

PVSRA Indicators

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Table of Contents:

- **PVSRA Trade Levels**
- **PVSRA Access Panel**
- **PVSRA News Panel**
- **PVSRA Trends Set**
- **PVSRA Candles Set**
- **PVSRA Volumes Set**

PVSRA International with Traderathome provides at no cost the indicators described herein and the templates that use them. Colors shown in the External Inputs sections herein are for black charts. The “Suggested Colors” sections herein include the colors for white charts.

1. PVSRA TRADE LEVELS

User Notes:

This indicator is coded to run on MT4 Build 600+. It shows Trade Levels lines and labels for trade entries (EP), for the average of entries (AV), and for selected take profit (TP) and stop loss (SL), and it displays Profit/Loss labels for open and closed trades. Everything is based on MT4 orders executed. A Summary follows. Details are further below.

Preview

- All trade datum is automatically obtained from MT4 orders, no manual inputs of price or quantity are provided except to display a trial TP and SL.
- Exact line and label placements for all time frame charts is fully automated using new MQL4 "Chart_Scale" tracking.
- Permits single side trading and hedging. Permits variable size entries. These entries can be closed at different times and at different prices.
- Open and closed trades can be displayed on the same chart concurrently.
- Displays can be based on micro-lots, mini-lots, or full lots with a simple "1-2-3" unit type input, making this applicable across the entire spectrum of forex traders, and can be used to protect privacy of trade/account true size.
- The labels for EP Levels lines can be turned on/off for a cleaner chart when not needed. When displayed, they include the number of units (of the units size input selection) traded at each EP.
- EP/AV/TP/SL lines can individually be full lines, or just tabs for a cleaner chart.
- Price Dots at trade entries and exits improve visibility and can be re-sized.
- Connecting lines can be shown between EPs and the current bid/ask price of open trades, and between the EPs and close prices of closed trades. These lines are color coded to show if each specific trade is in profit or loss.
- PL Labels for open & closed trades show number of EPs, number of traded units, average pips, total pips, PL total money and PL account pct.

- A "Lookback" minutes input allows quick selection of time to go back and pick up closed trades to show.
 - The "yyyy.mm.dd hh:mm" start and end inputs can precisely define a previous time period of closed trades to show.
 - When multiple trades are included in the time span they can be shown as a single group with one PL label, or as separate trades with separate PL labels.
-

Displaying EP Levels -

You can show EP Levels lines and labels. The EP Levels lines can be full lines spanning the chart to just past the current candle, or short mini-line "tabs" just after the current candle. EP Levels labels include the EP number, price and size (quantity of units of the lot type you input). The size is highlighted with different colors for long and short positions. If you select to show the EP Levels labels the AV, TP and SL lines shift to the right to maintain good visibility.

Displaying Price Dots and Lines -

For open and closed trades you can show lines connecting the EPs to the current appropriate bid/ask price or closed price, color coded to represent if the trade is in profit or loss. You can show at each entry price a Dot color coded to represent if the trade is long or short. When an EP is closed the Dot is ringed with the color selected for closed EP rings. This enables you to easily see, if a number of trade components remain active but some have been closed, which are the closed EPs and which are open EPs. The size (0-5) of the price dots that will be shown on the chart scales (0-5) are the ones you enter into the External Inputs.

Displaying the AV Line -

For open trades an AV Level line and label can be displayed. The AV Level line can be a full line a "tab" line. The AV Level label shows the average price of all open EPs, the number of open EPs and the total trade size (quantity of open units of the lot type input).

Displaying TP and SL Lines -

For open trades TP and SL Levels lines and labels can be displayed. You can show the TP/SL lines as full lines or as “tabs” lines. Their values are those associated with the last MT4 order for the trade. It is presumed all orders for the trade have been given the same TP/SL values,.....none excluded and none different! You can override these values by putting other values into the External Inputs. You might do this temporarily to help you decide on the values to place with your MT4 orders. An asterisk appears in the TP/SL labels when displaying your override values as a reminder they are not the values derived from the last MT4 order. The TP/SL labels display the total pips resulting from all open units of all open EPs.

Displaying Open Trade PL Label -

The open trades PL Label is displayed in the lower right corner of the main chart window. It numbers the discrete EPs open, the total of open units of the lot type input, the average pips PL for each of the open units, and the total pips PL for the trade. You can also include the PL Money Total and PL Account Percent. The PL Label text changes color between green and red for profit/loss in pips as well as in money. You can have green text for the pips profit, but still have red text for loss of money and account value due to commissions and swap charges.

Be advised that the MT4 Trade ledger individual line "profit" ignores the commissions and swaps shown on the line! Only the summation profit shown at the bottom of the ledger includes commissions and swaps for all the line items! This can be confusing and deceiving, especially when you might be looking to close a particular line item as soon as it is in profit, since the line item "profit" it is not the true profit!

Show either gross or net profit by setting “Include_Commissions_Swaps” to "false" or to "true" respectively. Their default setting is "true", to show net profit.

Displaying Closed Trade PL Label -

The closed trade PL Label displays numbers of EPs closed, the total number of closed units of the lot type input, the average pips PL for each closed unit, and the total pips PL for the trade. You can also include PL Money Total and PL Account Percent, with or without adjusting for commissions and swaps. You can select to show just the number of EPs closed and average pips P/L for each of the undisclosed number of units involved.

PL Labels appear above or below the last close price of a trade unit in the trade group based on whether the unit was closed below or above its' entry price. You can raise or lower the PL label by increasing or decreasing the default offset input of "30" pips.

Five label height inputs allow adjustment of PL labels for up to five separate trade groups. The sequence 1-2-3-4-5 starts with the oldest trade group. It is intended the most recent trade group closed will be #5 in this sequence. If you attempt to show more than five groups it will be the oldest five trade groups can have their labels individually adjusted, with all more recent groups having the same label height as the very oldest group. Limit the display of closed trade groups to no more than five and it is best to just show one closed trade group at a time.

Whether you intend to show all closed trades as a single group with one PL label, or as multiple groups with labels, you must specify the number of minutes backwards from current time within which all closed trades will display. There are two way to do this:

1. The simple way is to use "Simple_Lookback_Time_Span", which by default is already set for one hour, an input of "60" minutes. After one hour the display of a closed trade will disappear from your chart. To continue to display it, increase this input, say from "60" to "600", to continue the display for a total of ten hours from the time the trade closed. The start/end inputs must be in their default state (yyyy.mm.dd hh:mm) for the simple method to work. You can copy & paste the "yyyy.mm.dd hh:mm" (provided in the External Inputs) to these start/end inputs to return them to their default state.
2. The exacting method is to set the year/month/day/hour/minutes for the start or end, or both the start and the end of the period for which you want closed trades to display. This method takes precedence over any value entered for the "Simple_Lookback_Time_Span".

All the trades closed within the set time span will be displayed. As mentioned already, you can display them either of two ways, as a single group or as multiple groups:

1. To show trades as one group with one PL label set "Show_Separate_Trade_Groups" to "false" (it is "false" by default)
2. To show trades separately grouped with each group having its own PL label, then set "Show_Separate_Trade_Groups" to "true". Now you must also define how to separate the individual groups using the input "__Min_Minutes_Btwn_Groups". You do this is by specifying a minimum time span between the last closed trade of one group and the first closed trade of the next following group. For all the groups to be shown, the time span to use is the one between the two groups with the shortest time between those last/first close events. Specify the time in minutes slightly less than that minimum time span.

Selecting the Unit Type Input -

The External Inputs start with "Show_Micro_Mini_Full_123" to input the unit type number that will determine how the units traded and the pips involved are displayed:

1. Select "1": Displays are in terms of micro-lots and micro-lot pips (\$0.10 MOL).
2. Select "2": Displays are in terms of mini-lots and mini-lot pips (\$1.00 MOL).
3. Select "3": Displays are in terms of full lots and full lot pips (\$10.00 MOL).

For example, if you input "3" for standard lots, but make an entry of a half lot (5 mini-lots), and price moves in your favor 10 pips, then your gain is 5 standard lot pips, not 10. As another example, if you input "1" for micro-lots but make a entry of one mini-lot (equivalent to 10 micro-lots), and price moves 10 pips in your favor, then your gain is 100 micro-lot pips, not 10.

Protecting your privacy is another feature of the unit type input. For example, suppose there are three traders:

1. This trader makes a single micro-lot trade and selects unit type "1".
2. This trader makes a single mini-lot trade and selects unit type "2".
3. This trader makes a single full lot trade and selects unit type "3".

Due to the unit types selected, the three charts will display identical data, all being based on "1" unit traded of the unit type selected. Anyone viewing all three

charts will see nothing that identifies the “1” unit type being traded as being based on micro, mini or full lots. The only way a viewer of the chart can know the unit type of the units shown is for the user to select to display PL Money Total in the PL Labels for open and closed trades. Without this information, a viewer cannot know if units are lots with \$10 pips, or mini-lots with \$1.00 pips, or micro-lots with \$0.10 pips (MOL, depending on each forex pair).

Setting Time Frames for Display of Indicator -

The indicator can be turned on/off without removing it from the chart. Also, you can select a chart TF above which this indicator will automatically not display.

Chart Properties Settings -

For this indicator to properly display Chart properties/Common tab/chart on foreground must be uncheck! The PVSRA templates already have this done by default. If checked, then MT4 candles are on top of, and can partially or totally obscure the Price Dots and other things drawn by this indicator.

- Traderathome, 05-01-2017

Acknowledgements:

St3ve – For initiating the change from manually filled datum to an MT4 orders driven product. This was a milestone influence and effort, which transitioned the indicator from an enhancement for educational charts into a tool for traders.

qFish - For generously devoting his time and programming skills to overhaul the core code of this indicator that handles the retrieval of MT4 orders for open and closed trades, to expand the "lookback" feature that identifies the closed trades to display, and to provide other indispensable features to this very sophisticated and complex indicator.

traderathome - For initiating the Trade Levels indicator as an aid to presenting clear trade charts for educational purposes, and for tailoring the upgrades to maintain an easy to use, eye appealing product.

Suggested Colors:	White Chart	Black Chart
Open_PL_Panel	White	C'015,015,015'
Open_PL_Panel_Border	C'133,133,133'	DimGray
Open_PL_Label_Profit	C'030,164,060'	C'049,172,058'
Open_PL_Label_Loss	C'255,040,072'	C'255,041,057'
Closed_PL_Label_Panel_Profit	C'216,254,216'	C'114,211,153'
Closed_PL_Label_Panel_Loss	C'255,221,227'	C'216,171,194'
Closed_PL_Label_Text_Profit	C'030,164,060'	C'000,119,021'
Closed_PL_Label_Text_Loss	C'255,040,072'	C'223,000,000'
EP_Level_Label	MediumBlue	C'094,150,253'
EP_Level_Line_	MediumBlue	C'075,112,205'
AV_Level_Label	DarkOrchid	C'209,088,239'
AV_Level_Line	DarkOrchid	MediumOrchid
SL_Level_Label	C'213,000,000'	C'255,051,071'
SL_Level_Line	C'206,119,056'	C'202,053,057'
TP_Level_Label	C'016,148,072'	C'045,162,071'
TP_Level_Line	C'003,126,055'	C'043,125,053'
EP_Size_Label_Long	C'000,172,255'	C'070,209,255'
EP_Size_Label_Short	C'255,081,094'	C'255,151,151'
EP_Dot_Ring_Open_Long	Black	Black
EP_Dot_Ring_Closed_Long	Black	White
EP_Dot_Body_Long	C'045,104,242'	C'013,194,255'
EP_Dot_Center_Long	White	Black
CP_Dot_Ring_Long	Black	Black
CP_Dot_Body_Long	C'255,255,065'	Yellow
CP_Dot_Center_Long	C'045,104,242'	Blue
EP_Dot_Ring_Open_Short	Black	Black
EP_Dot_Ring_Closed_Short	Black	White
EP_Dot_Body_Short	C'242,052,047'	C'255,128,128'
EP_Dot_Center_Short	White	Black
CP_Dot_Ring_Short	Black	Black
CP_Dot_Body_Short	C'255,055,065'	Yellow
CP_Dot_Center_Short	C'242,052,047'	Crimson
PL_Line_Trade_Positive	Blue	C'070,209,255
PL_Line_Trade_Negative	Red	C'255,128,128'

Indicator External Inputs

```
extern string Part_1 = "Main Settings:";
extern bool Indicator_On = true;
extern int Show_Micro_Mini_Full_123 = 1;
extern bool Show_Open_Trades = true;
extern bool Show_Closed_Trades = true;
extern int Display_Max_TF = 1440;
extern string TF_Choices = "1-5-15-30-60-240- 1440-10080-43200";

extern string __ = "";
extern string Part_2 = "PL Label Settings:";
extern bool Include_Commissions_Swaps = true;
extern string Open_Trade = "";
extern bool __Show_Total_Pips = true;
extern bool __Show_PL_Money = true;
extern bool __Show_PL_Act_Pct = true;
extern string Closed_Trade = "";
extern bool __Show_Total_Pips = true;
extern bool __Show_PL_Money = true;
extern bool __Show_PL_Act_Pct = true;

extern string ____ = "";
extern string Part_3 = "Open Trade Settings:";
extern bool Show_EP_Labels = true;
extern bool Show_EP_Price_Dots = true;
extern bool Show_EP_PL_Lines = false;
extern bool __Subordinate_PL_Lines = false;
extern bool Show_Full_EP_Level_lines = false;
extern bool Show_Full_AV_Level_lines = false;
extern bool Show_Full_SL_TP_Level_lines = true;
extern double Show_Trial_TP_Long = 0;
extern double Show_Trial_SL_Long = 0;
extern double Show_Trial_SL_Short = 0;
extern double Show_Trial_TP_Short = 0;
extern color Open_PL_Panel = C'015,015,015';
extern color Open_PL_Panel_Border = DimGray;
extern color Open_PL_Text_Profit = C'049,172,058';
extern color Open_PL_Text_Loss = C'252,041,057';
```

```

extern string _____ = "";
extern string Part_4 = "Closed Trade Settings:";
extern bool Show_Price_Dots = true;
extern bool Show_Price_Lines = true;
extern bool __Subordinate_Lines = false;
extern int Simple_Lookback_Time_Span = 60;
extern string Lookback_Exact_Start_Time = "yyyy.mm.dd hh:mm";
extern string Lookback_Exact_End_Time = "yyyy.mm.dd hh:mm";
extern string __Reset_via_Copy_Paste = "yyyy.mm.dd hh:mm";
extern bool Show_Separate_Trade_Groups = false;
extern int __Min_Minutes_Btwn_Groups = 60;
extern int __PL_Label_1_Adjust_Height = 30;
extern int __PL_Label_2_Adjust_Height = 30;
extern int __PL_Label_3_Adjust_Height = 30;
extern int __PL_Label_4_Adjust_Height = 30;
extern int __PL_Label_5_Adjust_Height = 30;
extern color Closed_PL_Label_Panel_Profit = C'114,211,153';
extern color Closed_PL_Label_Panel_Loss = C'216,171,194';
extern color Closed_PL_Label_Text_Profit = C'000,119,021';
extern color Closed_PL_Label_Text_Loss = C'223,000,000';

extern string _____ = "";
extern string Part_5 = "Levels Settings:";
extern color EP_Level_Label = C'094,150,253';
extern color EP_Level_Line = C'075,112,205';
extern color AV_Level_Label = C'209,088,239';
extern color AV_Level_Line = MediumOrchid;
extern color SL_Level_Label = C'255,051,071';
extern color SL_Level_Line = C'202,053,057';
extern color TP_Level_Label = C'045,162,071';
extern color TP_Level_Line = C'043,125,053';

extern string _____ = "";
extern string Part_6 = "Dot Size Settings:";
extern string Note_6_1 = "For each Chart Scale 0-5 select the";
extern string Note_6_2 = "Dot Static Size 0-5 you want applied:";
extern int CS0_SS = 0;
extern int CS1_SS = 1;
extern int CS2_SS = 2;
extern int CS3_SS = 3;
extern int CS4_SS = 4;
extern int CS5_SS = 5;

```

```
extern string _____ = "";
extern string Part_7 = "Dot Related Color Settings:";
extern string Note_7_1 = "Colors for Size in EP Labels:";
extern color EP_Size_Label_Long = C'070,209,255';
extern color EP_Size_Label_Short = C'255,151,151';
extern string Note_7_2 = "Colors for Long Trade Dots:";
extern color EP_Dot_Ring_Open_Long = Black;
extern color EP_Dot_Ring_Closed_Long = White;
extern color EP_Dot_Body_Long = C'013,194,255';
extern color EP_Dot_Center_Long = Black;
extern color CP_Dot_Ring_Long = Black;
extern color CP_Dot_Body_Long = Yellow;
extern color CP_Dot_Center_Long = Blue;
extern string Note_7_3 = "Colors for Short Trade Dots:";
extern color EP_Dot_Ring_Open_Short = Black;
extern color EP_Dot_Ring_Closed_Short = White;
extern color EP_Dot_Body_Short = C'255,128,128';
extern color EP_Dot_Center_Short = Black;
extern color CP_Dot_Ring_Short = Black;
extern color CP_Dot_Body_Short = Yellow;
extern color CP_Dot_Center_Short = Crimson;
extern string Note_7_4 = "Colors for PL Trade Lines:";
extern color PL_Line_Trade_Positive = C'070,209,255';
extern color PL_Line_Trade_Negative = C'255,128,128';
```

2. PVSRA ACCESS PANEL

User Notes:

This indicator is coded to run on MT4 Build 600+. It provides improved charting features and displays, which are listed below. It is imperative to "set up" this indicator as described in the "Preface" immediately below. Complete this "set up" before using this indicator! Also, be sure MT4 is set to not show OHLC prices. In Tools/Options/Charts "Show OHLC" should be unchecked. The PVSRA template is already set this way by default.

The "Preface" Input -

Broker time is required by the code that features PivotsTz and vLines. When data feed is live the broker time is available. When data feed is not live it is not available. The purpose of this "Preface" section is to find and input the Clock location that has the same time as the broker server. Then, even without live data feed we will still have the equivalent of the broker server time to work with, generated by the Clock, and the PivotsTz and vLines will always display properly. Perform the following steps.

When there is live data feed use the Clock to find the Clock time zone location matching the broker server time. Change "Clock_Normal_vs_Find_Server" to "false". The Clock will display "B" (for broker server) at the time zone location matching the broker server time. You can populate the Clock with all labels to find "B" (see Clock instructions below).

Chances are the labels needed are already displayed. If "B" shows in the "GMT" label during the non-DST time of the year (winter in northern hemisphere) things are not so clear because London time is also GMT then. We can not tell from the Clock if the broker server is on GMT all year, or on London time all year. Call your broker to find out.

You now have the Clock Proxy Server TZ location, either from the Clock or your broker. Type this location name, exactly as it appears in the Clock, into the Preface input called "Clock_Proxy_Server_Tz_Location". Now change

"Clock_Normal_vs_Find_Server_Tz" back to "true" for normal operation. You have successfully completed the steps to assure the correct and 24/7 display of PivotsTz and market vLines. This indicator adjusts for DST changeovers when they occur twice yearly, which happens at different times at different places. This is fully automated. No adjustments for DST are required by the user.

The default "Clock_Proxy_Server_Tz_Location" is "Helsinki" because it is the most popular time zone used for broker servers. If this is not the time zone your broker server uses, then PivotsTz and vLines will display incorrectly. So, be sure you follow the steps above to confirm this default selection is correct, and if not then to find and input the correct Clock Proxy Server TZ location. Without an input this indicator will not function. Be sure that "Clock_Normal_vs_Find_Server" is "false" only when searching for the Clock Proxy Server TZ location. It must be "true" for normal indicator operation.

Remember, if a change from the default setting was required, re-save your template so when you call that template to a chart in the future, it will be the corrected one!

Preview of the Displayed Access Panel and Other Indicator Features-

This indicator places an Access Panel in the upper left corner of the chart, consisting of a Market Panel and a Clock Panel. For proper display chart/Properites/Common/Show OHLC should be unchecked, which has been done already in the PVSRA template. You have a choice of two font sizes/spacing for the display of the Panel.

The Market Panel: The Market Panel can be turned on/off. When "on" it displays the items below, and the Clock Panel can be displayed:

- (1) Symbol & Period: The symbol for the currency pair and the chart TF.**
- (2) Spread: The difference (cost to trade) between the Ask and Bid.**
- (3) Ranges: The average day range, and the range achieved.**
- (4) Swaps: The long and the short swap rates.**
- (5) Candle: The time remaining for the chart current TF bar.**
- (6) Bid Price: The last (fractional) digit can be set smaller than the other digits. The price changes color when the last full size digit reverses.**
- (7) The PVSRA Logo.**

The Clock Panel: When the Market Panel is on the Clock Panel can be turned on/off. It displays time and location for seven different time zones that can be selected out of a list of time zones available. It is also used during a time of live feed to determine the difference between the broker server time and GMT, which is an input that must be entered manually in the "Preface" section of the External Inputs. If a time zone displayed happens to coincide with the broker server time, your local time, GMT, or the time zone selected for the calculation of pivots (if pivots are displayed), an extension to the label will include the designations: "B", "L", "G" and "P" so you do not have to waste lines to also separately display the Broker, Local and GMT time zones.

In addition to the two panel sections, this multi-function indicator provides the following services, which are listed here, and more fully described below:

1. A special Ask line and a special Bid line.
2. A background of level lines dividing the distance between whole numbers.
3. Natural Fibonacci numbers applied to the previous day range.
4. Daily or Fibonacci pivots, including mid-pivot lines.
5. Average Range H/L lines for the week and the day.
6. Day Separators.
7. Vertical lines at the open of the Frankfurt, London and New York forex markets, and at the close of the London market.

1. Special Ask and Bid Lines -

You can select to place your own Ask and Bid Ray lines on the chart, which you can vary in thickness and color. The lines end just beyond the current candle. The Bid line terminates with a Bid Dot that can be sized and that changes color (example: green/red) as the bid price changes (up/dn). To display only your own Ask/Bid Ray lines, right click on the chart and select Chart Properties/Colors. Make sure the Grid color = "None", otherwise the MT4 bid line is going to be beneath your own, and will be visible from the end of your line to the chart edge. This is already done in the PVSRA template. The special Ask and Bid lines can be subordinated to appear below other chart artifacts, such as the candles and the PVSRA Solid Trend. You can set the Ask line to not show above a chosen chart TF. By default, the Ask line is set to not show above the M15 TF. See the External Inputs for other options.

2. Background Level Lines -

This indicator places level lines on the chart at key price intervals between whole numbers (00, 25, 50, 75 and 00 again). The number of "sets" of these Whole, Half, and Quarter lines is fixed by hard code for each TF chart. Information regarding line features and spacing follows.

The lines can individually be of any available color, style and width. With Levels "On", the half and quarter levels can be turned On/Off individually. The whole, half and quarter levels also have separate "Max_TF" settings, which you can set so the less significant Levels automatically cease to be displayed as you go up in chart TF.

Spacing between the Levels is 25 pips. For some currency pairs and other traded instruments this might place the Levels too far apart or too close together. Adjust spacing using "__Decr_Incr_Levels_Spacing" which by default is "0". Changing to "-1" spaces lines 12.5 pips apart. Changing to "-2" spaces lines 6.25 pips apart. Each reduction in number cuts the distance between Levels in half. Changing to "1" spaces lines 50 pips apart. Changing to "2" spaces lines 100 pips apart. Each increment in number doubles the distance between Levels. Remember, once the default space setting of "0" is changed, the Levels lines longer represent the whole, half, and quarter Levels! With the variety of instruments available to trade, and the way the market has fixed pricing, there is no simple code that will yield better results automatically.

3. Natural Fibos -

Fibonacci numbers are applied to the internal range of the previous day, as well as beyond, both above and below that range. The "yHI" and "yLO" lines are displayed from the start of the previous day session.

The Fibonacci levels are applied to the internal range are: yLO, 23.6, 38.2, 50.0, 61.8, 76.4 and yHI. The levels are applied above and below this range are: 23.6, 38.2, 50.0, 61.8, 76.4, 100.0, 161.8, 261.8, 423.6 and 638.2.

4. Pivots -

Separate controls exist for showing the main PVT, the SR pivot levels and the MID pivot levels. Up to five levels instead of the customary three can be shown. You can use the Day or Fibonacci pivots formula. The main pivot (PVT) can be constructed using two lines. The bottom line can wider with a highlighting color and the top line can be narrower with a different color (Example: 3 wide Yellow bottom & 1 wide Gray top on a white chart).

You can display broker server pivots, or pivots based on a different time zone (PivotsTz). New coding fully automates the complexities of PivotsTz, such as timing the hour shift for DST twice yearly, depending on when your broker server does that. Your choice to use PivotsTz requires only three simple inputs.....

- A. Set "**__Use_PivotsTz**" to "true". If "false", broker server pivots are displayed.
- B. Set "**__Use_PREFERRED_Offset**" to "true" for pivots based on the Frankfurt time zone. If set "false" the input for "**__Alternative_GMT_Offset**" will be used.
- C. The "**__Alternative_GMT_Offset**" is your alternative choice of time zone location relative to GMT in +/- hours (examples: for GMT use "0", for one time zone east of GMT use "1", and for four time zones west of GMT use "-4").

When Pivots are displayed, "P" will show in the appropriate Clock label matching the time zone the pivots are based on. For PivotsTz, when the next PivotsTz day occurs during the broker server day, the PivotsTz lines will suddenly change. PivotsTz will display either "^", "<", or ">" in the pivot labels. By default, PivotsTz are set to the Frankfurt time zone and will display "^" in the labels. If you select a PivotsTZ time zone less than the default "<" appears in the labels. If you select a PivotsTZ time zone greater than the default ">" appears in the labels. Broker pivot labels display nothing extra.

5. Range High/Low Lines for the Day and Week -

You can display two horizontal lines, one for the computed range high target, and one for the computed range low target. The range is based on the averaging period you select (defaults: day=15, week=13). The special range averaging process for the Day range lines skips any brief Sunday sessions of some brokers, which would drag the average down. The Week range lines use the standard ATR formula since brief Sunday sessions do not much affect the results.

A. Two conditions determine where range lines appear....

1. Condition #1 - the Day/Week range has not exceeded the average range.

- * RDH/RWH line is the average range above the session Low.**
- * RDL/RWL line is the average range below the session high.**
- * The lines will move as new highs/lows are achieved during the session.**
- * Shows extent price can move before exceeding average range.**

2. Condition #2 - the Day/Week range exceeds the average range.

- * The range lines lock into place showing range breakout.**

B. The purpose of the range lines is to provide a perspective on how far PA might move during the trading day or week. This can be of some guidance in selecting where to exit a trade. A swing trader might pay more attention to the RWH/RWL lines, and hold a trade into oncoming days. However, a day trader looking for quick profits and limited exposure to market price swings might pay more attention to the RDH/RDL lines.

6. Day Separators -

You can apply day separators to your chart with this option. It lets you select color and line styles. You can elect to show separators just for today and/or for any number of previous days.

7. Vertical Time Lines -

Current and prior sessions the vertical time lines can be displayed for the Frankfurt Open (F), London Open (Lo), the New York Open (NY), and the London Close (Lc) will show. Coding determines throughout the year the proper location for these “vLines”, taking into account DST shifts implemented at these locations and on the broker's server.

8. Additional Remarks On Displaying Horizontal Lines and Labels -

The horizontal lines and labels groups are Levels, Fibos, Pivots and Ranges.

- Levels are full screen wide with labels mid-chart.
- Fibos, Pivots and Day/Week Range lines are session wide with labels at the start of the session until that moves off the chart. Then the labels are mid-chart.
- When the chart is switched to H4 TF or higher, horizontal lines other than Levels will display as just short lines starting at the bar beginning the current day.
- Horizontal lines/labels (excluding Levels) have a "subordination" true/false control to appear beneath (true) or above (false) other charting. The default setting "60" specifies for charts H1 down to M1 that horizontal lines will be below if their individual subordination setting is "true", and will be above on chart TFs above H1. Obviously, a "0" setting turns subordination off for all TF charts, allowing all horizontal lines to be above. The default setting allows selected horizontal lines to be above the Solid Trend on high TF charts and below on lower TF charts.
- Broker servers at GMT/GMT+1 show a short "Sunday" trading day consisting of 3,2,1 hours respectively. These hours are the final hours of the preceding Friday trading day. During this brief Sunday session horizontal lines appear as they were on Friday, and will suddenly be repositioned once the Monday session begins.

- Traderathome, 05-01-2017

Acknowledgements:

CaveMan - who generously devoted his time and programming skills to produce the PivotsTz time zone shift coding, designed to handle any situation involving gaps between trading days and/or partial trading days.

Kent - for his "pips4life" P4L clock code to import and use time zone information.

qFish - for generously donating professional skill when needed to help us fix and improve.

Suggested Colors:	White Chart	Black Chart
Panel Section-		
Panel_Background_Color	C'235,236,241'	C'020,020,022'
Symbol_And_TF_Color	Black	C'208,208,208'
Spread_Color	C'080,080,080'	C'233,163,231'
Range_Color	C'080,080,080'	C'121,199,240'
Swaps_Color	C'080,080,080'	C'121,199,240'
Candle_Time_Color	C'080,080,080'	C'209,203,129'
Bid_UP_Color	C'049,172,058'	C'045,185,045'
Bid_DN_Color	Crimson	C'255,032,054'
Bid_Fractional_Pip_Digit	C'040,040,040'	C'160,160,160'
Logo	Blue	C'096,112,221'
Ask-Bid Line Section-		
Ask_Ray_Color	DarkSlateGray	C'100,100,100'
Bid_Ray_Color	DarkSlateGray	C'100,100,100'
Ask_Dot_Color	Black	Gainsboro
Ask_Dot_Cntr_Color	White	C'100,100,100'
Bid_Dot_Up_Color	C'000,198,060'	Lime
Bid_Dot_Dn_Color	C'240,032,084'	Red
Bid_Dot_Mono_Color	Black	White
Horizontal Lines Section-		
Line_Labels_Color	C'000,000,064'	C'162,162,174'
Levels Section-		
Level_Whole_Color	C'187,187,247'	C'028,051,089'
Level_Half_Color	C'147,221,166'	C'000,070,000'
Level_Quarter_Color	C'219,210,176'	C'064,049,028'
Fibos Section-		
H_Fibo_Color	C'078,091,186'	C'091,104,191'
M_Fibo_Color	Black;	C'113,111,125'
L_Fibo_Color	C'200,079,079'	C'208,078,070'
Pivots Section-		
DPV1_Back_Color	C'255,255,128'	Black
DPV2_Top_Color	Black	C'209,080,203'
R_Pivot_Color	C'064,064,255'	C'060,094,251'
S_Pivot_Color	C'255,053,017'	C'200,034,011'
MidPivot_Color	SaddleBrown	C'103,103,052'

Range Lines Section-

RDH_Color	C'134,149,251'	C'107,107,220'
RDL_Color	C'241,126,120'	C'214,072,065'
RWH_Color	C'134,149,251'	C'091,091,217'
RWL_Color	C'241,126,120'	C'208,060,055'

Separators Section-

Separators_Color	BlueViolet	C'085,085,085'
-------------------------	-------------------	-----------------------

vLines Section-

vLines_Color	Silver	C'074,074,074'
vLabels_Color	MidnightBlue	C'162,162,174'

Clock Section-

Clock_MktClosed	C'080,080,080'	C'128,136,142'
Location_MktClosed	C'080,080,080'	C'128,136,142'
Clock_MktOpen	C'172,102,039'	C'201,153,124'
Location_MktOpen	C'000,136,049'	C'052,180,081'

Indicator External Inputs

```
extern bool Indicator_On = true;

extern string Preface_____ = "Find & enter Clock Proxy Server Tz Location.";
extern bool Clock_Normal_vs_Find_Server = true;
extern string Clock_Proxy_Server_Tz_Location = "Helsinki";
extern string Preface_____ = "Read User Notes. Contact broker to confirm.";
```

```

extern string _ = "";
extern string Part_1 = "Indicator Master Controls:";
extern bool Access_Panel_On = true;
extern bool __Show_Clock_in_Panel = true;
extern bool Ask_Line_On = true;
extern int __Ask_Max_TF = 15;
extern bool Bid_Line_On = true;
extern bool Levels_On = true;
extern bool __Show_Half_Levels = true;
extern bool __Show_Quarter_Levels = true;
extern int __Levels_Whole_Max_TF = 240;
extern int __Levels_Half_Max_TF = 240;
extern int __Levels_Quarter_Max_TF = 60;
extern int __Decr_Incr_Levels_Spacing = 0;
extern bool Natural_Fibos = false;
extern int __Fibos_Max_TF = 60;
extern bool Pivots_On = false;
extern bool __Show_PVT = true;
extern bool __Show_SR = true;
extern bool __Show_Mid = true;
extern int __Show_Levels_Thru_2345 = 5;
extern bool __Use_PivotsTz = true;
extern bool ____Use_Preferred_Offset = true;
extern int ____Alternative_GMT_Offset = 0;
extern bool __Use_Day_vs_Fibonacci_Formula = true;
extern int __PVT_Max_TF = 60;
extern bool Range_Day_On = true;
extern int __Day_Max_TF = 1440;
extern bool Range_Week_On = true;
extern int __Week_Max_TF = 10080;
extern bool Separators_On = false;
extern int __Prior_Days_To_Show = 0;
extern int __Separators_Max_TF = 60;
extern bool vLines_On = true;
extern int __Current_Session_Max_TF = 60;
extern int __Prior_Sessions_Max_TF = 60;
extern int __Prior_Sessions_To_Show = 0;
extern string TF_Choices = "1-5-15-30-60-240-1440-10080-43200";

```

```

extern string  ___ = "";
extern string  Part_2 = "Panel Settings:";
extern bool    Panel_Font_Size_7_vs_8 = false;
extern int     Days_In_Range_Day_Avg = 15;
extern int     Weeks_In_Week_ATR = 13;
extern color   Panel_Background_Color = C'020,020,022';
extern color   Symbol_And_TF_Color = C'208,208,208';
extern color   Spread_Color = C'233,163,231';
extern color   Range_Color = C'121,199,240';
extern color   Swaps_Color = C'121,199,240';
extern color   Candle_Time_Color = C'209,203,129';
extern color   Bid_UP_Color = C'045,185,045';
extern color   Bid_DN_Color = C'255,032,054';
extern color   Bid_Fractional_Pip_Digit = C'160,160,160';
extern int     ___Shift_Digit = 0;
extern color   Logo = C'096,112,221';

```

```

extern string  ___ = "";
extern string  Part_3 = "Ask-Bid Line Settings:";
extern color   Ask_Ray_Color = C'100,100,100';
extern int     Ask_Ray_LineStyle_01234 = 2;
extern int     Ask_Ray_Thickness = 1;
extern color   Bid_Ray_Color = C'100,100,100';
extern int     Bid_Ray_LineStyle_01234 = 2;
extern int     Bid_Ray_Thickness = 1;
extern bool    Subordinate_Ask_Bid_Lines = true;
extern color   Ask_Dot_Color = Gainsboro;
extern int     Ask_Dot_Size = 6;
extern color   Ask_Dot_Cntr_Color = C'100,100,100';
extern int     Ask_Dot_Cntr_Size = 4;
extern color   Bid_Dot_Up_Color = Lime;
extern color   Bid_Dot_Dn_Color = Red;
extern color   Bid_Dot_Mono_Color = White;
extern bool    Use_Bid_Dot_Mono_Color = false;
extern int     Bid_Dot_Size = 6;

```

```

extern string  ___ = "";
extern string  Part_4 = "Horizontal Lines Settings:";
extern bool    Subordinate_Fibos = true;
extern bool    Subordinate_Pivots = true;
extern bool    Subordinate_Ranges = true;
extern int     ___Max_TF_to_Subordinate = 60;
extern color   Labels_Color = C'162,162,174';

```

```
extern string _____ = "";  
extern string Part_5 = "Levels Settings:";  
extern color Level_Whole_Color = C'028,055,100';  
extern int Level_Whole_Style_01234 = 0;  
extern int Level_Whole_Width_12345 = 1;  
extern color Level_Half_Color = C'000,070,000';  
extern int Level_Half_Style_01234 = 0;  
extern int Level_Half_Width_12345 = 1;  
extern color Level_Quarter_Color = C'064,049,028';  
extern int Level_Quarter_Style_01234 = 0;  
extern int Level_Quarter_Width_12345 = 1;
```

```
extern string _____ = "";  
extern string Part_6 = "Fibos Settings:";  
extern color H_Fibo_Color = C'091,104,191';  
extern color M_Fibo_Color = C'113,111,125';  
extern color L_Fibo_Color = C'208,078,070';  
extern int F_Style_01234 = 0;  
extern int F_Width_12345 = 1;  
extern bool Subordinate_Fibos = false;
```

```
extern string _____ = "";  
extern string Part_7 = "Pivots Settings:";  
extern color PVT1_Back_Color = Black;  
extern int PVT1_Style_01234 = 0;  
extern int PVT1_Width_12345 = 3;  
extern color PVT2_Top_Color = C'209,080,203';  
extern int PVT2_Style_01234 = 2;  
extern int PVT2_Width_12345 = 1;  
extern color R_Pivot_Color = C'060,094,251';  
extern int R_Style_01234 = 2;  
extern int R_Width_12345 = 1;  
extern color S_Pivot_Color = C'200,034,011';  
extern int S_Style_01234 = 2;  
extern int S_Width_12345 = 1;  
extern color MidPivots_Color = C'103,103,052';  
extern int mP_Style_01234 = 2;  
extern int mP_Width_12345 = 1;
```

```
extern string _____ = "";  
extern string Part_8 = "Range Day Settings Settings:";  
extern color RDH_Color = C'107,107,220';  
extern color RDL_Color = C'214,072,065';  
extern int RD_Style_01234 = 0;  
extern int RD_Width_12345 = 1;
```

```
extern string _____ = "";  
extern string Part_9 = "Range Week Settings:";  
extern color RWH_Color = C'091,091,217';  
extern color RWL_Color = C'208,060,055';  
extern int RW_Style_01234 = 0;  
extern int RW_Width_12345 = 3;  
  
extern string _____ = "";  
extern string Part_10 = "Separators Settings:";  
extern color Separators_Color = C'083,084,085';  
extern int Separators_Style_01234 = 2;  
extern int Separators_Width_12345 = 1;  
extern bool Separators_Thru_SubWindows = true;  
  
extern string _____ = "";  
extern string Part_11 = "vLines Settings:";  
extern color vLines_Color = C'074,074,074';  
extern int vLines_Style_01234 = 2;  
extern int vLines_Width_12345 = 1;  
extern bool vLines_Thru_SubWindows = false;  
extern bool Sbow_vLabels = true;  
extern color vLabels_Color = C'162,162,174';
```

extern string	_____	= "";
extern string	Part_1 2	= "Clock Settings:";
extern color	Clock_MktClosed	= C'128,136,142';
extern color	Location_MktClosed	= C'128,136,142';
extern color	Clock_MktOpen	= C'201,153,124';
extern color	Location_MktOpen	= C'052,180,081';
extern bool	Show_AMPM_Time	= true;
extern string	Note_12_1	= "Choosing Locations to Display:";
extern string	Note_12_2	= "Select 7 maximum from list,";
extern string	Note_12_3	= "0 = display off.";
extern string	Note_12_4	= "1 = Display on.";
extern int	Broker	= 0;
extern int	Local	= 0;
extern int	Auckland	= 0;
extern int	Sydney	= 1;
extern int	Tokyo	= 1;
extern int	HongKong	= 1;
extern int	Jakarta	= 0;
extern int	India	= 0;
extern int	Israel	= 0;
extern int	Helsinki	= 1;
extern int	Frankfurt	= 1;
extern int	London	= 1;
extern int	GMT	= 0;
extern int	Brazil	= 0;
extern int	NewYork	= 1;
extern int	Central	= 0;
extern int	Mexico	= 0;
extern int	Mountain	= 0;
extern int	Pacific	= 0;

3. PVSRA NEWS PANEL

User Notes:

This indicator is coded to run on MT4 Build 600+. It places a News Panel on the chart displaying up to seven news releases. Details are provided below.

News Panel Location and Behavior -

The NP resides in the first chart sub-window used for the PVA Volume histogram and can be shown on the left or right side. The NP is coded so the most recent events are the last to disappear if the sub-window is made smaller by downsizing the chart to view multiple charts simultaneously.

Two options for text size and spacing are provided. The larger is the default option. If you find that you prefer the smaller, simply pull the top of the volume sub-window lower until the NP sits at the bottom. This gives you a smaller sub-window and a larger main chart window.

News Panel Contents -

The time, title and ranking of news releases are shown

The time of a release is important to know because it can become a time of exceptionally high price volatility. You might not want to be in any trade coming up into the time of any of the more important releases, and maybe not for at least an hour afterwards; time to see just what the Robber Bank MMs previously decided to do with price, and for it to be over with (maybe!).

The ranking and title of a release can be important to know because higher ranking releases (Low, Medium, High) can mean higher price volatility. The release title can distinguish releases of more importance within a ranking. For example, certain "Bank Rate" and "FOMC" High Impact releases can sometimes result in the highest volatility of all.

The Low and Medium Impact releases often have little effect on price, whereas the variety of High Impact releases can trigger a big price move. But understand it is not "news" that moves price. It is always the Robber Bank Market Makers that move price. They move price to make profits from commissions and from the money they steal from market participants when they manipulate price, sometimes suddenly, dramatically, in the least expected direction,..sometimes in both directions! And they tend to make more of these opportunities to steal from market participants with some High Impact releases than with the Low and Medium Impact releases.

Of the three impact level events (High, Medium, Low), you have the option to show all three by selecting "3", or just the High and Medium by selecting "2", or just the High by selecting "1".

Prioritizing News Events -

Prioritization of events is fully automated and seven event labels are provided to help avoid surprises. With a input of 2 or 3 for "Show_Impacts_H_HM_HML_123" only 1 event of the highest impact scheduled will show for each event time. With a input of 1, all of the High Impact events will display.

When events, per settings, are not scheduled, text noting that appears. Events for any pair can be shown on any chart. For example, show a CNY (China) event on a AUDUSD chart. You can also ignore the chart pair itself, selecting only other currencies for news.

There can be more than one event with the same impact at any given time. When only one is displayed per event time (input choices 2 or 3) it is the one picked from the source listing based on the order of events in the source listing. It is possible the one displayed is not the most significant one in it's impact class. Therefore, the way to use this indicator is to consider any Medium or Low Impact event shown to be of significance in its impact class.

The News Alert -

You can specify to be alerted "x" minutes ahead of the scheduled release of Event #1. When that time arrives, an alert will sound/appear on the chart. If during the same minute, while the release time and the alert time are of the same minute, if you change chart time frame the alert will re-trigger on the selected new chart time frame. After that minute passes, there will be no re-trigger of the set alert under any circumstances.

When "Alert_Minutes_Before_Event_1" is set at "0" the Alert is not set to function. If any other number appears, the Alert is set to function. When the Alert is set to function....

* If the minutes input is less than the time to the release of Event #1, the Alert is set to trigger and "Alert Pending" appears in the News Panel title.

* If the minutes input equals the time to the release, the Alert triggers and "Alert Received" appears in the News Panel title.

* If the minutes input now exceeds the time to the release, the release is already one or more minutes into the past and "Alert Completed" appears in the News Panel title. When this is the case, open the External Inputs and reset the input to "0" to turn off the Alert.

Setting Time Frames for Display of Indicator -

You can select a range of TFs for the display of this indicator, so it automatically will not display on a chart TF outside that range. The indicator can be turned on/off without having to remove it from the chart, thereby preserving your chart settings.

- Traderathome, 05-01-2017

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derkwehler and other contributors - for the core code of the FFCal indicator, FFCal_v20 dated 07/07/2009, Copyright @ 2006 derkwehler, email: derkwehler@gmail.com

atstrader - For the option controlling for what pair/pairs(s) news is shown, and for providing new file access coding in 2015.

deVries - for his excellent donated work that significantly altered and streamlined the file handling coding to establish compatibility with the new release of MT4 Build 600+, (Jobs for deVries www.mql5.com/en/job/new?prefered=deVries)

qFish - for his generously given time and professional help on an ongoing basis to improve this indicator from the MT4 Build 600 baseline recode.

traderathome - for the modification of the original work to show more events and prioritized headlines, and for overseeing modifications to assure good performance and a esthetic display.

Suggested Colors:

White Charts

Black Charts

Panel_Title	Black	Gray
News_Low_Impact	C'000,125,029'	C'046,186,046'
News_Medium_Impact	MediumBlue	C'094,150,253'
News_High_Impact	Crimson	C'254,027,032'
Bank_Holiday_Color	DarkOrchid	Orchid
Remarks_Color	DarkGray	DimGray
Background_Color_	White	C'015,015,015''

Indicator External Inputs

```
extern string Preface_Note_1 = "Impact choice 1 will show all of the high impacts.";
extern string Preface_Note_2 = "Impact choices 2 & 3 will show only 1 event of the";
extern string Preface_Note_3 = "highest impact scheduled for each event time.";

extern string _ = "";
extern string Part_1 = "Indicator Display Controls:";
extern bool Indicator_On = true;
extern bool FontSize_7_vs_8 = false;
extern bool News_Panel_At_Chart_Right = false;
extern int Show_Impacts_H_HM_HML_123 = 3;
extern int Alert_Minutes_Before_Event_1 = 0;
extern int Display_Max_TF = 43200;
extern string TF_Choices = "1-5-15-30-60-240-1440-10080-43200";

extern string __ = "";
extern string Part_2 = "News Panel Settings:";
extern color Panel_Title = DarkGray;
extern color Low_Impact_News_Color = C'051,170,060';
extern color Medium_Impact_News_Color = C'099,141,239';
extern color High_Impact_News_Color = C'252,041,057';
extern color Bank_Holiday_Color = Orchid;
extern color Remarks_Color = C'121,121,121';

extern string ___ = "";
extern string Part_3 = "Other Currency Settings:";
extern bool Show_USD_News = false;
extern bool Show_EUR_News = false;
extern bool Show_GBP_News = false;
extern bool Show_NZD_News = false;
extern bool Show_JPY_News = false;
extern bool Show_AUD_News = false;
extern bool Show_CAD_News = false;
extern bool Show_CHF_News = false;
extern bool Show_CNY_News = false;
extern bool Ignore_Current_Symbol = false;
```

4. PVSRA TRENDS SET

User Notes:

This indicator is coded to run on MT4 Build 600+. It displays a solid Trend and two Line Trends. The various options for each Trend are described below.

Solid Color Trend -

This Trend uses High/Low/Close prices and is solidly colored. It is intended for use with the PVSRA Candles Set indicator which will draw candles on top of this solid Trend. For proper display, the MT4 price display must be "Line chart" with CLR_NONE" as color, and not be set to foreground. This Solid Trend is not intended for use with the normal MT4 price styles, which will be obscured by the Trend unless they are set to "foreground". However, MT4 price styles set to foreground obscures features of the PVSRA Trade Levels indicator and the PVSRA Access Panel indicator. So, to repeat, this Solid Trend is intended for use with the PVSRA Candles Set indicator only! Be sure chart Properties/Common tab/Chart on foreground is NOT checked! This has already been taken care of in the PVSRA template.

A. The period can be adjusted using the external input "Solid_Trend_Period".

B. The type can be adjusted using the external input "Solid_Trend_EMA_SMA_WGT_123":

- 1 = EMA, exponential moving average
- 2 = SMA, simple moving average
- 3 = WGT, linear weighted moving average

Line Trends 1 and 2 - This Trend uses Close prices. One of them might be used for a MA lower than the Solid Trend while the other is used for a higher MA than the Solid Trend. Or both might be used as MAs higher than the Solid Trend. The period, type, style and width can be changed to suit using the inputs provided.

Both Line Trends include the option to use a backdrop MA, wider and with a highlighting color, to improve the esthetics of the trend display, especially on white charts.

Configuration Label -

This is a Label located at the bottom center of the chart, showing the period and type (EMA, SMA, WGT) of the Trend(s) set to display, starting from the lowest period trend to the highest period trend. You can adjust the centering of this label for your particular monitor using the "Label_Shift" input. Increase the number to move the label to the right. Decrease the number to move the label to the left. When charts are downsized to show multiple charts in the single MT4 chart window, the Configuration Label might not display, depending on how much the chart has been downsized. This is intended, so as to keep the Configuration Label from obscuring the Trade Levels display of the open trade P/L labels located in the lower right corner of the chart window.

- Traderathome, 05-01-2017

Suggested Colors	White Chart	Black Chart	Remarks
Solid Trend 1-			
Body	C'210,233,255'	C'034,039,085'	Histo H/L
Edges	C'206,231,255'	C'036,039,089'	MA H/L
Center Line	C'089,168,255'	C'083,106,200'	MA Line
Line Trends-			
Trend 2	Black	C'203,209,124'	MA Line
Accent 2	C'248,250,175'	Black	MA Line
Trend 3	C'017,113,255'	LightSkyBlue	MA Line
Accent 3	White	C'064,000,128'	MA Line
Label Display-			
Panel	C'230,240,255'	C'034,036,083'	Shade of Blue
text	C'021,048,138'	C'200,200,200'	Shade of Blue/Gray

Indicator External Inputs

```

extern string Part_1 = "Main Settings:";
extern bool Indicator_On = true;
extern bool Show_Solid_Trend_1 = true;
extern bool Show_Line_Trend_2 = true;
extern bool Show_Line_Trend_3 = true;
extern int Display_Max_TF = 43200;
extern string TF_Choices = "1-5-15-30-60-240-1440-10080-43200";

extern string ___ = "";
extern string Part_2 = "Solid Trend Settings:";
extern int Solid_Trend_1_Period = 50;
extern int Solid_Trend_EMA_SMA_WGT_123 = 1;
extern color Body = C'034,039,085';
extern color Edges = C'036,039,089';
extern color Center_Line = C'083,106,200';

extern string ___ = "";
extern string Part_3 = "Line Trend Settings:";
extern int Line_Trend_2_Period = 200;
extern int Line_Trend_EMA_SMA_WGT_123 = 1;
extern int L_Style = 2;
extern int L_Width = 1;
extern color L_Color = C'203,209,124';
extern bool Accent_Trend_2 = true;
extern int A2_Style = 0;
extern int A2_Width = 5;
extern color A2_Color = Black;

extern string ___ = "";
extern string Part_4 = "Line Trend 3 Settings:";
extern int Line_Trend_3_Period = 25;
extern int Line_Trend_3_EMA_SMA_WGT_123 = 3;
extern int L3_Style = 2;
extern int L3_Width = 1;
extern color L3_Color = LightSkyBlue;
extern bool Accent_Trend_3 = true;
extern int A3_Style = 0;
extern int A3_Width = 5;
extern color A3_Color = C'064,000,128';

extern string ___ = "";
extern string Part_5 = "Configuration Label Settings:";
extern int Label_Shift = 650;
extern color Label_Color = C'034,036,083';
extern color Text_Color = C'200,200,200';

```

5. PVSRA CANDLES SET

User Notes:

This indicator is coded to run on MT4 Build 600+. It draws PVA (Price-Volume Analysis) bars and candlesticks, as well as standard bars and candlesticks. In the PVA mode an alert option signals when a "Climax" situation exists. Specific details follow.

PVA Bars & Candlesticks -

The PVA bars and PVA candlesticks are used together with PVA volume for easy recognition of those specific chart time frame bars where special price and volume situations occur. The special situations, or requirements for the PVA colors used are as follows.

Situation "Climax"..... When volume \geq 200% of the average volume of the 10 previous chart TFs or where the product of candle spread \times candle volume is \geq the highest for the 10 previous chart time Tfs. Default Colors: Bull bars are green and bear bars are red.

Situation "Volume Rising Above Average"..... When volume \geq 150% of the average volume of the 10 previous chart Tfs. Default Colors: Bull bars are blue and bear are blue-violet.

PVA Color Options -

There are two PVA color options provided by "`__Custom_vs_Default_Color`", true/false.

1. Custom: Use this option for the multi-color PVA display where you can change colors. This option is to help those suffering from color blindness or with other reasons for needing different colors that better suit them.
2. Default: There are no inputs. The traditional multi-color PVA display is hard coded. You can easily return to this display anytime while preserving those changes made to the Custom display.

Selecting the Type Price Display -

First, Chart Properties should be set so no color is assigned to "Line chart" and so that "Line chart" is selected. This will prevent any MT4 drawn price styles and allows this indicator to produce the various price draws. This is already set up in the PVSRA template.

The PVA Bar Alert -

When displaying PVA Candles, the included sound-text alert will, if turned on, trigger once per TF at the first qualification of the TF bar as a "Climax" situation. Set "Show_PVA_Bar_Alert_Label" to "true" to be able to see the alert label. It will show a green dot when the alert is activated and a red dot when it is not. Set "PVA_Bar_Alert_On" to "true" to activate (turn on) the alert. The PVSRA Volumes Set indicator has the same alert, and it is the one to use if you are using that indicator.

- Traderathome, 05-01-2017

Acknowledgements:

qFish - For his generosity with time and coding skills, bringing this indicator into the MT4 Build 600+ world with automatically adjusting bar widths with chart scale changes.

BetterVolume.mq4 - for "climax" candle code definition (BetterVolume_v1.4).

Suggested Colors	White Chart	Black Chart
Wicks	C'006,000,079'	C'128,137,153'
Bull STD Candle	C'159,160,162'	C'159,159,177'
Bear STD Candle	C'106,106,117'	C'106,106,117'
Bull Rising	C'070,107,255'	C'017,136,255'
Bear Rising	C'187,050,223'	C'184,051,255'
Bull Climax	C'000,166,100'	C'031,192,071'
Bear Climax	C'226,035,083'	C'214,012,027'

Note: Suggested colors coincide with those of the PVSRA Volumes Set indicator.

Indicator External Inputs

```
extern string Part_1 = "Main Settings:";
extern bool Indicator_On = true;
extern bool PVA_vs_All_STD = true;

extern string __ = "";
extern string Part_2 = "PVA Options:";
extern color Custom_vs_Default_Colors = true;
extern bool Show_PVA_Bar_Alert_Label = false;
extern bool PVA_Bar_Alert_On = false;

extern string ____ = "";
extern string Part_3 = "PVA Custom Colors:";
extern color Custom_Wick = C'128,137,153';
extern color Custom_Bull = C'159,159,177';
extern color Custom_Bear = C'106,106,117';
extern color Custom_Bull_Rising = C'017,136,255';
extern color Custom_Bear_Rising = C'184,051,255';
extern color Custom_Bull_Climax = C'031,192,071';
extern color Custom_Bear_Climax = C'214,012,027';

extern string _____ = "";
extern string Part_4 = "All STD Colors:";
extern color STD_Wick = C'128,137,153';
extern color STD_Bull = C'159,159,177';
extern color STD_Bear = C'106,106,117';
```

6. PVSRA VOLUMES SET

User Notes:

This indicator is coded to run on MT4 Builds 600+. It draws a PVA (Price-Volume Analysis) volumes histogram in the first chart subwindow. An alert option signals when a "Climax" situation exists. Specific details follow.

The PVA Volumes Histogram -

PVA volume is used together with a PVA price display for easy recognition of those TFs when special price and volume situations occur. The special situations, or requirements for the the colors used are as follows.

Situation "Climax"..... When volume \geq 200% of the average volume of the 10 previous chart TFs or where the product of candle spread x candle volume is \geq the highest for the 10 previous chart time Tfs. Default Colors: Bull bars are green and bear bars are red.

Situation "Volume Rising Above Average"..... When volume \geq 150% of the average volume of the 10 previous chart Tfs. Default Colors: Bull bars are blue and bear are blue-violet.

PVA Color Options -

There are two PVA color options provided by "PVA_Custom_vs_Default_Colors".

1. Custom: Use this option for the multi-color PVA display where you can change colors. This option is to help those suffering from color blindness or with other reasons for needing different colors that better suit them.
2. Default: There are no inputs. The traditional multi-color PVA display is hard coded. You can easily return to this display anytime while preserving those changes made to the Custom display.

PVA Bar Alert -

This indicator includes a sound-text alert that triggers once per TF at the first qualification of the TF bar as a "Climax" situation. Set "Alert_On" to "true" to activate the alert.

Standard Volume Display -

You can display volume in the normal fashion. In either a normal or PVA volume display, the standard bars can be set thin or wide.

- Traderathome, 05-01-2017

Acknowledgements:

BetterVolume.mq4 - for "climax" candle code definition (BetterVolume_v1.4).

Suggested Colors	White Chart	Black Chart
Chart Background	White	C'015,015,015'
Non-PVA Display- Std Thin	C'050,082,118'	C'102,099,163'
Std Wide	C'115,142,176'	C'050,053,086'
PVA Display- Std Thin	C'115,142,176'	C'102,099,163'
Std Wide	C'208,218,230'	C'050,053,086'
Bull Rising	C'070,107,255'	C'017,136,255'
Bear Rising	C'187,050,223'	C'184,051,255'
Bull Climax	C'000,166,100'	C'031,192,071'
Bear Climax	C'226,035,083'	C'214,012,027'

Note: Suggested colors coincide with those of the PVSRA Candles Set indicator.

Indicator External Inputs

```
extern string Part_1 = "Main Settings:";
extern bool Indicator_On = true;
extern bool PVA_vs_All_STD = true;

extern string __ = "";
extern string Part_2 = "Volume Window:";
extern color Chart_Background_Color = C'015,015,015';
extern bool STD_Volume_Thin_vs_Wide = true;
extern bool PVA_Custom_vs_Default_Colors = true;
extern bool PVA_Bar_Alert_On = true;

extern string ____ = "";
extern string Part_3 = "PVA Custom Colors:";
extern color Custom_STD_Thin = C'102,099,163';
extern color Custom_STD_Wide = C'050,053,086';
extern color Custom_Bull_Rising = C'017,136,255';
extern color Custom_Bear_Rising = C'184,051,255';
extern color Custom_Bull_Climax = C'031,192,071';
extern color Custom_Bear_Climax = C'214,012,027';

extern string _____ = "";
extern string Part_4 = "All STD Colors:";
extern color STD_Thin = C'102,099,163';
extern color STD_Wide = C'050,053,086';
```