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## Instruction (Manual) Document

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### 2. Information for the submitted materials

Title of the submitted instruction or manual	Smart ways of detecting profitable patterns in your chart
Language of Instruction	English
Key words (at least 3)	Smart Renko, Technical Analysis, Support, Resistance, Forex, Investment
Date of Completion	19 April 2016
Version of this Document	1.0

### 3. If it is about any trading platform or any of our products (leave empty if you don't use)

Name of Trading Platform	MetaTrader 4 or MetaTrader 5
Trading Platform version	Build 950
Name of Product	Smart Renko (5.7), Price Breakout Pattern Scanner (5.2), Harmonic Pattern Plus (7.3)
Product version	5.7, 5.2, 7.3

## Smart way of detecting profitable patterns in your chart



## Background

In spite of the fact that many trading style exists, technical analysis is the most important tool to successful traders. About 10 years ago, I encouraged technical analyst to learn fundamental economic theory, then now I encourage fundamental analysts to learn technical analysis. Regardless of what are your thoughts about which of these two tools are better, both tools are very important if your full time job is trading and investment. Now for the technical analysis, the clarity is the prime importance. Your decision will be made based on looking at noisy and fuzzy price series data on your charts. If you want fully automatic pattern detection tools saving a lot of time and efforts, then we recommend using our fully automatic pattern detection tools like Harmonic Pattern Plus, Price Breakout Pattern Scanner and Sideways Market Analyzer. However if you prefer to manually draw them, then you can also do it in classic manner too. It may take more time and efforts comparing to fully automatic software. However if detecting profitable patterns is very important task for you, it is nothing wrong with possessing your own skills of detecting patterns. For this task, Smart Renko can be great help offering both clarity and efficiency.

Smart Renko indicator is the Renko based charting tool where a lot of fuzzy and noisy data in the price series are filtered with Renko transformation for clarity. The unique feature of the Smart Renko is to draw the Renko brick on the actual price data helping you to grab current market snap shots built from much clearer Renko chart. At the same time, you can use all standard technical indicators together on your actual price data. Smart Renko also provide you the unique Renko derived Zigzag helping you detect profitable patterns in much more objective way. So you can get the best of the both world between Renko and normal charting. In next section, we will introduce more detailed features of Smart Renko and Pattern Detection techniques.

## Introduction to Smart Renko Indicator

Renko chart was first developed in Japan. Renko chart is constructed by drawing bricks of fixed height in series. As shown in the figure below, if the price moved up by 5 points from the top of brick, then we will draw one white up brick. Likewise, if the price moved down by 5 points from the bottom of the brick, then we will draw one black down brick. The brick will be drawn either on the top or on the bottom of the other brick always. If the up brick is drawn, then it indicates that the current up trend continues. If the down brick is drawn, it indicates that the current down trend continues. When the brick change its direction (i.e. from down brick to up brick or from up brick to down brick), it requires twice more movement comparing to the brick continuing in the same

direction. So to change the trend direction in Renko system, there must be some substantial price move. This logic seems quite agreeable from both trader's point of view and mathematical point of view. This is one of the reasons why this several hundred years old charting techniques are loved by many people.

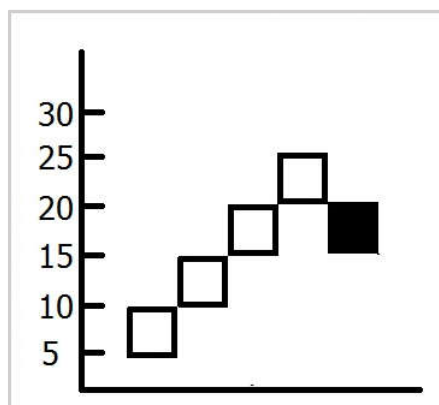


Figure 1: Schematic representation of Renko brick using 5 points brick height.

In spite of this good property for trend identification, Renko charting has some limitation. Firstly compressing the price series into brick requires losing the information related time. Secondly, while you are using Renko chart, you are not able to monitor what is happening in your actual price series chart. Also quite often you can't use the standard technical indicators with Renko chart. To overcome these limitations, we have built the Smart Renko indicator which shows the Renko brick in actual price series as well as showing original Renko chart in sub window.

Smart Renko is also capable of displaying Zigzag derived from Renko bricks. Smart Renko is the first tool utilizing the Zigzag derived from the Renko brick on actual price series. Classic Zigzag requires 3 parameters including Depth, Deviation and Back-steps. For the Renko derived Zigzag, you need only one parameter that is the brick height. Zigzag derived from Renko brick is simply constructed by searching the highest (or lowest) peak while the same trend is continuing and those peaks are connected in Zigzag manner. So the process of constructing Zigzag is simplified. For the brick height parameter, we always recommend to use 1 standard deviation of the time frame. Renko derived Zigzag is very useful to detect patterns with clarity.

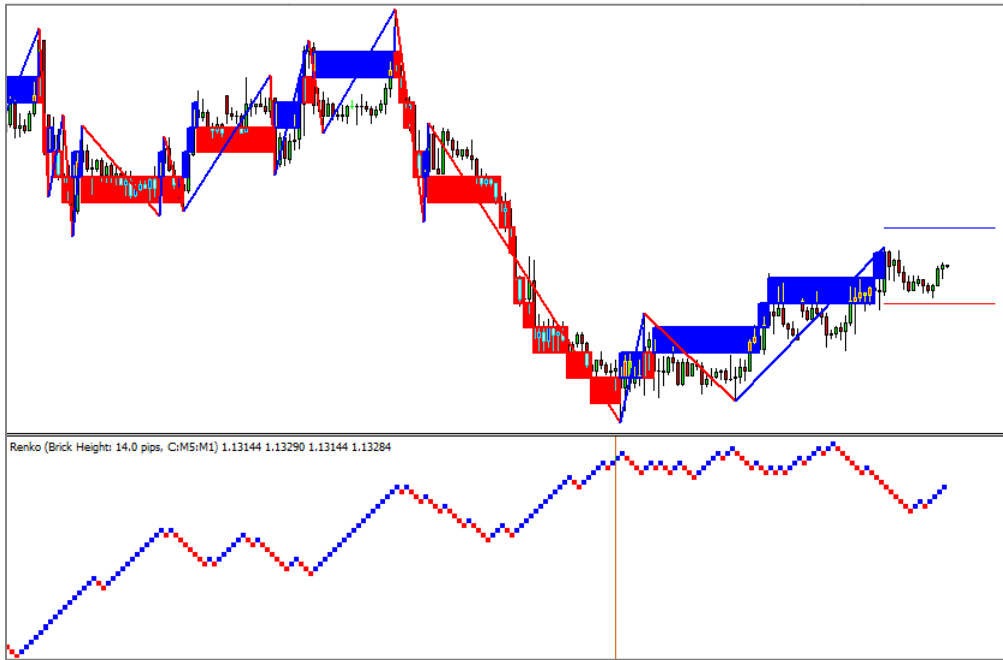


Figure 2: Smart Renko Indicator on Meta Trader platform.

Beside Renko Zigzag, Smart Renko can indicate the next brick price level on your actual price series. If there was up trend and brick height was 5 pips for Renko brick, then next brick level to continue this up trend is 5 pips high from current brick level. To change the direction from up trend to down trend, current price must move 10 pips below the current brick level. Smart Renko indicator can show these next brick price level for you to visually confirm this information. From time to time, this next brick price level can be used to double confirm the breakout level, profit target or stop target. However, such level must be double confirmed with other technical indicators.

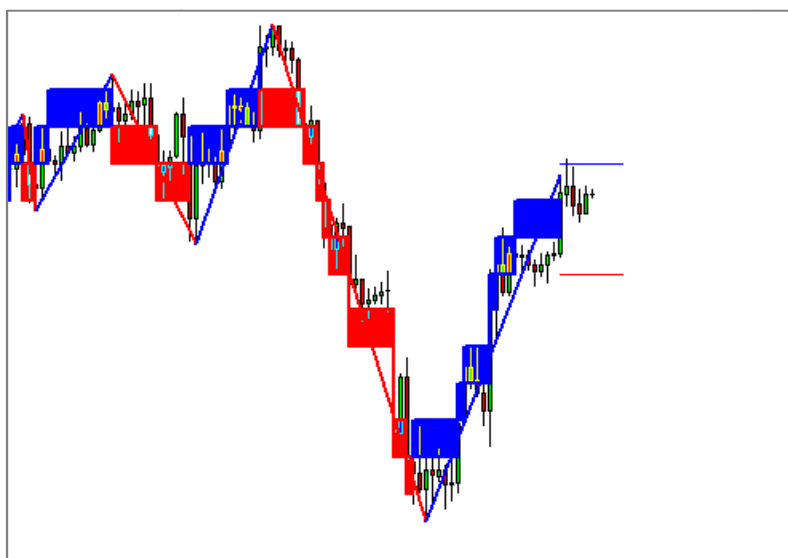


Figure 3: Next brick price level after 6 up Renko bricks.

## Detecting Profitable Patterns with Smart Renko

Note that both Renko brick and Renko Zigzag can be switched on and off from Smart Renko Indicator. So you can use either of them depending on your preference. As we mentioned, without too much knowledge about technical analysis, it is still straight forward to detect profitable patterns used by professional traders. Below we show some examples.

### Triple Top Pattern

Triple top is common patterns used by traders. The first step is to find some plausible triple pattern from Renko chart in the sub window and you will confirm them in actual price series in your main window. Once you are certain about your patterns, then you will confirm your entry level using some other technical indicators like Bollinger bands or moving average. If you are carefully considering your stop and profit targets, these can be good breakout setups.

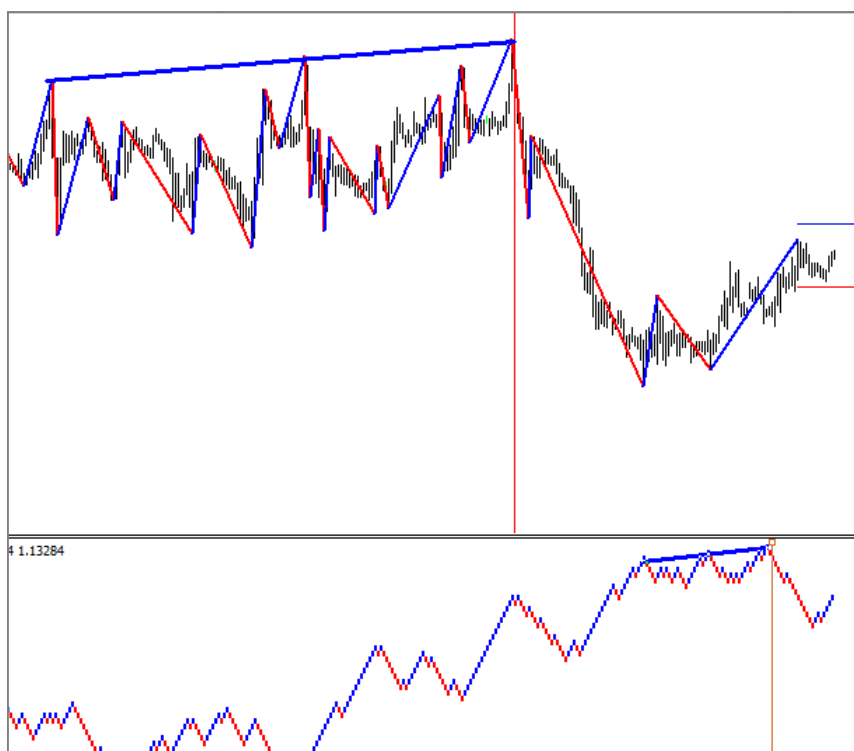


Figure 4: Triple tops patterns identified in both indicators chart and main chart. Vertical red line is cross brick reference lines.

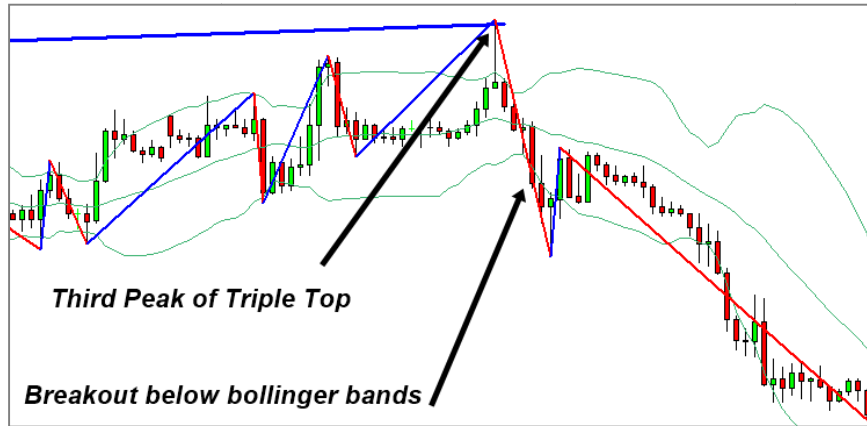


Figure 5: Breakout trade setup with Triple tops and Bollinger bands.

### Triangle Pattern

Triangle is another common pattern used by many traders. Just like we detected triple tops, you can confirm the seemingly plausible pattern from Renko brick in your indicator window first. Then you will confirm the triangle pattern in your main chart. If it is difficult to know the position of Renko brick in the indicator chart to your main chart, then enable “Cross Brick Reference” in your Smart Renko Indicator. By double clicking on the chart, you can cross reference the position between your Renko chart and main chart. Once you have drawn the triangle in your main chart, again you should set up some standard technical indicators to gauge your entry like Bollinger band or moving average.



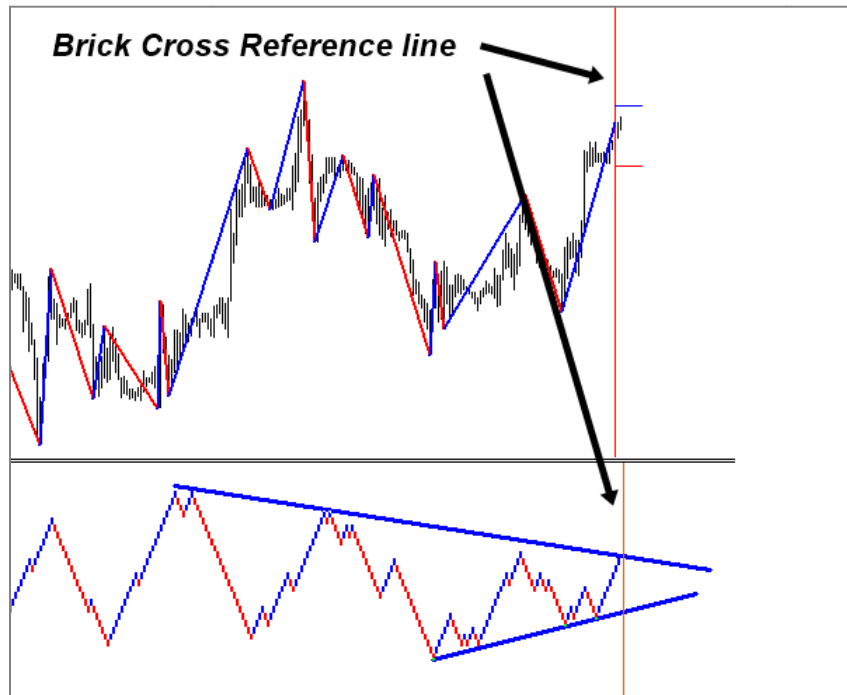


Figure 6: Brick cross reference line positioned at the latest peak of triangle pattern.

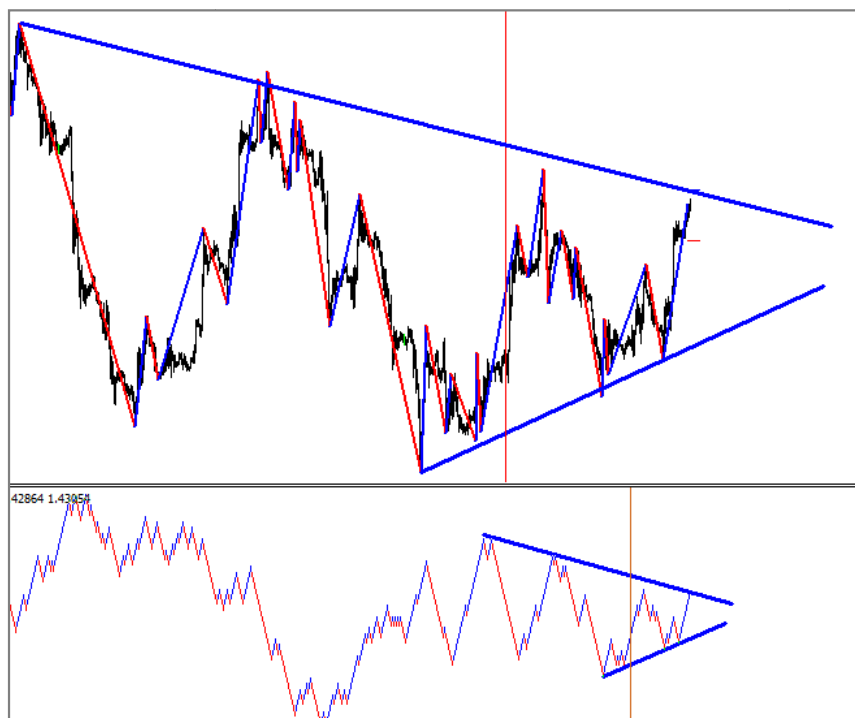


Figure 7: Triangle pattern identified in indicator chart and main chat.



Figure 8: Bollinger bands gauging entry level with triangle patterns.

### Conclusion

If you prefer to learn manual pattern detection process by yourself, then Smart Renko can be the great tool to achieve your goal by offering both clarity and efficiency. As we have shown in our example, you can identify many tradable patterns using Smart Renko indicators. Although we have not covered here, you can identify harmonic patterns and Elliott Wave patterns too using the same process. You may require reading some text books to identify these patterns.

On the other hands, it should be noted that we also offer fully automatic pattern scanner including Harmonic Pattern Plus, Price Breakout Pattern Scanner and Sideways Market Analyzer. Which one to choose between manual and automatic one is really depending on your preference. With manual pattern detection, traders must suppress their emotion and aim to be more objective while they are identifying patterns. When traders are mentally tired, this often become difficult. Also manual detection is much slower than fully automatic software too.