

PVSRA Indicators

March 1, 2016 Release

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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.
- Exacting 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 lines span the chart to the current candle, followed by the labels which include the EP number, price and size (quantity of units of the lot type input). The size is highlighted with different colors for long and short positions. If you show the labels for the EP Levels lines, the AV, TP and SL lines will shift to the right to maintain good visibility. You can show the EP Levels line as a full line, or as a short mini-line or "tab".

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 the trades closed the Dot is ringed with the color selected for closed trade rings. This enables you to easily see, if a number of trade components remain active but some have been closed, which are the closed ones and which remain open. The input "Dot_Size_12345" provides 5 Dot sizes to select from.

Displaying the AV Line -

For open trades an AV Line is displayed. It shows the rounded off average price for all open orders (even if varying in size), the number of open orders (separate EP

events), and the number of open units of the type input. You can show the AV Levels line as a full line, or as a short mini-line or "tab".

Displaying TP and SL Lines -

For open trades the TP and SL lines associated with the MT4 orders are displayed. You can override these values by putting other values into the External Inputs. You might do this temporarily to help you decide the values to place with your MT4 orders. An asterisk appears in the TP and SL labels when you are displaying your override values as a reminder they are not the values derived from the MT4 orders. You can show the TP/SL Levels line as full line, or as a short mini-line or "tab". The pips displayed at TP/SL are the rounded off total pips of all the open units of your EPs of the type unit selected. It is presumed the user has set all orders to the same TP/SL values, leaving none out and not setting any to different TP/SL values. When the TP/SL is reached and the trade closes, the closed trade P/L might display differently from what the open trade PL label showed due to the rounding of the final average price which can involve some units closing at different, and sometimes better prices than intended. Remember, if TP/SL lines are displayed, it is presumed all orders are set to those values,....none excluded and none different!

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 made, the total of open units of the type unit selected, the average pips PL for each of the open units, and the total pips PL for the units. You can also include the PL Money Total and PL Account Percent. If you elect to show only EPs and average pips, the average pips are for each of the undisclosed number of units involved, not the number of EPs involved. 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 commissions and swaps. But 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 soon as it is in profit, since the line item "profit" it is not the true profit!

With this indicator, you can show either gross or net profit by setting "Include_Commissions_Adjustment" and "Include_Swaps_Adjustment" both 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 type you input, the average pips PL for the unit type, and the total pips PL for the unit type. 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 EPs and average pips for each of the undisclosed 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.

There are five label height inputs allowing adjustment of PL labels for five separate trade groups. The sequence 1-2-3-4-5 starts with the oldest trade group. If more than five trade groups are to be shown, only the oldest five trade groups can have their PL labels adjusted in offset. The more recent trade groups will have PL labels the same height as the oldest trade group. Obviously, it is better to limit the display of closed trade groups to no more than five, and 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.

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".

These 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.

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. Set "Show_Separate_Trade_Groups" to "false" (it is "false" by default) to show trades as one group with one PL label .

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.

Acknowledgements:

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'010,010,010'
Open_PL_Panel_Border	C'133,133,133'	DimGray
Open_PL_Label_Profit	C'000,125,029'	C'046,186,046'
Open_PL_Label_Loss	Crimson	C'255,032,032'
Closed_PL_Label_Panel	C'255,255,185'	C'230,227,138'
Closed_PL_Label_Profit	C'040,123,078'	C'040,123,078'
Closed_PL_Label_Loss	C'213,000,000'	C'213,000,000'
EP_Level_Label	MediumBlue	C'094,150,253'
EP_Level_Line_	MediumBlue	C'064,133,208'
AV_Level_Label	DarkOrchid	C'205,072,238'
AV_Level_Line	DarkOrchid	MediumOrchid
SL_Level_Label	C'213,000,000'	C'255,032,032'
SL_Level_Line	C'052,160,101'	C'226,035,035'
TP_Level_Label	C'040,123,078'	C'046,186,046'
TP_Level_Line	C'052,160,101'	C'015,168,084'
EP_Size_Long	C'027,116,224'	C'083,225,255'
EP_Size_Short	C'202,087,096'	C'255,128,128'
EP_Dot_Long	C'008,084,223'	C'028,199,255'
EP_Dot_Short	C'232,000,000'	C'255,128,128'
EP_Dot_Center	White	Black
EP_Dot_Closed	Black	White
CP_Dot_Center_Long	C'027,116,224'	Blue
CP_Dot_Center_Short	C'255,055,061'	Crimson
CP_Dot_Ring	Black	Yellow
PL_Line_Trade_Positive	CornflowerBlue	C'028,199,255'
PL_Line_Trade_Negative	Salmon	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_PL_Money = true;
extern bool __Show_PL_Act_Pct = true;
extern bool __Show_Only_EPs_AvgPips = false;
extern string Closed_Trade = "";
extern bool ___Show_PL_Money = true;
extern bool ___Show_PL_Act_Pct = true;
extern bool ___Show_Only_EPs_AvgPips = false;

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_Level_lines = true;
extern bool Show_Full_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'010,010,010';
extern color Open_PL_Panel_Border = DimGray;
extern color Open_PL_Label_Profit = C'046,186,046';
extern color Open_PL_Label_Loss = C'255,032,032';
```

```

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 = C'230,227,138';
extern color Closed_PL_Label_Profit = C'040,123,078';
extern color Closed_PL_Label_Loss = C'213,000,000';

extern string _____ = "";
extern string Part_5 = "Line/Label/Dot Settings:";
extern color EP_Level_Label = C'094,150,253';
extern color EP_Level_Line = C'064,133,208';
extern color AV_Level_Label = C'205,072,238';
extern color AV_Level_Line = MediumOrchid;
extern color SL_Level_Label = C'255,032,032';
extern color SL_Level_Line = C'226,035,035';
extern color TP_Level_Label = C'046,186,046';
extern color TP_Level_Line = C'015,168,084';
extern color EP_Size_Long = C'083,225,255';
extern color EP_Size_Short = C'255,128,128';
extern color EP_Dot_Long = C'028,199,255';
extern color EP_Dot_Short = C'255,128,128';
extern color EP_Dot_Center = Black;
extern color EP_Dot_Closed = White;
extern color CP_Dot_Center_Long = Blue;
extern color CP_Dot_Center_Short = Crimson;
extern color CP_Dot_Ring = Yellow;
extern int Dot_Size_12345 = 2;
extern color PL_Line_Trade_Positive = C'028,199,255';
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. The PVSRA template provides for a proper display with chart/Properties/Common/Show OHLC unchecked.

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.

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 manually set "bias" indicator.
3. A background of level lines dividing the distance between whole numbers.
4. Natural Fibonacci numbers applied to the previous day range.
5. Daily or Fibonacci pivots, including mid-pivot lines.
6. Average Range H/L lines for the week and the day.
7. Average Range H/L lines for the Asian session.
8. Day Separators.
9. Vertical lines at the open of the Asian, 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. Manual Bias Indicator -

You can select to show a Bias Indicator in the upper right corner of the volume sub-window. This is a colored circle (bull = green, bear = red by default). Set this bias indicator to bull or bear based on your own PVSRA for the currency pair. You can do this with each chart of currency pairs you monitor, to remind you of the bias you have given each, as you flip back and forth thru your charts during a trading session. This manually set bias indicator should be updated via ongoing PVSRA! When your PVSRA is not current, or when you are not yet sure what bias to assign, leave this indicator turned off.

3. 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" will space lines 12.5 pips apart. Changing to "-2" will space lines 6.25 pips apart. Each reduction in number cuts the distance between Levels in half. Changing to "1" will space the lines 50 pips apart. Changing to "2" will space the lines 100 pips apart. Each increment in number doubles the distance between Levels. Remember, once the default space setting of "0" is changed, the applied colors/styles/widths remains the same but they no 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.

4. 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 other lines are displayed for just the current day session. An option called "__Use_Tz_Filter" (default is "false") diverts calculations to the time zone shift coding in this indicator to find the correct start of the previous session following partial days and holidays, which is the only time this option might be needed.

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.

5. 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.

6. 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.

7. Range High/Low Lines for the Asian Session -

You can display high and low horizontal lines for the Asian session average Day Range based on the averaging period you select (default = 10 days). These lines labeled ASH/ASL display for 9 hours, from start to the end of the Asian session.

However, you have the option to display for the full trading day session, as well as the option to override the subordination of the lines/labels (the default setting for all the lines/labels to keep them from interfering with the Trade Levels indicator). The "vLines" option must be selected and the "Ao" option included for the AS Range Lines to appear. This is because the vLines code must operate to determine where the Asian session starts. These lines are initially placed equidistant from the Asian session open price and then move as do the full Day Range lines (see above).

8. 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.

9. Vertical Time Lines -

For current and prior sessions the vertical time lines (vLines) for the London Open (Lo), the New York Open (NY), and the London Close (Lc) will show, with options to include the Asian/Sydney Open (Ao), and the Frankfurt Open (F). You can also show the following day "Ao" (which will display "Mkt Close" on Fridays). When vLines are set to show only for the current session you can also show just the prior session "Ao" (see next paragraph). Note that the "vLines" option must be selected and the "Ao" vLine option included in order to show the AS Range lines.

Note that broker servers at GMT/GMT+1 show a very short 2/1 hour day when the market opens for the week (10pm GMT) until the next full day begins (12am GMT). This period represents the conclusion of the preceding Friday. During this time horizontal lines selected to display per "2", will appear as they were on the previous Friday and remain at the levels for Friday until the short Sunday period for the new week ends. If your broker server is on GMT/GMT+1, to show a complete

perspective of Friday set to show "Ao" in the vLines, set to show just the current session (which will actually still be the Friday session not quite over with yet), and set to show " __Last_Ao_with_Current_Session_only".

New coding in this release properly places these vLines without any special inputs required from the user because it determines all year around the GMT offsets of the broker server, and the Sydney, Frankfurt, London and NYC locations and their market open times. The coding takes into account DST changes as they are implemented at different times in each location.

Additional Remarks On Displaying Horizontal Lines and Labels -

The horizontal line groups can be displayed differently, using display numbers "1" and "2" in the section "Horizontal Lines Position Settings:" If the selection number is outside the 1-2 range it will default to "2". The line groups are: Levels, Pivots and Ranges.

"1" – Full screen: draws the lines across the chart and positions labels mid-chart.

"2" - Session: draws the lines only thru the current session and positions labels at the start of current session until that moves off-chart. Then labels are positioned mid-chart.

"3" - This is not a selective option, but it is hard coded so that if the lines are set to display for the current session and the chart is switched to the DAY TF or higher, the lines will display 7 TFs to the right from the current candle.

Additional Remarks on Displaying Horizontal Lines and vLines for Brokers at GMT/GMT+1 -

Note that these broker servers show a very short trading day at the new week market open. During this time horizontal lines selected to display per "2", will appear as they were on the previous Friday and remain at the levels for Friday until the short Sunday period for the new week ends.

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.

Suggested Colors:	White Chart	Black Chart
Bull/Bear Bias-		
Bull_Color	LimeGreen	Lime
Bear_Color	Crimson	Red
Panel Section-		
Panel_Background_Color	C'237,237,239'	C'028,025,028'
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'226,223,107'
Bid_UP_Color	C'026,132,039'	C'046,188,046'
Bid_DN_Color	Crimson	C'234,000,000'
Bid_Last_Digit_Normal	C'140,140,140'	C'100,100,100'
Bid_Last_Digit_Small	C'040,040,040'	C'160,160,160'
Logo	C'046,055,169'	C'095,103,211'
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 Line Labels Section-		
Labels_Color	MidnightBlue	DarkGrayC'121,199,240'

Levels Section-		
Level_Whole_Color	C'187,187,247'	C'028,051,089'
Level_Half_Color	C'152,220,164'	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'	CLR_NONE
DPV2_Top_Color	Black	C'209,080,203'
R_Pivot_Color	C'064,064,255'	C'071,102,207'
S_Pivot_Color	C'255,053,017'	C'202,034,004'
MidPivot_Color	SaddleBrown	C'106,106,000'
Range Lines Section-		
ASH_Color	C'134,149,251'	C'107,107,220'
ASL_Color	C'241,126,120'	C'214,072,065'
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'128,128,064'
Clock Section-		
Clock_MktClosed	C'080,080,080'	C'124,124,124'
Location_MktClosed	C'080,080,080'	C'124,124,124'
Clock_MktOpen	C'133,084,035'	C'200,142,079'
Location_MktOpen	C'000,149,034'	C'046,186,046'

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 Analysis_Bias_On = false;
extern bool __Bull_vs_Bear = true;
extern color __Bull_Color = Lime;
extern color __Bear_Color = Red;
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 = 1440;
extern int __Levels_Half_Max_TF = 1440;
extern int __Levels_Quarter_Max_TF = 60;
extern int __Decr_Incr_Levels_Spacing = 0;
extern bool Natural_Fibos = false;
extern bool __Use_Tz_Filter = 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_Prefered_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_AS_On = true;
extern bool __Show_for_Full_Trading_Day = false;
extern bool __Override_Subordinations = true;
extern int __AS_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 bool __Ao_in_All_Sessions = true;
extern bool __Fo_in_All_Sessions = true;
extern bool __Last_Ao_with_Current_Session_only = false;
extern bool __Next_Ao_with_Current_Session_only = true;
extern string TF_Choices = "1-5-15-30-60-240-1440-10080-43200";
```

```
extern string __ = "";
extern string Part_2 = "Panel Settings:";
extern bool Show_Forex_Fractional_Pip = true;
extern int __Shift_Fractional_Pip = 0;
extern int Days_In_Asian_Session_Avg = 10;
extern int Days_In_Range_Day_Avg = 15;
extern int Weeks_In_Week_ATR = 13;
extern color Panel_Background_Color = C'028,025,028';
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'226,223,107';
extern color Bid_UP_Color = C'046,188,046';
extern color Bid_DN_Color = C'234,000,000';
extern color Bid_Last_Digit_Normal = C'100,100,100';
extern color Bid_Last_Digit_Small = C'160,160,160';
extern color Logo = C'095,103,211';
```

```
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 Position Settings:";
extern string note_4_0 = "Choose line display number.";
extern string note_4_1 = "1 = Fullscreen";
extern string note_4_2 = "2 = Session";
extern int Levels_Display_Number = 1;
extern int Pivots_Display_Number = 2;
extern int Ranges_Display_Number = 2;
extern bool Subordinate_Lines = true;

extern string _____ = "";
extern string Part_5 = "Horizontal Lines Labels Settings:";
extern bool Pivot_PVT_Label_On = true;
extern bool Pivot_SRM_Labels_On = true;
extern bool Range_Labels_On = true;
extern color Labels_Color = DarkGray;
extern bool Subordinate_Labels = true;

extern string _____ = "";
extern string Part_6 = "Levels Settings:";
extern color Level_Whole_Color = C'028,051,089';
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_7 = "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_8 = "Pivots Settings:";  
extern color PVT1_Back_Color = CLR_NONE;  
extern int PVT1_Style_01234 = 0;  
extern int PVT1_Width_12345 = 1;  
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'071,102,207';  
extern int R_Style_01234 = 2;  
extern int R_Width_12345 = 1;  
extern color S_Pivot_Color = C'202,034,004';  
extern int S_Style_01234 = 2;  
extern int S_Width_12345 = 1;  
extern color MidPivots_Color = C'106,106,000';  
extern int mP_Style_01234 = 2;  
extern int mP_Width_12345 = 1;
```

```
extern string _____ = "";  
extern string Part_9 = "Range AS Settings:";  
extern color ASH_Color = C'107,107,220';  
extern color ASL_Color = C'214,072,065';  
extern int AS_Style_01234 = 0;  
extern int AS_Width_12345 = 1;
```

```
extern string _____ = "";  
extern string Part_10 = "Range Day 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 = 2;
```

```
extern string _____ = "";  
extern string Part_11 = "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_12 = "Separators Settings:";
extern color Separators_Color = C'085,085,085';
extern int Separators_Style_01234 = 2;
extern int Separators_Width_12345 = 1;
extern bool Separators_Thru_SubWindows = true;

extern string _____ = "";
extern string Part_13 = "vLines & Labels 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'128,128,064';

extern string _____ = "";
extern string Part_14 = "Clock Settings:";
extern color Clock_MktClosed = C'124,124,124';
extern color Location_MktClosed = C'124,124,124';
extern color Clock_MktOpen = C'200,142,079';
extern color Location_MktOpen = C'046,186,046';
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.

Setting the News Panel Location -

The News Panel resides only in the first chart sub-window that is set up to show the PVA Volume histogram. You can select to show the News Panel on the left or the right, inside this chart subwindow. As the template is set, the NP (News Panel) appears to be located off the bottom, but if you increase the height of the window the NP will rise as the top of the window rises. The purpose of this top offset is to have the most recent events disappear last whenever the chart is downsized. Charts might be downsized so that multiple charts can be viewed when an important release nears. When the chart is downsized, causing the window to be less high, it will be the bottom of the NP that begins to disappear first, leaving the events soonest coming as the last to disappear.

News Panel Contents -

The time, title and ranking of news releases are shown

Time is important. SM (Smart Money: investment banks, hedge funds, etc.) often have advance knowledge of the essence of "official" releases due to their own participation in the data gathering process. For the currency market there is no law against "formal institutions" having and trading on "insider information." So, SM can set orders in advance of releases and MMs (Market Makers) can move price ahead of releases (called "front running") and use remaining time to fill those orders. And the MMs can save the move that will make profits for their SM clients until the time of the releases, or later.

Title and ranking is important. The variety of low impact releases often have little effect on price, whereas the variety of high impact releases can trigger a big price move. Just understand it is not "news" that moves price. It is always the MMs that move price. And they move price for commissions and profits, not because of news content. If some catastrophic event happens and they can take large positions for themselves and then gap price for almost instant profits because the market will be forced then to trade where the MMs have taken price. The MMs frequently "stop hunt", meaning they intentionally force price up or down the price queue looking to trigger pending orders that close positions that the MMs themselves want. This is legalized theft. Stop hunting price manipulation by the MMs often precedes their front running moves before releases and moves at/after releases. Such price moves have nothing at all to do with "news" or "free market pricing based on supply & demand." The Medium and High Impact news releases are simply opportunities for the Robber Bank Market Makers. And they tend to make more of these opportunities than they do with the low 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". Previous/Forecast data is not displayed. Remember, prices can go either way regardless what specific content is released. Releases do not cause prices to move, the MMs do! They use the "news" as triggers. The MMs frequently already have planned what they are going to do and how they are going to do it. So "news" timing is more important than content. The MMs will move price how it gives them profits, and that will not necessarily be in the manner that the "news" content would logically dictate.

Prioritizing News Events -

Prioritization of events is fully automated and seven event labels are provided to help avoid surprises. When two or more events occur simultaneously, only one event of the highest impact displays. 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.

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 FFCal 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.

ACKNOWLEDGEMENTS:

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

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 help during the effort to improve this indicator.

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

traderathome - for the modification of the original work to show more and prioritized headlines.

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 Part_1 = "Indicator Display Controls:";
extern bool Indicator_On = true;
extern int Show_Impacts_H_HM_HML_123 = 3;
extern bool News_Panel_At_Chart_Right = false;
extern int Alert_Minutes_Before_Event_1 = 0;
extern int Display_Min_TF = 1;
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'046,186,046';
extern color Medium_Impact_News_Color = C'094,150,253';
extern color High_Impact_News_Color = C'254,027,032';
extern color Bank_Holiday_Color = Orchid;
extern color Remarks_Color = DimGray;
extern color Background_Color_ = C'015,015,015';
extern bool Show_Panel_Background = true;

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 DUAL TRENDS

User Notes:

This indicator is coded to run on MT4 Build 600+. It displays a solid Trend and a Line Trend. 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.

Period, Type and Width -

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

Highlighting Edges of Solid Trend -

You can select to highlight the outer edges of the Solid Trend ("on" by default). This feature might make the Solid Trend easier on the eyes.

Line Trend -

This Trend uses Close prices. The period, type, style and width can be changed to suit using the inputs provided. You have the option to accent the Line Trend using two colors: a color for a "wide" bottom line and another color for a "narrow" top line.

Display M15 Trends or M30 Trends on other TF charts -

You can select to show the M15 configuration of the Trend(s) on the M1/M5/M30/M60 charts. And you can select to show the M30 configuration of the Trend(s) on the M1/M5/M15/M60 charts.

Reasons you might want to do this are to filter out some of the PA "noise" by being able to view a larger TF chart with the M15 or M30 Trend(s) on it, or to be able to get a close up view on M1/M5, keeping the Trend(s) per the M15 or M30 configuration. If the transfer of the M15 or M30 trend(s) does not populate properly on the receiving TF chart, as can sometimes happen, simply switch the chart TF back-and-forth once. If you have selected both the M15 and M30 configuration Trend(s) to be received by the same other TF chart, it will always be the M15 (first on list of transfer options) that is received by the other TF chart, not the M30.

Configuration Label -

A Label located at the bottom center of the chart shows the configuration of the Trend(s) being displayed (TF,period,type). You can center the label with the "Label_Shift" input.

Suggested Colors	White Chart	Black Chart	Remarks
Solid Display-			
Trend Body	C'213,234,255'	C'029,031,071'	Histo H/L
Trend Edges	C'204,230,255'	C'032,034,077'	MA H/L
Center Area	C'242,252,255'	C'015,015,015'	MA Line
Center Line	C'022,113,222'	C'083,106,200'	MA Line
Line Trend-			
Trend Line	Black	C'226,223,107'	MA Line
Accent Base	SlateBlue	C'063,077,139'	MA Line Wide Bottom
Accent Top	PaleTurquoise	Black	MA Line Narrow Top
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 = true;
extern bool Show_Line_Trend = 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 = "Transfer Settings:";
extern bool M15_On_M1 = false;
extern bool M15_On_M5 = false;
extern bool M15_On_M30 = false;
extern bool M15_On_M60 = false;
extern bool M30_On_M1 = false;
extern bool M30_On_M5 = false;
extern bool M30_On_M15 = false;
extern bool M30_On_M60 = false;

```

```
extern string ____ = "";
extern string Part_3 = "Solid Trend Settings:";
extern int Solid_Trend_Period = 50;
extern int Solid_Trend_EMA_SMA_WGT_123 = 1;
extern bool Highlight_Edges = false;
extern color Body = C'029,031,071';
extern color Edges = C'032,034,077';
extern color Central_Area = C'015,015,015';
extern color Center_Line = C'083,106,200';
```

```
extern string ____ = "";
extern string Part_4 = "Line Trend Settings:";
extern int Line_Trend_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'226,223,107';
extern bool Accent_Line_Trend = false;
extern color Base_Color = C'063,077,139';
extern int Base_Width = 3;
extern color Top_Color = Black;
extern int Top_Style = 0;
extern int Top_Width = 1;
```

```
extern string ____ = "";
extern string Part_5 = "Label Settings:";
extern int Label_Shift = 572;
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 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 "__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.

To display standard bars or candlesticks set "__PVA_BAR_STD_123" to "2" for bars and to "3" for standard candlesticks.

To display PVA set "__PVA_BAR_STD_123" to "1". Then choose a variety of PVA displays with the next input "__Bars_Candles_Bodies_123". Input "1" to show a PVA bar chart. Input "2" to show a PVA candlestick chart. These bars and candlesticks display on top of the PVSRA Solid Trend. Use input "3" only to show PVA colored body overlays on a MT4 drawn bar or candlestick chart. Be aware that MT4 drawn bars and candlesticks do not appear on top of the PVSRA Solid Trend because the PVSRA template has chart Properties/Chart to foreground unchecked to keep MT4 drawn prices in the background so they will not interfere with features of the PVSRA Trade Levels and PVSRA Access Panel indicators! If you plan to use MT4 drawn prices go to chart Properties and on the "Colors" tab assign a color to "Line graph" and on the "Common" tab uncheck "Line chart" and check "Bar chart" or "Candlesticks". Use the PVSRA Line Trend and save this as a separate template!

If you do create a separate template using MT4 drawn bars or candlesticks with the Line Trend, you will find if you checked "Bar chart" that all of the basic price styles from "__PVA_BAR_STD_123" and the PVA styles from "__Bars_Candles_Bodies_123" will still display properly. If you checked "Candlesticks" then only the basic style "3" from "__PVA_BAR_STD_123" and only the PVA styles "2" and "3" from "__Bars_Candles_Bodies_123" will display properly.

Variable Bar Widths -

Setting "Vary_Width_on_Higher_Chart_Scales" to "true" the width of bars displayed on Chart Scales 3,4,5 can be adjusted. The default adjustments make these bars more narrow than the standard MT4 display. Some will find this to be easier on the eyes, especially for black charts, making these charts better overall for trading.

The Alert -

When displaying PVA Candles, 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 both "Show_Alert_Label" and "Alert_On" inputs to "true" to operate the alert, and enter your "Broker_Name_In_Alert" to avoid confusion if simultaneously using multiple platforms. However, "Show_Alert_Label" and "Alert_On", should be set to "false" if also using the PVSRA Volumes Set indicator, which provides the same alert and is the one to use.

- Traderathome, 03-01-2016

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'
Std Bars	C'006,000,079'	C'193,194,206'
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'096,096,238'	C'017,136,255'
Bear Rising	C'187,050,233'	C'184,051,255'
Bull Climax	C'000,166,100'	C'031,192,071'
Bear Climax	C'214,012,083'	C'214,012,027'

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

Indicator External Inputs

```
extern bool Indicator_On = true;

extern bool Vary_Width_on_Higher_Chart_Scales = false;

extern int __Chart_Scale_3 = 2;
extern int __Chart_Scale_4 = 4;
extern int __Chart_Scale_5 = 6;

extern string Select_Price_Style_to_Dispay = "";
extern int __PVA_BAR_STD_123 = 1;

extern string Select_PVA_Style_and_Coloring = "";
extern int __Bars_Candles_Bodies_123 = 2;
extern bool __Custom_vs_Default_Color = true;
extern bool __Show_Climax_Volume = true;
extern bool __Show_Rising_Volume = true;

extern string PVA_Custom_____ = "";
extern color __Custom_Wicks = 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 Standard_Bars_____ = "";
extern color __Bars_Color = C'193,194,206';

extern string Standard_Candles_____ = "";
extern color __STD_Wick = C'128,137,153';
extern color __STD_Bull = C'159,159,177';
extern color __STD_Bear = C'106,106,117';

extern string PVA_Alert_____ = "";
extern bool Show_Alert_Label = false;
extern bool Alert_On = false;
extern string Broker_Name_In_Alert = "";
```

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.

Variable Bar Widths -

Setting "Vary_Width_on_Higher_Chart_Scales" to "true" the width of bars displayed on Chart Scales 3,4,5 can be adjusted. The default adjustments make these bars more narrow than the standard MT4 display. Some will find this to be easier on the eyes, especially for black charts, making these charts better overall for trading.

The 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 this mode you can select to highlight volume bars that are PVA Climax and/or Rising Volume situations by making them wider than the other bars. In this highlight mode, the Alert will function.

- Traderathome, 03-01-2016

Acknowledgements:

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

Suggested Colors	White Chart	Black Chart
Chart Background	White	C'015,015,015'
Standard Volume	C'119,146,179'	C'102,099,163'
Bull Rising	C'096,096,238'	C'017,136,255'
Bear Rising	C'187,050,233'	C'184,051,255'
Bull Climax	C'000,166,100'	C'031,192,071'
Bear Climax	C'214,012,083'	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 Vary_Width_on_Higher_Chart_Scales = false;
extern int __Chart_Scale_3 = 2;
extern int __Chart_Scale_4 = 4;
extern int __Chart_Scale_5 = 6;

extern string __ = "";
extern string Part_2 = "Shortname Window:";
extern color Chart_Background_Color = C'015,015,015';
extern bool Volume_PVA_vs_STD = true;
extern bool PVA_Custom_vs_Default_Colors = true;
extern bool Alert_On = true;

extern string ____ = "";
extern string Part_3 = "Standard Volume:";
extern bool Highlight_Climax_Volume = false;
extern bool Highlight_Rising_Volume = false;
extern color STD_Volumes_Color = C'102,099,163';

extern string _____ = "";
extern string Part_4 = "PVA Custom:";
extern bool Show_Climax_Volume = true;
extern bool Show_Rising_Volume = true;
extern color Standard_Volume = C'102,099,163';
extern color Bull_Rising = C'017,136,255';
extern color Bear_Rising = C'184,051,255';
extern color Bull_Climax = C'031,192,071';
extern color Bear_Climax = C'214,012,027';
```