added **ColorBullBear** input parameter to color the market profile according to bars' directions.

Added **DisableAlertsOnWrongTimeframes** input parameter to disable popup alerts when Market Profile is applied to a wrong timeframe.

Added optional printouts for Value Area High, Value Area Low, and Point of Control rates for each profile.

Added grouping for input parameter in MT5 version of the indicator.

1.12 – 2019-03-27

Added **RaysUntilIntersection** input parameter, which helps to hide the rays of the previous sessions' median and value area that have already been violated by newer trading sessions.

Fixed a bug with TPO display when the symbol's TickSize is higher than $_Point \times \text{PointMultiplier}$.

1.11 – 2019-01-20

Fixed a bug when empty holes could appear in the profile when the current session was built.

Fixed a bug that prevented current session profile from drawing from the first bar.

Fixed some potential 'array out of range' errors.

1.10 – 2018-12-25

Fixed potential array out of range error when old chart with Market Profile indicator is reopened.

1.09 – 2018-12-24

Added two alternative options for dealing with Saturday and Sunday candlesticks.

Added more flexibility to displaying Median and Value Area rays.

Changed Median to draw as a single line inside the value area.

Reduced the size of the working arrays significantly, which should make MP calculation on some trading instruments faster.

1.08 – 2018-05-28

Added smart color graduation depending on timeframe and session type.

Added an option to project the Median (Point of Control) of the previous session to the right side of the chart.

Added single color scheme.

Added **PointMultiplier** input parameter to allow traders to set wider profile box, helping with indicator's performance.

Added **ThrottleRedraw** input parameter to delay indicator's display updates, helping to reduce its load on the CPU.

Fixed a potential bug when incorrect chart object naming routine could cause glitchy display of the market profile.

Changed hard initialization failure to a soft one – this will prevent input parameters from resetting when incorrect timeframe and session type combination is used.

1.07 – 2018-02-06

Added support for up to four intraday sessions.

Added three new color schemes for drawing the market profile.

Some minor code tweaks and improvements.

1.06 – 2017-11-30

Added proper object cleanup when Market Profile is used with chart templates.

1.05 – 2017-11-23

Added optional display for the previous session's Value Area High/Low lines.

Added time shift input parameter to move the sessions across time zones.

1.04 – 2016-11-07

Fixed "Array out of range" errors.

1.03 – 2016-01-25

Added support for three sessions: daily, weekly, and monthly.

Fixed chart object deletion to only delete indicator's own objects.

Optimized execution speed.

Increased the range of supported timeframes.

Added inline indicator description.

Improved interface (enumerated input parameters).

Fixed some potential "Array out of range" errors.

Code rewritten completely to comply with the current MQL4 and MQL5 standards.

1.01 – 2011-12-11

Fixed compatibility issues due to new coding conventions in MQL5.

1.00 – 2010-07-23

Original version of Market Profile released for MT4 and MT5.