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Instruction (Manual) Document

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Backtesting Potential Reversal Zone with Harmonic Pattern Plus (or with Harmonic Pattern Scenario Planner)



10 May 2015

Note this manual may contains technical terms and this manual is intended for educational purpose only.

What is Potential Reversal Zone?

Potential Reversal Zone (PRZ) is an area where 3 or more Fibonacci Retracement levels are overlapping together. When several layers of Fibonacci Retracement levels are stacked up near to each other, this area should be treated very carefully for your trading. Using the classic definition of support and resistance, this PRZ area can act as both highly probable trend reversal zone or as highly probable breakout zone. In another words, you will find that price can either penetrate hard or bounce back hard at this PRZ levels with unusually high volatilities. It is important to note that the PRZ levels are not always predicting the trend reversal. But it will predict price breakout too sometimes. So it is much more practical to take PRZ levels in terms of support and resistance approach.

With some knowledge with harmonic pattern trading, this PRZ levels can help you to trade with high success rate. In the picture below, automatically identified PRZ lines by harmonic pattern plus are shown. Understanding the basic characteristics of PRZ levels, you can use them for many different purposes in your Harmonic Pattern trading. PRZ can be used to confirm the last point D in your harmonic Pattern. Also this PRZ can be used to place your stop loss or trail your stops or take profit targets.



Figure 1: Potential Reversal Zone for bullish Harmonic Pattern.

The structure of PRZ Levels in Harmonic Pattern Plus and Harmonic Pattern Scenario Planner

Fibonacci Retracement is a popular support and resistance identification technique. To draw this Fibonacci Retracement manually, you may need to identify two peaks including highest point and lowest point in your chart. Then you can draw retracement level in Fibonacci number including 23.6%, 38.2%, 50%, 61.8% and 100% etc. Depending on the order of highest peak and lowest peak, your Fibonacci Retracement can be setup for both ascending and descending orders.

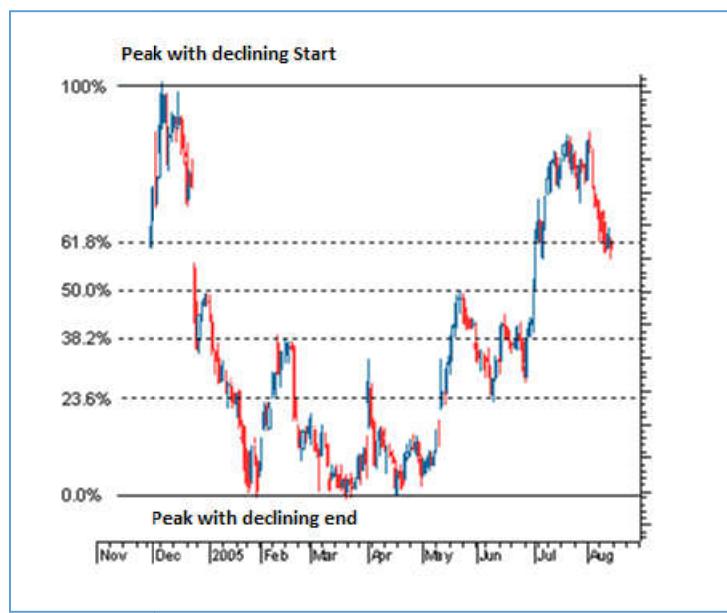


Figure 2: Fibonacci Retracement example drawn using two peaks in ascending order.

PRZ levels in Harmonic Pattern Plus uses this Fibonacci Retracements idea and extend them to detect more significant support and resistance levels. Harmonic Pattern Plus will consider all the available Fibonacci Retracements from the five points making up the pattern. For example, the pattern with XABCD notation, harmonic pattern plus will calculate Fibonacci Retracements from all these four legs:

1. Internal Price Retracement (XA)
2. External Price Retracement (BC)
3. Correction Price Projection (AB or ABCD)
4. Future Price projection (CD).

For starters, the name of points and each lags are shown in the figure below. For Harmonic Pattern, the most of patterns will start from point X except ABCD pattern and few others. At point D, traders need to make entry decision.

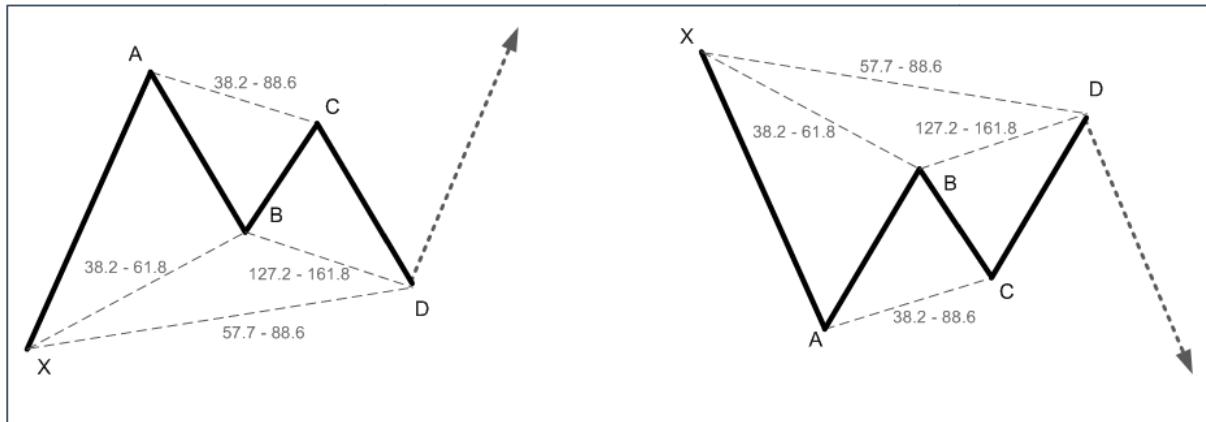


Figure 3: Typical XABCD pattern price trajectory for both bullish and bearish patterns.

Some curious readers, we will show the steps of how to do such a complicated task manually using one example bullish harmonic pattern. The steps can be broken down into 3 sub steps as shown in below:

- A. Draw Fibonacci retracement for XA and BC upwards legs.
- B. Draw Fibonacci Retracements for AB and CD downwards legs.
- C. Once you have drawn the Fibonacci Retracements from all these four legs, then you will identify PRZ levels by detecting area where 3 or 4 Fibonacci Retracements are overlapping together.

Note that without final steps, the Fibonacci Retracements levels from all four legs can make your chart extremely complicated to interpret for your trading (Figure 6). Therefore, as the final step, one must filter out many fuzzy Fibonacci Retracements levels from your charts (Figure 7). We have seen some patient traders doing all these steps manually. Of course identification of PRZ levels are worth doing it for your trading. They will help you to make good profits for your trading. However doing all this steps manually will take quite good efforts and time. Harmonic Pattern Plus and Harmonic Pattern Scenario Planner can do tedious task automatically in less than 1 second. You can even backtest this PRZ levels for each patterns on historical data with Harmonic Pattern Plus and Harmonic Pattern Scenario Planner. Learning how price reacts over these PRZ levels can help you to

master many profitable trading strategies with harmonic patterns. This is really objective and scientific way of developing your profitable trading strategy.

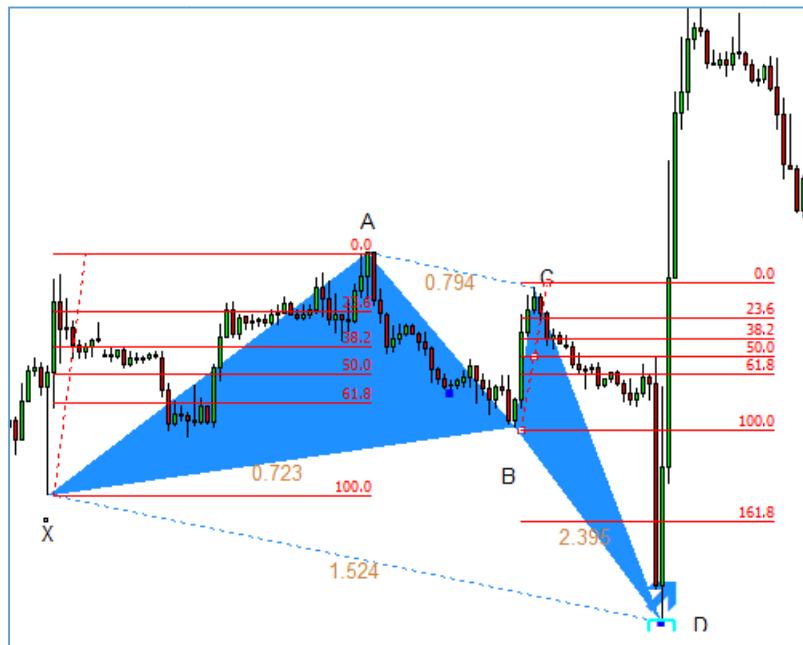


Figure 4: Fibonacci Retracement from XA and BC upwards legs.

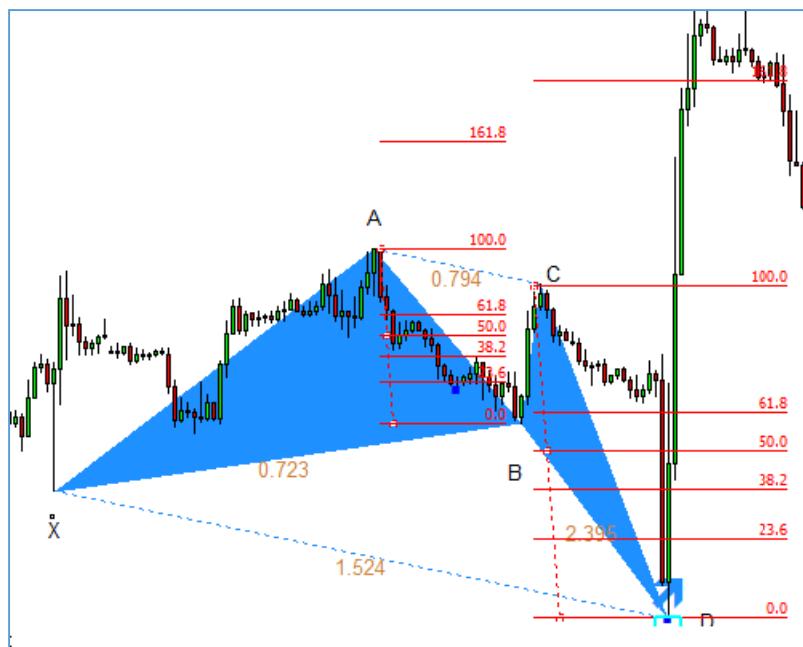


Figure 5: Fibonacci Retracement from AB and CD downward legs.

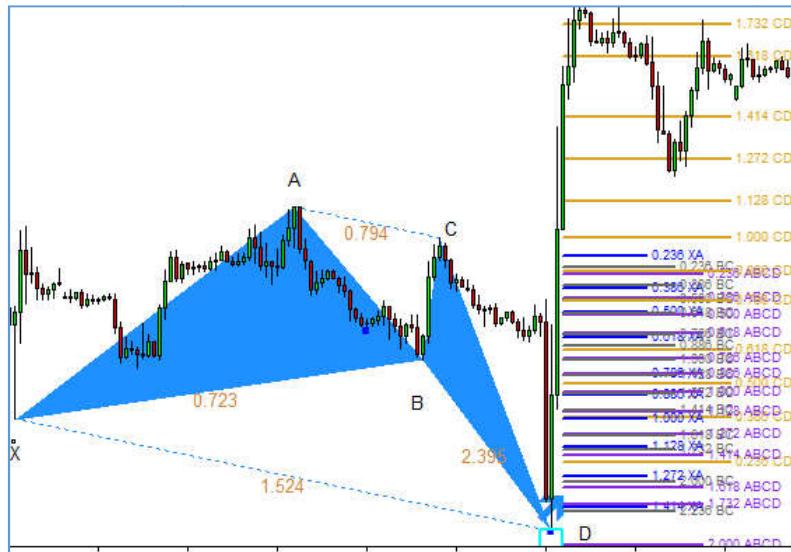


Figure 6: Combined Fibonacci Retracement from all XA, AB, BC and CD legs. These combined Fibonacci Retracements are really complex and not so much usable for your trading. It is important to identify overlapping and significant PRZ levels only among these complex lines for your practical trading.

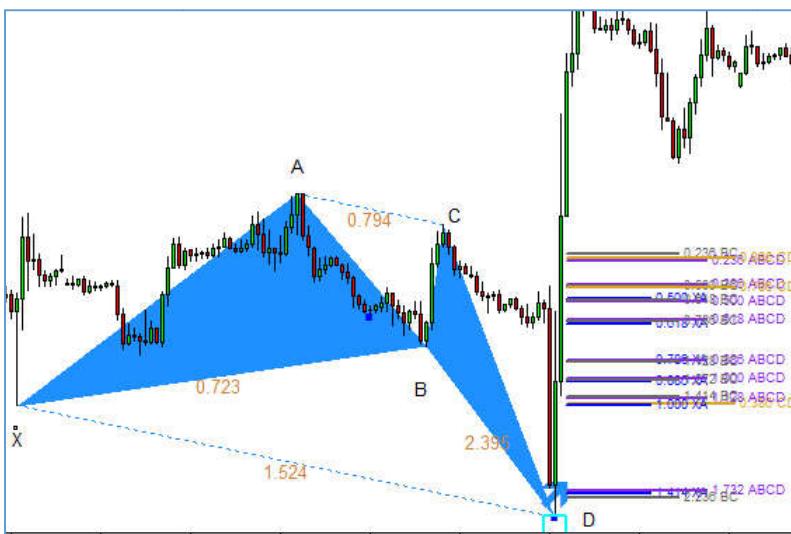


Figure 7: All fuzzy PRZ lines are automatically filtered out. Only clustered and overlapping PRZ lines are shown from Harmonic Pattern Plus. As you can see, it is much easier to spot the entry with harmonic patterns.

In Harmonic Pattern Plus, there are many ways to control this PRZ identification in your charts. Those input settings are all under the “PRZ option” of the input setting. You can switch off this PRZ levels from your charts if you prefer to use different style of Harmonic Pattern Trading with your other preferred setup. To do this, you will need to set “Use Potential Reversal Zone = false”.

The most important input in your PRZ option is to set the limit of the Potential Reversal Zone Overlapping distance. Human trader can detect the PRZ without too much complex rules. However algorithm requires some criteria to separate significant PRZ levels from all the fuzzy Fibonacci Retracements in your chart. The two inputs to define the PRZ levels in your chart include:

- A. Potential Reversal Zone Overlapping Relative Limit
- B. Potential Reversal Zone Overlapping Absolute Limit

“Potential Reversal Zone Overlapping Relative Limit” input controls the limit of PRZ overlapping distance in relative to the pattern Size. This is in fact the preferred option because for relatively bigger size patterns, we should allow larger overlapping distance between Fibonacci Retracements. PRZ overlapping relative limit uses fraction of the pattern size to separate significant PRZ levels from all the other fuzzy Fibonacci Retracements. Normally you can use 1% (0.01), 2% (0.02) or 3% (0.03) for PRZ overlapping relative limit. 1% means tighter overlapping distance than 3%. Therefore you will see fewer PRZ levels in your chart 1% limit in comparing to 3% limit. Another way of controlling the PRZ overlapping distance is to use absolute limit using just straight pip value. For example, if you set Potential Reversal Zone Overlapping Absolute Limit = 1 pip, then the PRZ levels with overlapping distance smaller than 1 pip will be shown in your chart. You can't use both PRZ Overlapping Relative Limit and Absolute Limit at the same time. If both are on, then relative limit will be used in priority. To use absolute limit, just set Potential Reversal Zone Overlapping Relative Limit = 0.0.

Harmonic Pattern Parameters 4 (PRZ Option) =====	Harmonic Pattern Parameters 4 (PRZ Option)
Use Potential Reversal Zone	true
Potential Reversal Zone Overlapping Relative Limit % (0.03 = 3%)	0.03
Potential Reversal Zone Overlapping Absolute Limit in Pips	2.0
Potential Reversal Zone Text Size	7
Potential Reversal Zone Line Width	2
Potential Reversal Zone Line Length for XA (0=no projection)	15
Potential Reversal Zone Line Length for BC (0=no projection)	20
Potential Reversal Zone Line Length for ABCD (0=no projection)	25
Potential Reversal Zone Line Length for CD (0=no projection)	30
Potential Reversal Zone Colour for XA Projection	Blue
Potential Reversal Zone Colour for BC Projection	DimGray
Potential Reversal Zone Colour for ABCD Projection	BlueViolet
Potential Reversal Zone Colour for CD Projection	Goldenrod

Figure 9: Input setting for PRZ option.

To backtest these PRZ levels over many different patterns, click “<<” or “>>” on your chart. Then Harmonic pattern Plus will show next patterns on your charts with PRZ levels. If you need to develop your trading strategy with large samples of Harmonic Patterns, increase “Amount of Bars to scan for pattern search”. “Amount of Bars to scan for pattern search” is located under “User Option” of your input setting.

More practical consideration of PRZ levels

As you can see from the screenshot below, PRZ levels are very important support and resistance levels identified by many overlapping Fibonacci Retracements. The PRZ levels in the screenshots below are very clear (Figure 10) and you can definitely play your tactics with full advantage of this PRZ levels. However, sometimes, the detected PRZ lines are not clear for trading as shown in Figure 11. The reason behind this is in general because the detected harmonic patterns are less accurately matching to the ideal patterns meaning that it has higher MAPE (if MAPE = 0.0, then it is the perfect harmonic pattern.). In this case, you may skip your trading for this harmonic pattern. Or alternatively you may apply more strict criteria to detect PRZ levels from your chart. For example, you can reduce your Potential Reversal Zone Overlapping Relative limit from 0.03 (3%) to 0.02 (2%). Or alternatively you may apply Potential Reversal Zone Overlapping Absolute Limit instead of Relative limit.

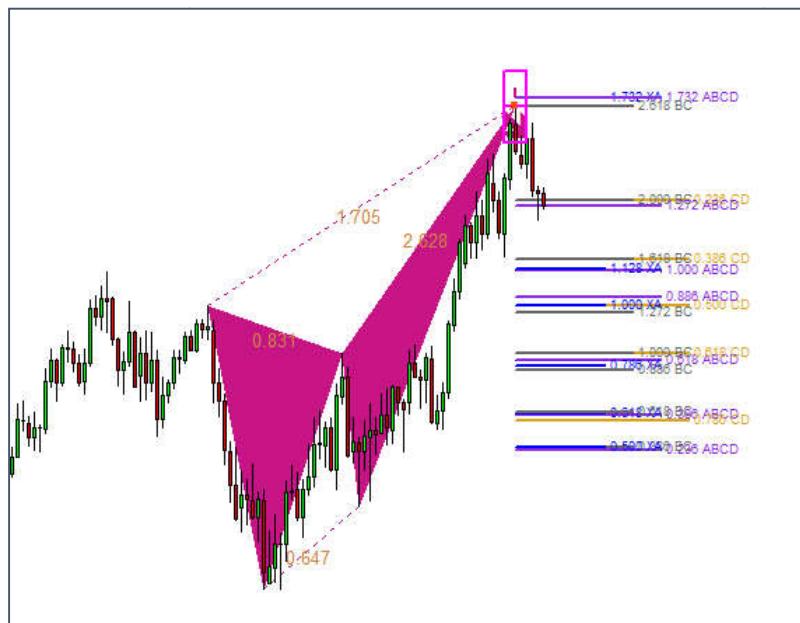


Figure 10: Bearish Harmonic Pattern with PRZ levels (Potential Reversal Zone Relative Overlapping limit = 0.03). PRZ levels are nicely placed on the chart for your trading.



Figure 11: Bullish Harmonic Pattern with PRZ levels (Potential Reversal Zone Relative Overlapping limit = 0.03). PRZ levels are little bit unclear for trading.

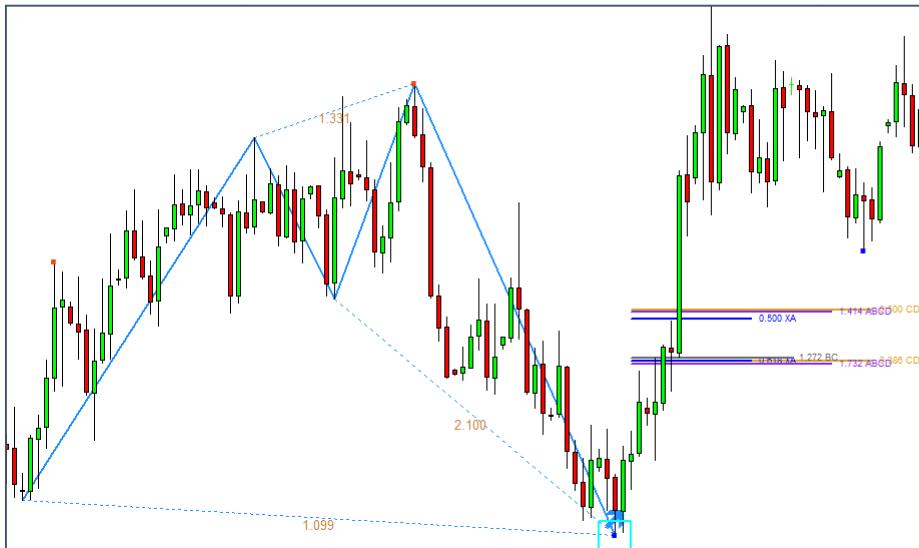


Figure 12: Bullish Harmonic Pattern with PRZ levels (Potential Reversal Zone Relative Overlapping limit = 0.02). All the unclear PRZ levels are filtered again leaving only clear PRZ levels.

Successful trading requires highly efficient operations meaning that it is important for you to plan and to think ahead before market. Therefore, you should identify these important PRZ levels as soon as the harmonic pattern is detected. Your entry level can be calculated using this PRZ levels as well as stops and take profits. You can always lock the patterns with PRZ together in your chart. This way you can mark these important price levels to monitor throughout your trading session.

With Harmonic Pattern Scenario Planner, you can even predict future patterns with PRZ levels. Indeed harmonic Pattern Scenario Planner is an amazing tool designed for sophisticated traders. However, predicting future is much more difficult and especially predicting further future is even more difficult. Therefore, it is noted that you should make short term prediction if possible. For short term forecasting, you can always take advantage using your early planning over others who can't access to future information.



Figure 13: Future Predicted Harmonic Pattern using Harmonic Pattern Scenario Planner with PRZ levels.