Ichimoko Analysis for Forex Beginners

Five Lines and a Cloud

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ActionForex.com was set up back in 2004 with the aim to provide insightful analysis to forex traders, serving the trading community over a decade. We started providing only a daily and a mid-day report, now known as Action Insights. Gradually, we added a lot more in-house contents to the site. Techinical Outlook section was expanded to cover more pairs. Central Bank Views, China Watch and Special Topics are added to cover fundmental developments that affect the markets. In addition to that, Top Movers, Heat Map, Pivot Point Charts and Pivot Meters, Action Bias and Volatility Charts, are tools used by traders from all over the world.

"Empowering the individual traders" was, is, and will always be our motto going forward.

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I: Introduction

Ichimoku Kinko Hyo is a technical indicator invented and published by the Japanese for more than 30 years. It's a tool to measure momentum and project future support and resistance.

First of all, the Japanese word "Ichimoku" means "one glance", "Kinko" means "balance / equilibrium and "Hyo" means "chart", in short Ichimoku Kinko means to see the equilibrium at a glance. Basically, the indicator is best used to define market trend, support and resistance and finally generate buy/sell signals.

Ichimoku Kinko Hyo consists of 5 lines and a "Kumo" or known as "cloud" as most people call it. Whilst Ichimoku Kinko Hyo utilizes five separate lines, they shall not to be used independently but rather to use them together to form a comprehensive view of the price action in order to formulate trading strategies. After studying these indicators, one should be able to understand market sentiment, momentum and relative strength of a trend "at a glance".

By studying each of the five components that make up Ichimoku Kinko Hyo, one shall be able to have a clear perspective of the relative equilibrium of the market as these lines can reflect market force, the balance between buyers and sellers.

II: The Five Lines of Ichimoku

The five lines of Ichimoku Kinko Hyo are:

- Tenkan-Sen (Conversion Line)
- Kijun-Sen (Base Line)
- Senkou Span A
- Senkou Span B
- Chikou Span (Lagging Span)

Tenkan Sen

The Tenkan Sen, also known as short-term line (according to the Japanese meaning), conversion line and turning line. This line is calculated by:

(Highest High + Lowest Low) / 2, for the past x periods (Traditionally x=9)

There are quite some people compare the Tenkan-Sen to a simple 9 period moving average (no matter it is a simple one or a exponential one) and consider the two are quite similar to each other.

However, the fact is that the Tenkan-Sen is very much different from the moving average as it measures the average of price's highest high price and the lowest low price for the past 9 period.

It is believed that by applying the average of the price upper and lower range over a certain period of time is better in measuring market equilibrium than only using the average of closing price, especially in volatile market condition like the modern days.

As you can see in the above chart, the Tenkan Sen reacts better than the 9 period simple moving average when there are more volatile movements, such as the quick rebound from the bottom, this is because the Tenkan Sen takes into account of the highest high price and lowest low price. In addition, the average of the highest high price and lowest low price enables the line to stay at the mid-point when market is in a ranging situation.

The Tenkan Sen can serve a purpose to track the trending moves and in a rising market, the line shall act as a level of support whilst in a falling market, it will likewise act as a line of resistance.

The slope or angle of the Tenkan Sen provides additional information of the relative strength of the trend over the past given period. In general, a steeper slope indicates a stronger momentum whilst a flatter line or more horizontal Tenkan Sen signals weakening of near term momentum.

After a period of trending moves, the break of Tenkan Sen should be treated as an early sign of a temporary change in direction or at least a pause of current trend. Hence, consolidation shall take place and some correction of the previous decline or rise would be seen, however, whether it is really going to be a top or bottom formation or reversal will need confirmation provided by other Ichimoku components.

A main use of the Tenkan Sen is to apply it together with the Kijun Sen as the cross-over of the two lines can provide bullish and bearish signals, we will discuss it in further details after explaining the characteristics of Kijun-Sen.

Kijun Sen

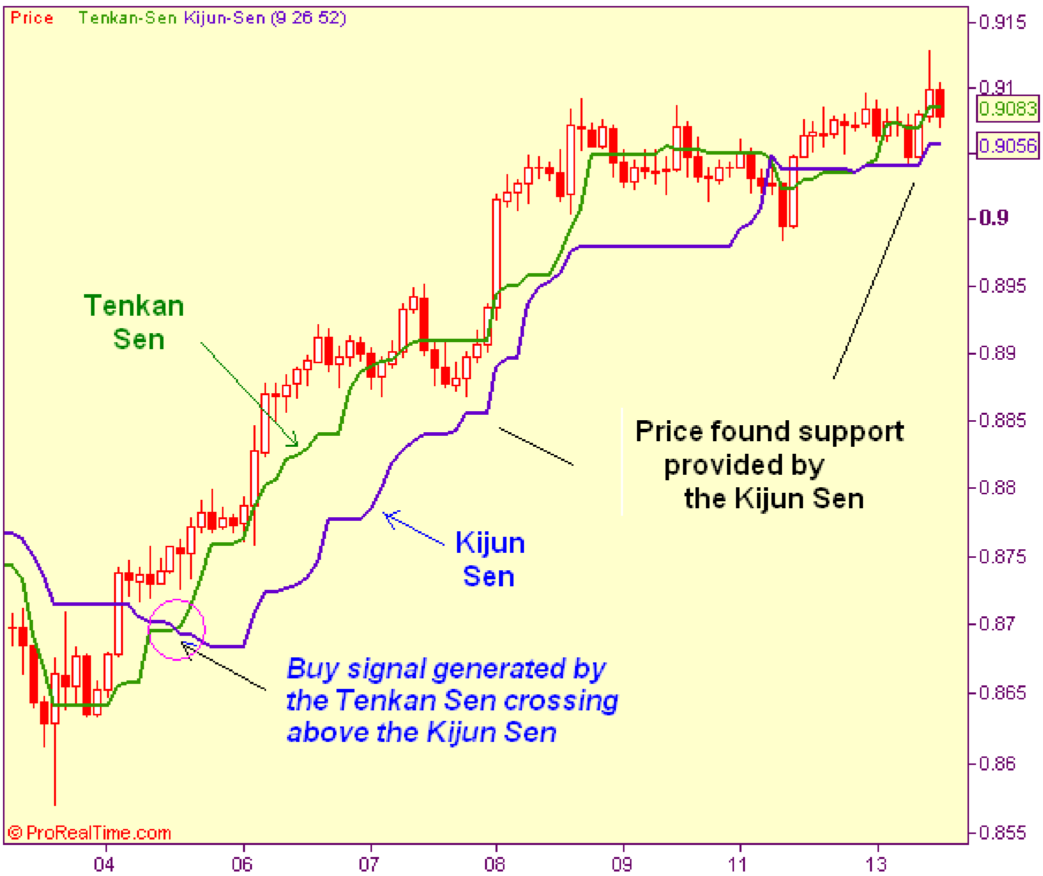
The Kijun-Sen, also known as base line, which is primarily used to measure medium term price momentum and it is calculated as :

(Highest High + Lowest Low) / 2, for the past y periods (Traditionally y=26)

Although the formula is quite similar to the one of Tenkan Sen (calculating the sum of the highest high and lowest low divided by two), as the Kijun Sen takes a long time frame into account (the past 26 time periods) which enables the line to provide the different perspective in understanding the change in short to medium term trend.

Generally, when price is moving sideways, the Kijun Sen will reflect by moving horizontally (flat ground) and once price exceeds either the highest or the lowest price within the indicated time periods (e.g. 26), then the time will start rising or falling accordingly. Therefore, the direction of the Kijun Sen can be used to measure the short-term trend and the strength of momentum of the trend can be indicated by slope or the relative angle of the Kijun Sen.

Whilst there are countless applications of the Kijun Sen, as mentioned above, one important use of this base line is in conjunction with the Tenkan Sen, take the crossover of the two line to initial a trading position.



As indicated in the above chart, a buy signal is generated when the Tenkan Sen crosses above the Kijun Sen and one can hold on to the long position as long as the Tenkan-Sen remains above the Kijun-Sen and once the Tenkan-Sen crosses below the Kijun-Sen, this is a signal to exit the long position immediately.

As the Kijun Sen is using a relatively longer time frame, it is considered as more reliable way to express price equilibrium (just as the name of the indicator "Kinko") and therefore, the Kijun Sen itself can be relied as a significant level of resistance (in downtrend) and support (uptrend).

An additional use of Kijun Sen is the pullback effect (just like the moving average), as the Kijun Sen is a good expression of price equilibrium, whenever price moves too far away from the Kijun Sen, which also represents an overbought or oversold condition, the price should not stay in that extreme level for too long and it is quite common to see price moves back towards the Kijun Sen, i.e. brings price back to equilibrium. This effect is particularly obvious when the Kijun Sen is moving horizontally which also indicates time of consolidation is taking place.

To sum up:

A **buy signal** is generated when Tenkan Sen **crosses above** the Kijun Sen from below and it will be considered as a stronger signal if market price is above both lines.

A **sell signal** is generated when the Tenkan-Sen **crosses below** the Kijun-Sen from above and it will be considered as a stronger signal if market price is below both lines.

When a position is entered in reaction to such a signal, one can use the Kijun Sen to set stop-loss level, one can put stop-loss below the Kijun Sen for long position and for short position, the stop-loss should be placed above the Kijun Sen.

Senkou Span A & B, The Kumo / "cloud"

The Kumo (or most people call it cloud and actually it does mean cloud in Japanese) is probably the most famous part of Ichimoku Kinko Hyo analysis and is getting more popular among chartists for the use of identifying support and resistance area. Some people even consider the Kumo as the core or key of this charting system. In fact the cloud itself is the most instantly visible component among the other lines in Ichimoku Kinko.

Actually the Kumo / cloud is referring to the area between 2 lines, they are the Senkou Span A and the Senkou Span B. Since the two lines are derived from the Tenkan Sen and Kijun Sen; highest high and lowest low respectively, so the Kumo is able to provide a deeper perspective of the market equilibrium. This cloud area also brings a better way when compare to other traditional chart analysis methods to represent price support and resistance, which is not only a single level but rather an area that would react on market volatility.

The **Senkou Span A** is calculated as:

(Tenkan-Sen + Kijun-Sen) / 2, shifted forwards y periods (Traditionally y=26)

The line is basically the mid-point between the Tenkan Sen and Kijun Sen but being plotted 26 periods ahead, the logic behind is that prior support and resistance tend to have impact on current price level, in other word the current price level normally pays respect to previous support and resistance. Therefore, when this line is drawn with 26 periods (for a daily chart, that would represent the data of approximately 1 month ago) forward displacement, it can give Ichimoku chartists a quick comparison of current price level with the prior support and resistance at a glance.

The **Senkou Span B** is calculated as:

(Highest High + Lowest Low) / 2 for the past z periods, shifted forwards y periods (Traditionally y=26 and z=52)

This line is always drawn alongside the Senkou Span A and is another component of the Ichimoku Kinko Hyo to create the Kumo / cloud. This line represents a relatively longer term view of the market equilibrium in the charting system, instead of calculating the past 26 periods data, the Senkou Span B measures the average of the highest high price and lowest low price for the past 52 periods (2 months data on daily chart) but again shifts forwards by 26 periods. Therefore, when putting the two lines, Senkou Span A and Senkou Span B, together and forming the Kumo, the cloud can cover both short-term (26 periods) and longer term (52 periods) data, hence providing a multi time frame perspective in understanding market equilibrium.

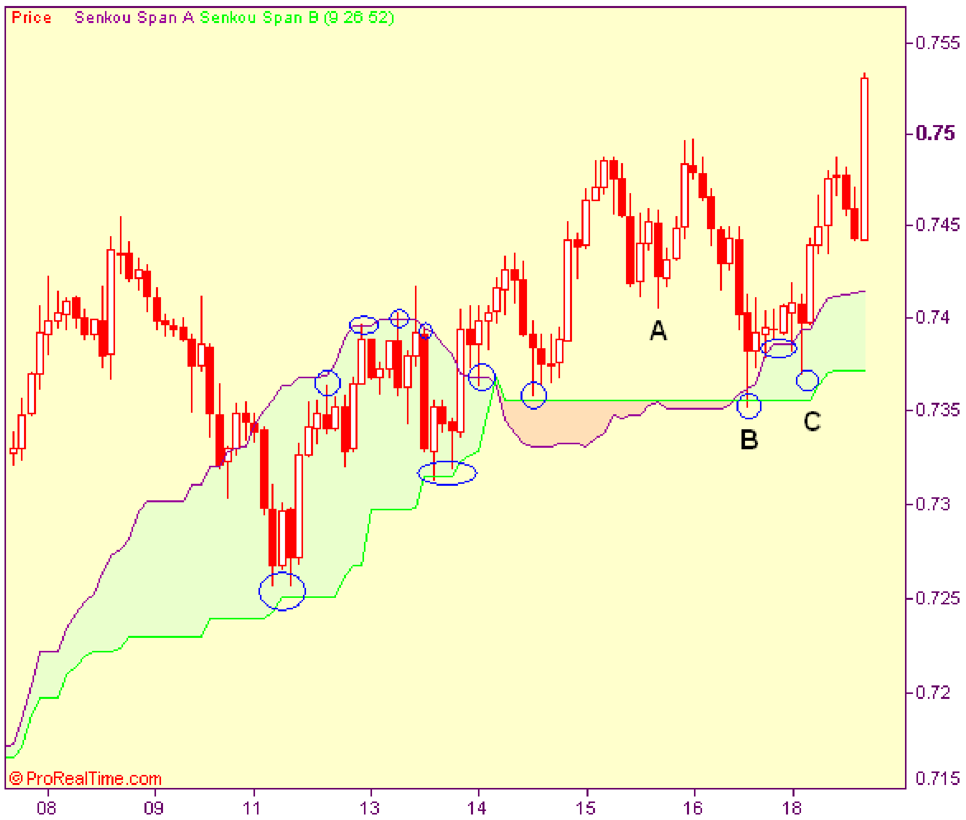
When the market trend is down, the Senkou Span A is located below the Senkou Span B; in a rising market, the Senkou Span A is located above the Senkou Span B. So the indicators are also used to predict the change in market direction when the two Senkou Spans cross over with each other.

Once the two lines are drawn, the area in between Senkou Span A and B, the shaded area, known as Kumo or cloud can be used to predict future support and resistance area.

When price is trading above the Kumo, the prevailing trend is said to be up and the Kumo will be treated as the support area whilst if price is below the Kumo, the trend is said to be down and the cloud will become resistance area instead.

The thickness of the Kumo (cloud) also indicates the market volatility as the cloud contracts and expands based on past price fluctuations. A thin layer of cloud reveals the lower historical volatility whilst a thick cloud implies higher historical volatility.

As explained above, the Kumo provides a different view of support and resistance and the thickness of the cloud provide additional information regarding the relative strength of the support and resistance. Normally the thicker the Kumo, the stronger is the support or resistance will be provided by the cloud. When price runs into a thick layer of Kumo, that usually suggests a non-trend situation and sideways trading is more likely to take place.



In the above chart, we can see price paid respect to the boundaries of the Kumo, Senkou Span A and B, in several occasions. From the far left of the chart, price started turning down after rising for some times, once the upper Kumo or the Ichimoku cloud top is broken, this normally indicates a temporary top is formed and correction has commenced, then the next line of support will be the lower Kumo or the cloud bottom. When price is trading inside the cloud area, the two lines, Senkou Span A and B, formed the upper and lower limit of the trading range and until price is able to break outside of this range, choppy consolidation within the cloud area would take place. Once price rises above the cloud area, the Kumo would turn from resistance to support and buying interest normally emerges above there, pushes price higher.

An additional advantage of using Ichimoku Kumo is that it provides a different perspective of the concept of support and resistance when comparing with the traditional technical analysis method. In the above chart, after breaking point A, according to traditional technical analysis techniques, it also ended the series of higher highs and higher lows which means an end of the prevailing trend. Traditional chartists might have sold the currency pair on such a break in anticipation of a correction of the upmove, however, price was not able to break below the Ichimoku cloud (not on a closing basis) and found support at point B and C around the Ichimoku cloud bottom, then headed back north again and resumed the uptrend subsequently.

The Kumo itself could also express market sentiment and therefore can show bullish or bearish signs, we will discuss the use of Ichimoku cloud in further details in the second part of our E-book.

Chikou Span

Chikou Span is also known as lagging line is plot by shifting current closing price backwards into the past 26 periods on the chart. This is one of the unique features of Ichimoku Kinko Hyo analysis by time-shifting current price backwards in order to get a clearer perspective of the price action. This line allows us to have a quick comparison of present level and the price of 26 periods ago.

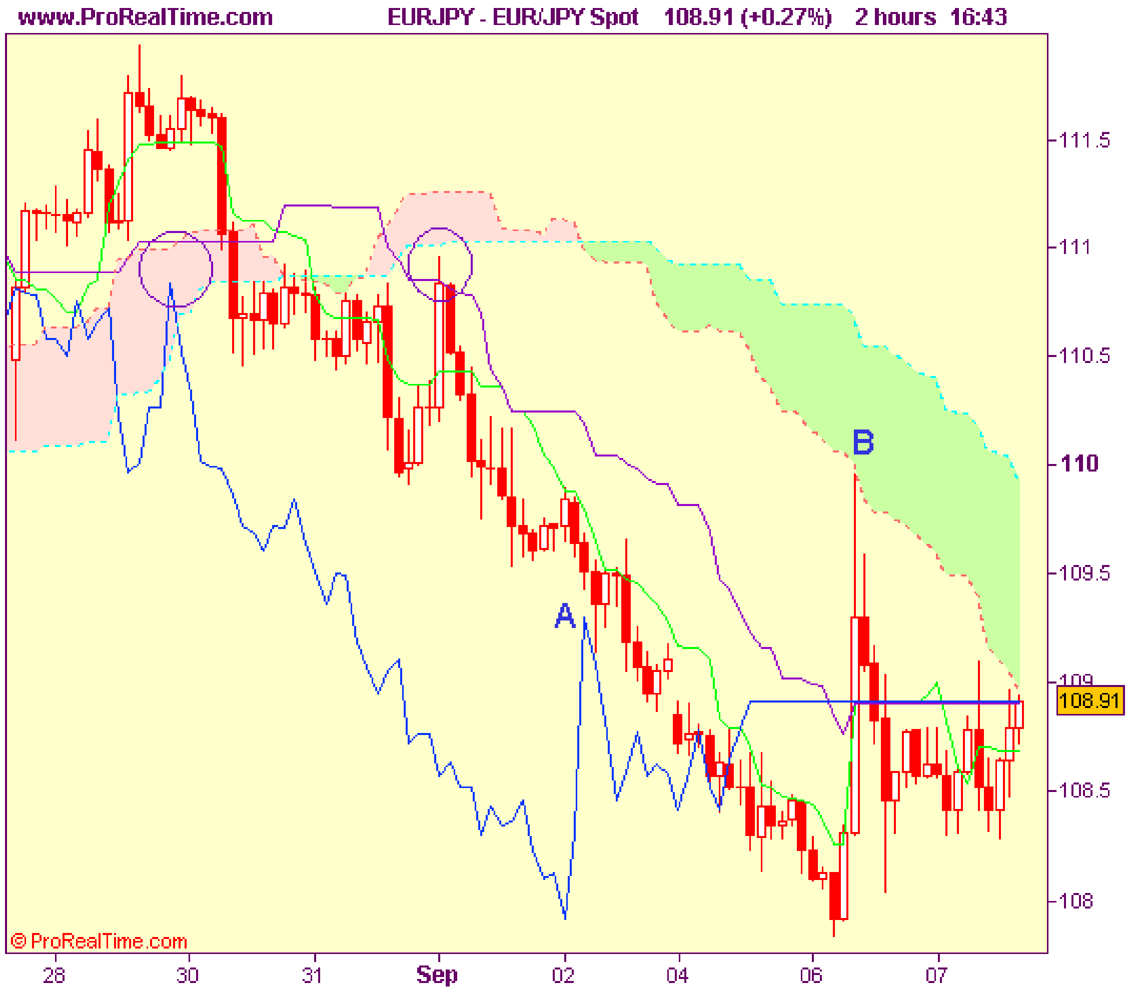
With a quick glance of this line, one shall be able to identify if there is a change in trend and see if any support or resistance is being penetrated.

There are several way to utilize the Chilkou Span:

- To do a quick comparison of current price to the price back in 26 periods ago, if current price is lower, then one can assume the bearish direction to continue and vice versa.
- In a falling market, if the Chikou Span rebounds and touch previous price level, one can assume that certain resistance would appear there. Therefore, if the Chikou Span is able to rise through previous price level, this normal represents a change in trend from bearish to bullish.
- In a rising market, if the Chikou Span retreats and touch previous price level, one can assume that certain support would appear there. Therefore, if the Chikou Span is able to drop through previous price level, this normal represents a change in trend from bullish to bearish.
- When the Chikou Span touch back the level of the Tenkan-Sen, Kijun-Sen or Kumo back in 26 periods ago, one can expect current price to meet resistance or support.

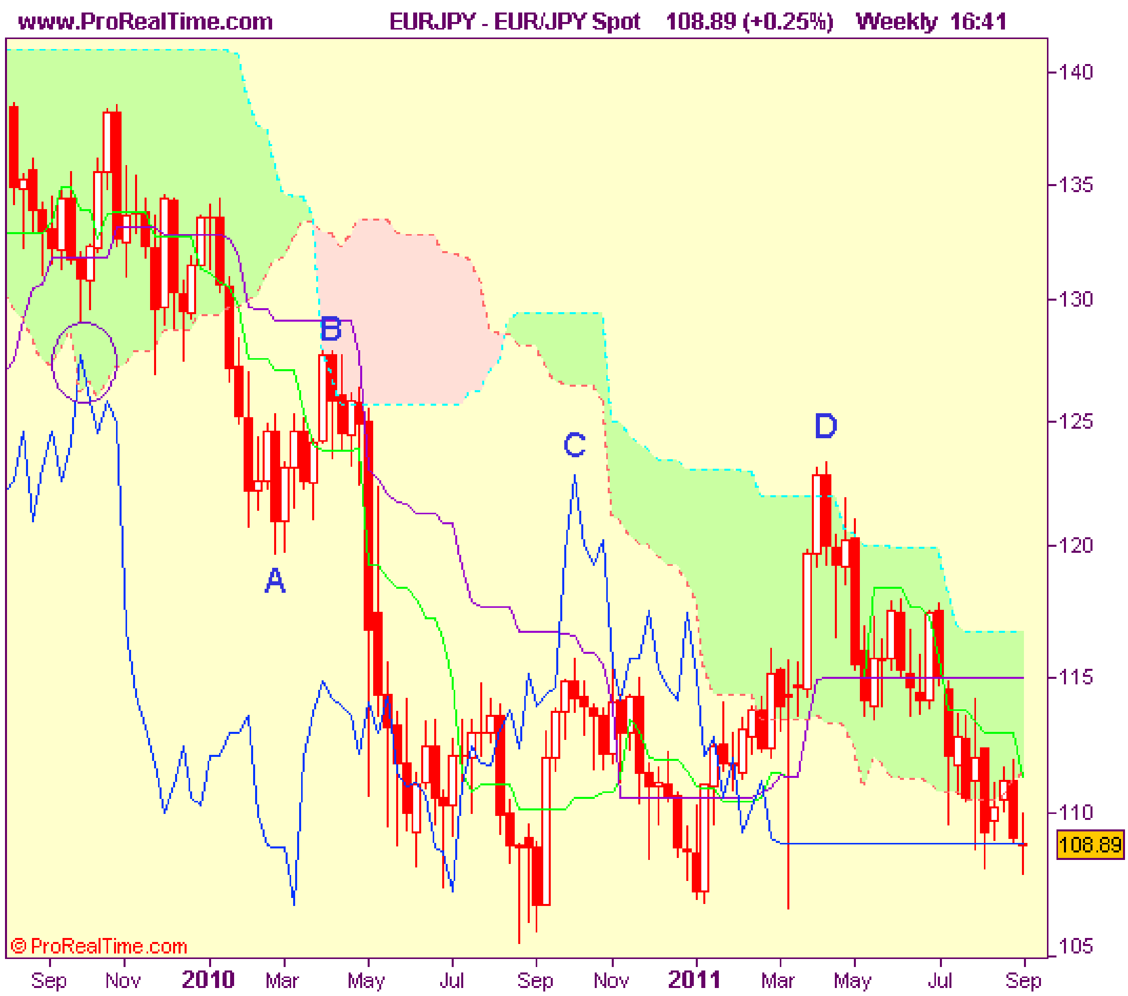
Here are some recent examples:

a) Meeting resistance at the Kumo and previous price level



In the above EUR/JPY chart, price started to fall from 111.93. Although the first rebound from 109.90 broke above the Tenkan-Sen and Kijun-Sen, it faltered below the Ichimoku cloud bottom. The Chikou Span also met resistance at the Ichimoku cloud.

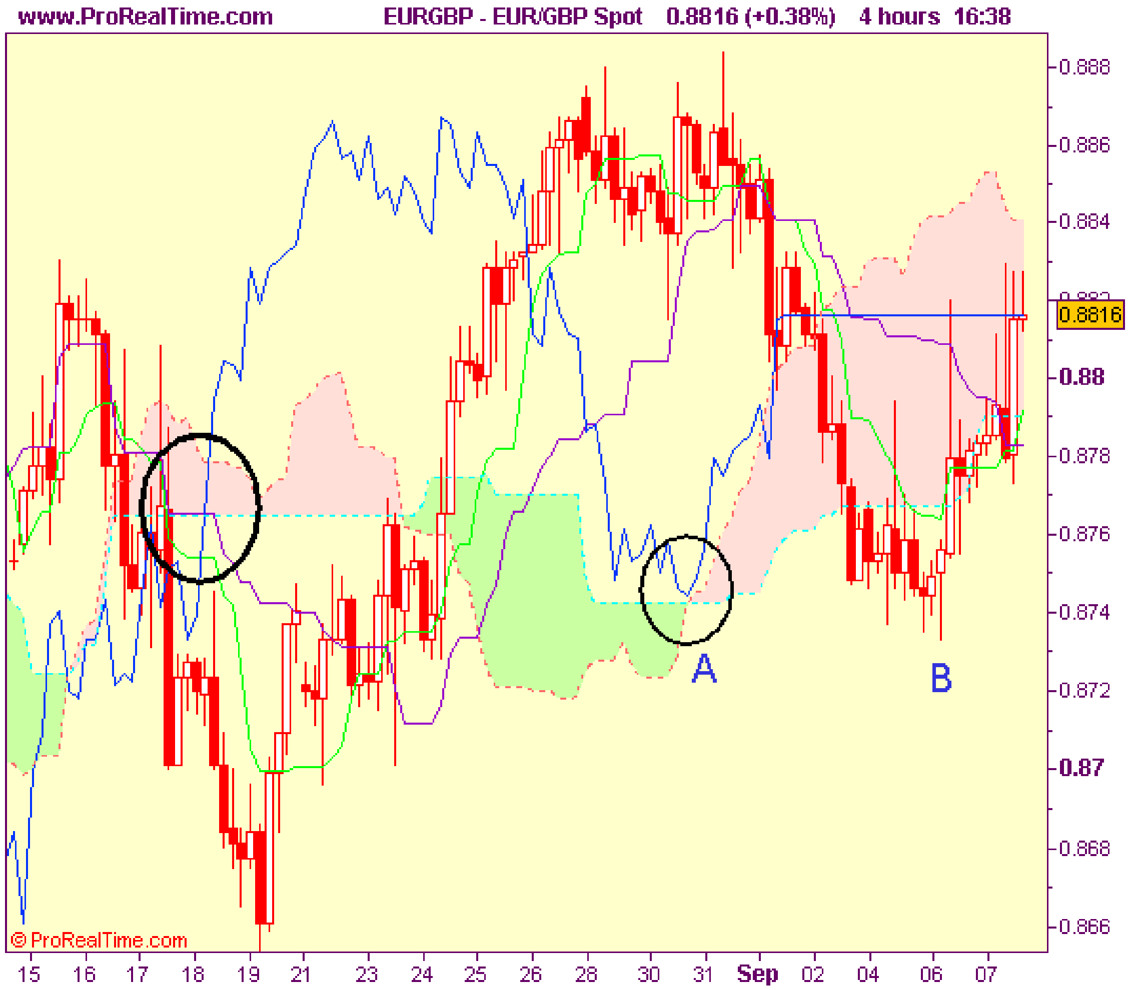
EUR/JPY then rebounded again from 107.80, even this bounce was quite sharp, price met strong resistance right at the Ichimoku cloud bottom (at point B). And, the Chikou Span also met resistance right at the previous price level back in 26 periods ago (at point A). Since Chikou Span failed to break through previous price level, suggesting the bearish trend remained intact and price then turned back down again.



In the above chart, after falling for several months, euro rebounded from point A to point B, price did not reach resistance the Kijun-Sen but the Chikou Span already met resistance at the Ichimoku cloud bottom, price then tumbled again from there to as low as 105.44 before rebounding again.

Even though EUR/JPY continued to find good support above this level and broke above Tenkan-Sen, Kijun-Sen and even Ichimoku cloud top (at point D), the Chikou Span met strong resistance below the Ichimoku cloud bottom (at point C). This suggests the trend is still bearish and EUR/JPY turned south again from point D back below 110.00 level.

b) Use Chikou Span to confirm change in direction



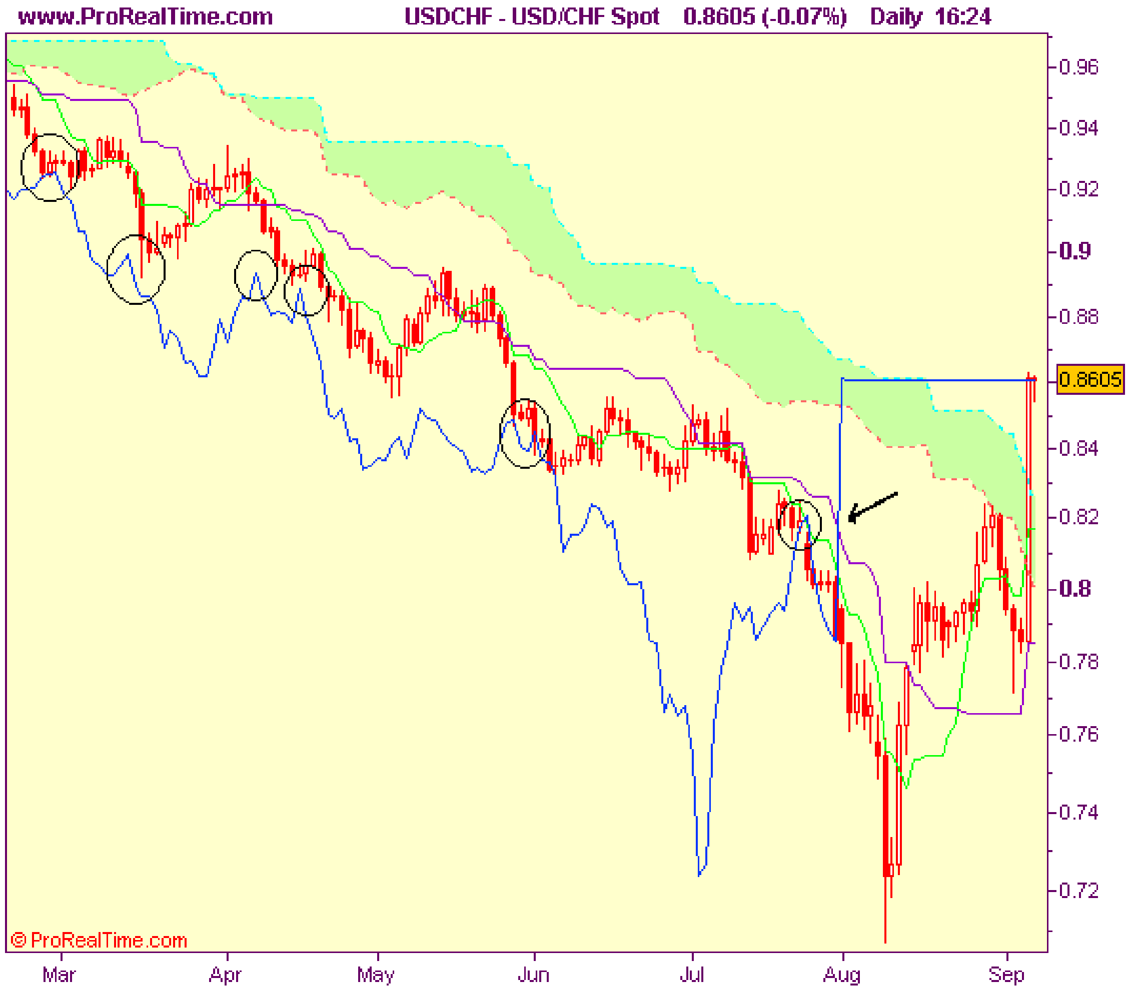
In the above chart, EUR/GBP rebounded from 0.8654 and the big circle on the left indicate the point where Chikou Span broke through price, then Tenkan-Sen, Kijun-Sen and finally the Ichimoku cloud, confirming the change in direction. EUR/GBP surged to as high as 0.8884.

With the fall from 0.8884, Chikou Span broke below price which provided confirmation of top formation, price then continued to fall to point B. Without the Chikou Span, as the decline from 0.8886 already penetrated Tenkan-Sen, Kijun-Sen and even the Ichimoku cloud bottom, it looked pretty bearish and seemed like further decline would be seen.

However, if we take Chikou Span into consideration, once can see in point A, the Chikou Span just held above the Ichimoku cloud and euro found support at the corresponding point B, then staged a strong rebound from there.

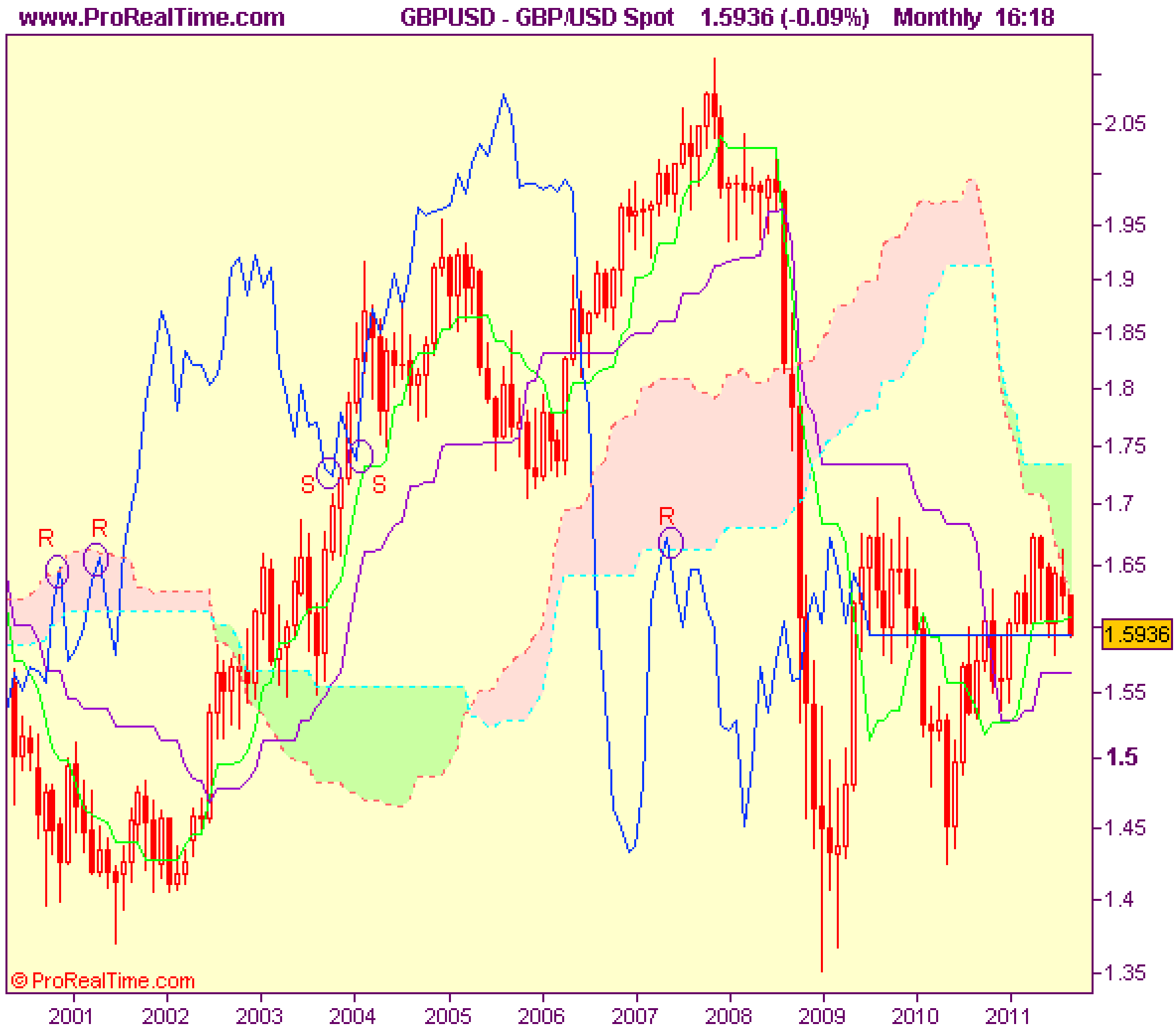
On the left side of the above EUR/GBP chart, the previous price level continue to cap the Chikou Span. The strong rebound from 0.8734 to point B broke above the Ichimoku cloud top and Tenkan-Sen also penetrated the Kijun-Se. However, the Chikou Span faltered just below the Ichimoku cloud bottom. Price then retreated quite sharply from point B.

Despite price dropping below the lower Kumo from point B, as Chikou Span found support just above previous price level and then broke above the Ichimoku cloud, price then rebounded again and broke above point B eventually.



Here's another similar example in USD/CHF here. One can see all the circles representing how previous price levels acting as resistance to the Chikou Span in a downtrend. Until the Chikou Span broke above price, Tenkan-Sen and Kijun-Sen on the right hand side of the above chart (with the pointer), this is where the Chikou Span provided confirmation of the change in trend.

c) Using Chikou Span to identify support and resistance.

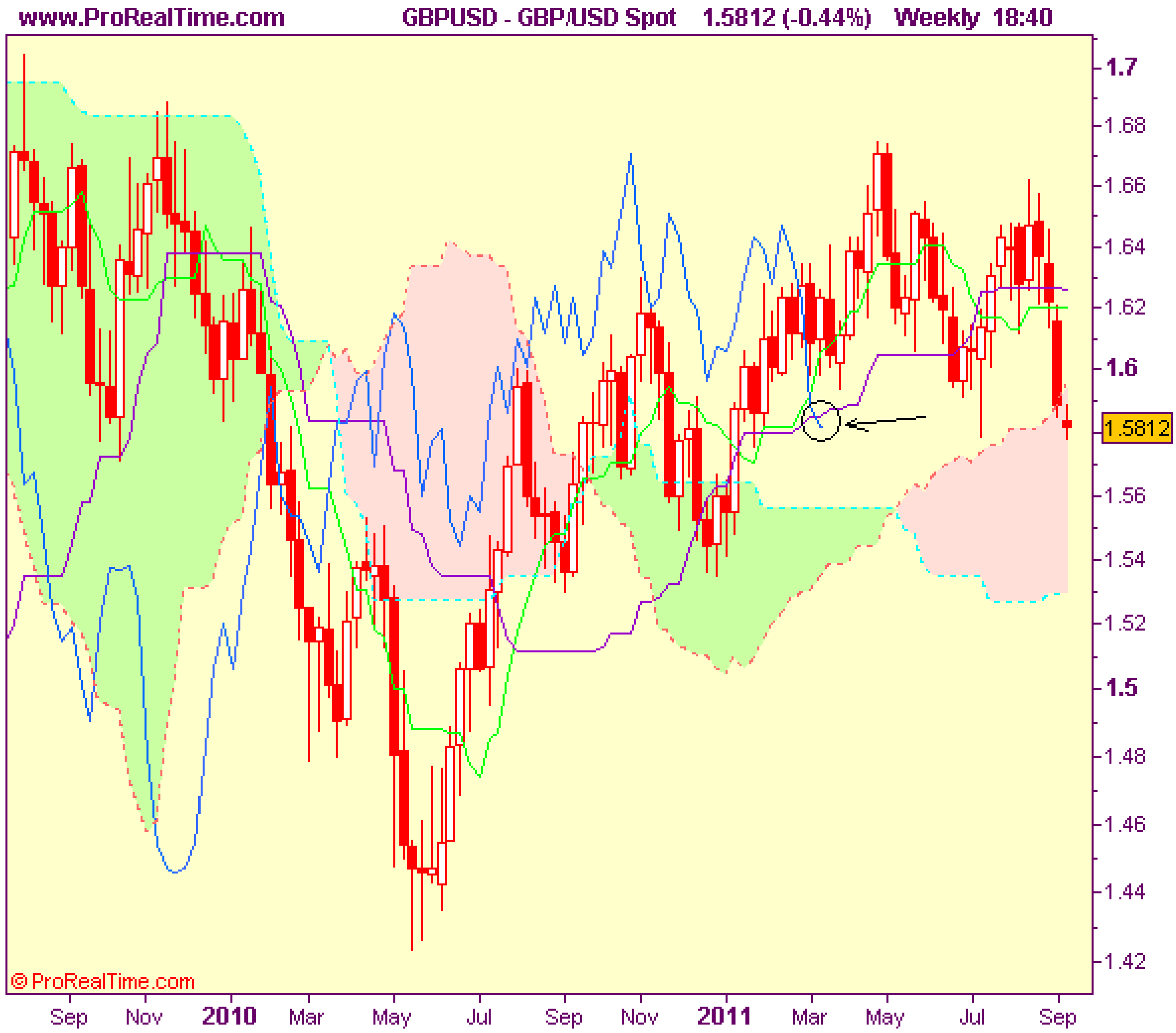


In a ranging market, previous level of the Ichimoku cloud and price level could act as both support and resistance to the Chikou Span, so one can also take into account of these levels for corresponding support and resistance at current price.

On left side of the chart, the 2 'R' represent the two resistance levels. Without referring to the Chikou Span it would be almost impossible to identify these two resistances.

When the Chikou Span successfully penetrated the Ichimoku cloud which confirmed the change in trend, then the previous price level turned to become support level for Chikou Span, marked as 'S'.

In early 2009, cable rebounded strongly from 1.3500 and broke above the Tenkan-Sen. As you can see, the previous level of the Ichimoku cloud bottom capped the corresponding rebound in Chikou Span at the middle point 'R' which capped the move from 1.3500.



After rising from 2010 low of 1.4228, cable continued to move higher since May 2010 to complete a one year uptrend to as high as 1.6747. It then retreated from there to 1.5781 before bouncing again to 1.6618.

On the drop from 1.6618, the Chikou Span finally broke below previous price level as well as the Tenkan-Sen and Kijun-Sen, suggesting a change in direction. If we solely consider the Ichimoku cloud, as price already fell inside the Kumo area, next support would be apparently the lower Kumo around 1.5288.

However, if we took the Chikou Span into account, the first support would come in at the previous Ichimoku cloud top level (which is 1.5555). So one can expect to see good level of support to appear there ahead of the lower Kumo.

Once the Chikou Span breaks through the previous Kumo area, this would provide final confirmation for a top formation. Since there isn't any obvious support (price, Tenkan-Sen or Kijun-Sen) after the break, one can expect that the decline is going to be quite sharp.

To sum up, the Chikou Span not only provide a quick comparison of current price with the past price level 26 periods ago, it could also help identifying support and resistance by using previous price, Tenkan-Sen, Kijun-Sen or Kumo levels. Finally it could also serve as a confirmation of a change in direction when Chikou Span breaks through previous price, Tenkan-Sen, Kijun-Sen and finally the Ichimoku cloud levels.

III: Conclusions

Ichimoku Kinko Hyo, “Chart to view balance/equilibrium at a glance”, is studied in this ebook. The more than 30 year old analysis technique uses five lines and a cloud to a clear perspective of the relative equilibrium of the market, and, the balance between buyers and sellers.

It could be a valuable tool to all forex traders. In other ebooks of the series, we’ll provide some example strategies of using the techniques. Check them out.

Trading is a journey, not a destination.