

Trend Analysis

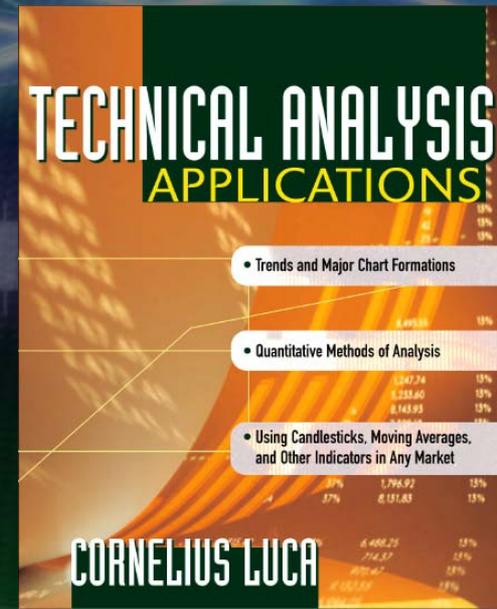
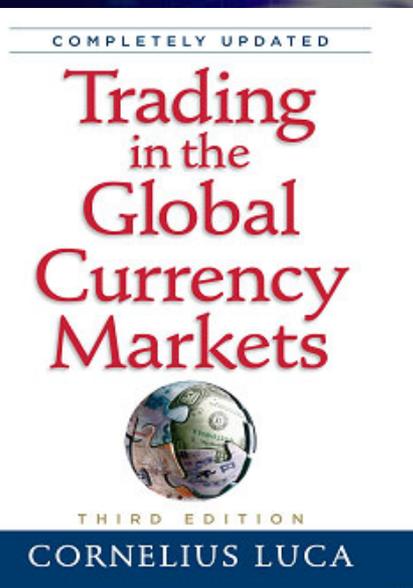
From Fibonacci to Gann
Ichimoku versus MACD
Proprietary Signals

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Luca Global Research

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Banco Best – Lisbon 2010





*From Fibonacci to
Gann*

Who is Fibonacci?



Leonardo of Pisa (1170s or 1180s – 1250), was also known as **Leonardo Pisano, Leonardo Bonacci, Leonardo Fibonacci, or Fibonacci**

- He spread Arabic numerals in Europe, through his *Book of Calculation, Liber Abaci* (published in the early 13th century).
- He discovered a sequence, which he used as an example in the *Liber Abaci*.

Fibonacci analysis

The Fibonacci sequence consists of an ascending series of numbers in which each factor consists of the sum between the previous number and itself, starting with 0. The series thus calculated yields the following series of numbers:

**0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144,
233, 377, 610, 987, 1597, 2584, 4181, (etc.)**

Numerical relationships of the Fibonacci series

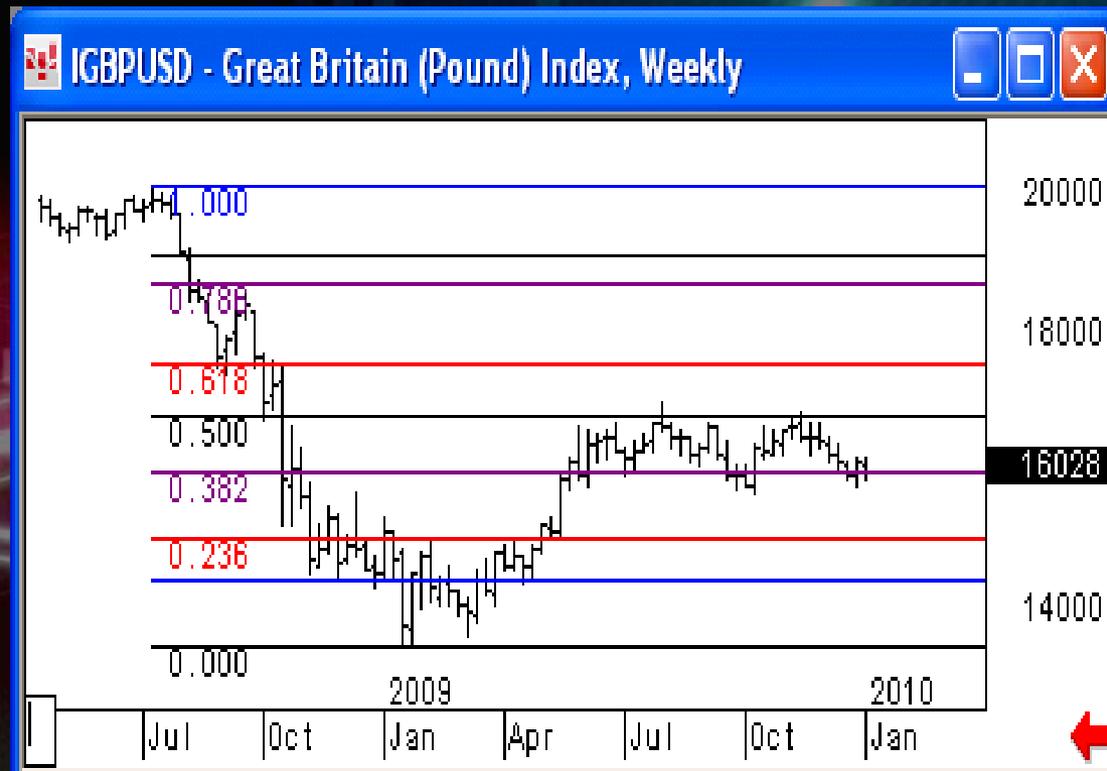
1. The sum of any 2 consecutive numbers equals the next consecutive number.
2. After the first 4 numbers, the ratio between 2 consecutive ascending numbers approaches 0.618.
3. As the numbers increase, the ratio between 2 consecutive descending numbers approaches 1.618, which is the inverse of 0.618.
4. The ratio between 2 alternate ascending numbers approaches 0.382 and the ratio between 2 consecutive descending numbers approaches 2.618.

The Fibonacci ratio

$$\frac{\sqrt{5} - 1}{2} = 0.6180339887499$$

Golden ratios of multiple moves

The retracements of an initial trend remain in effect for as long as The original High and Low remain In effect.



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Fibonacci retracements

The Fibonacci ratios are:

- .382 or about 38%
- 50% (Not a Fibonacci retracement level, really)
- .618 or about 62%
- $.236 = .618^3$ (or $.618 * .382$)
- $.786 = \text{square root of } .618.$

Fibonacci retracements (weekly)

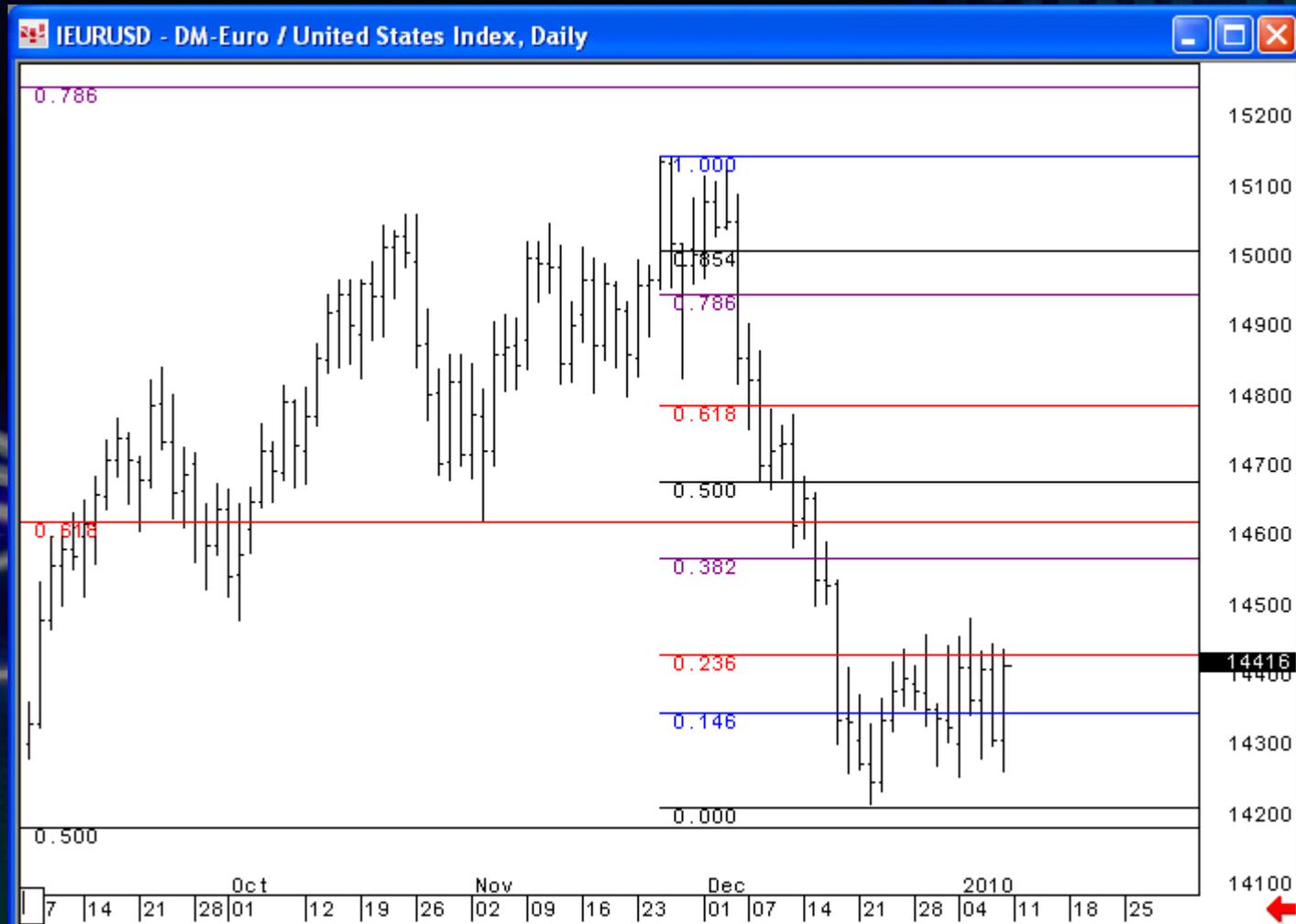


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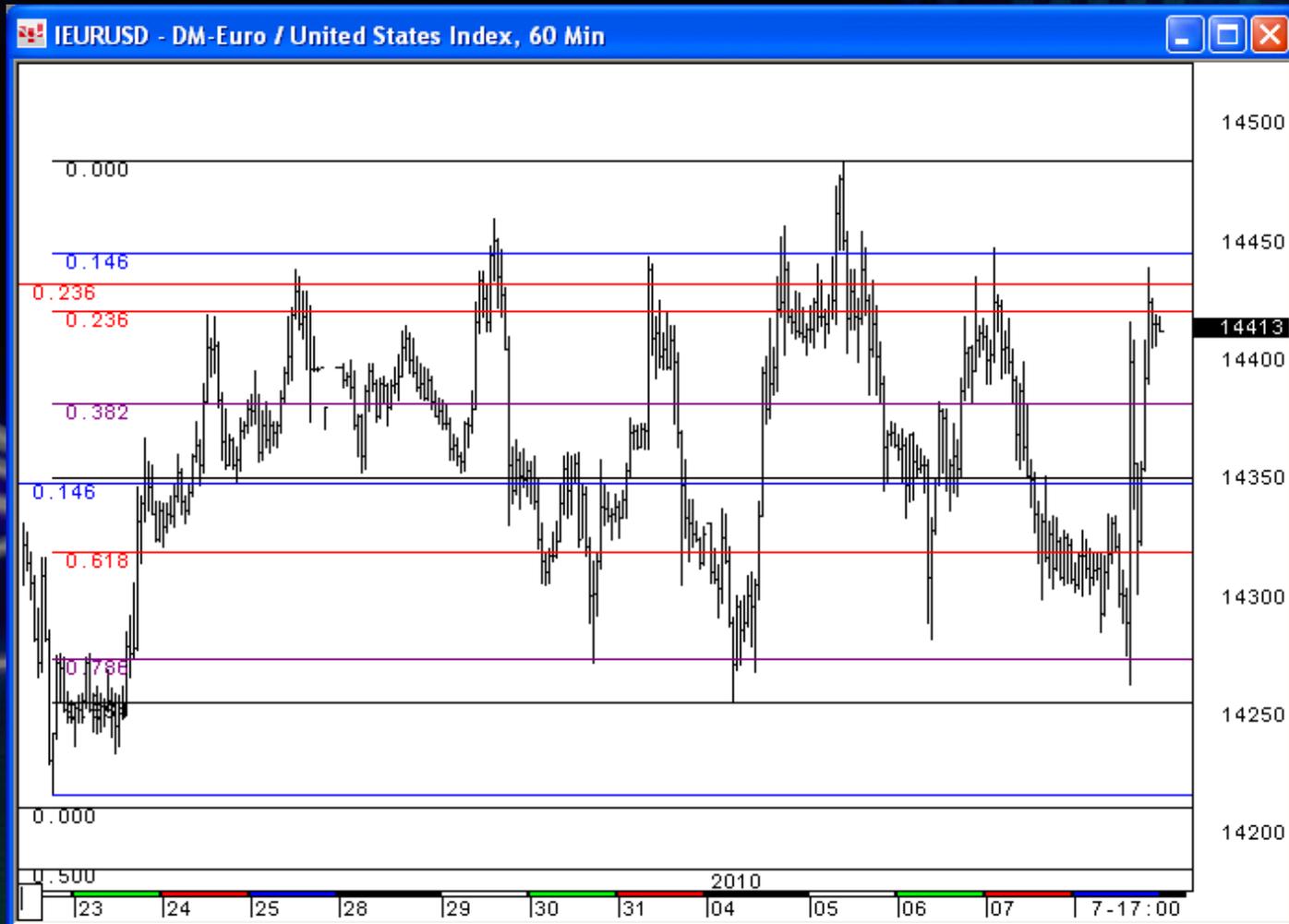
Fibonacci retracements (daily)



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Fibonacci retracements (hourly)

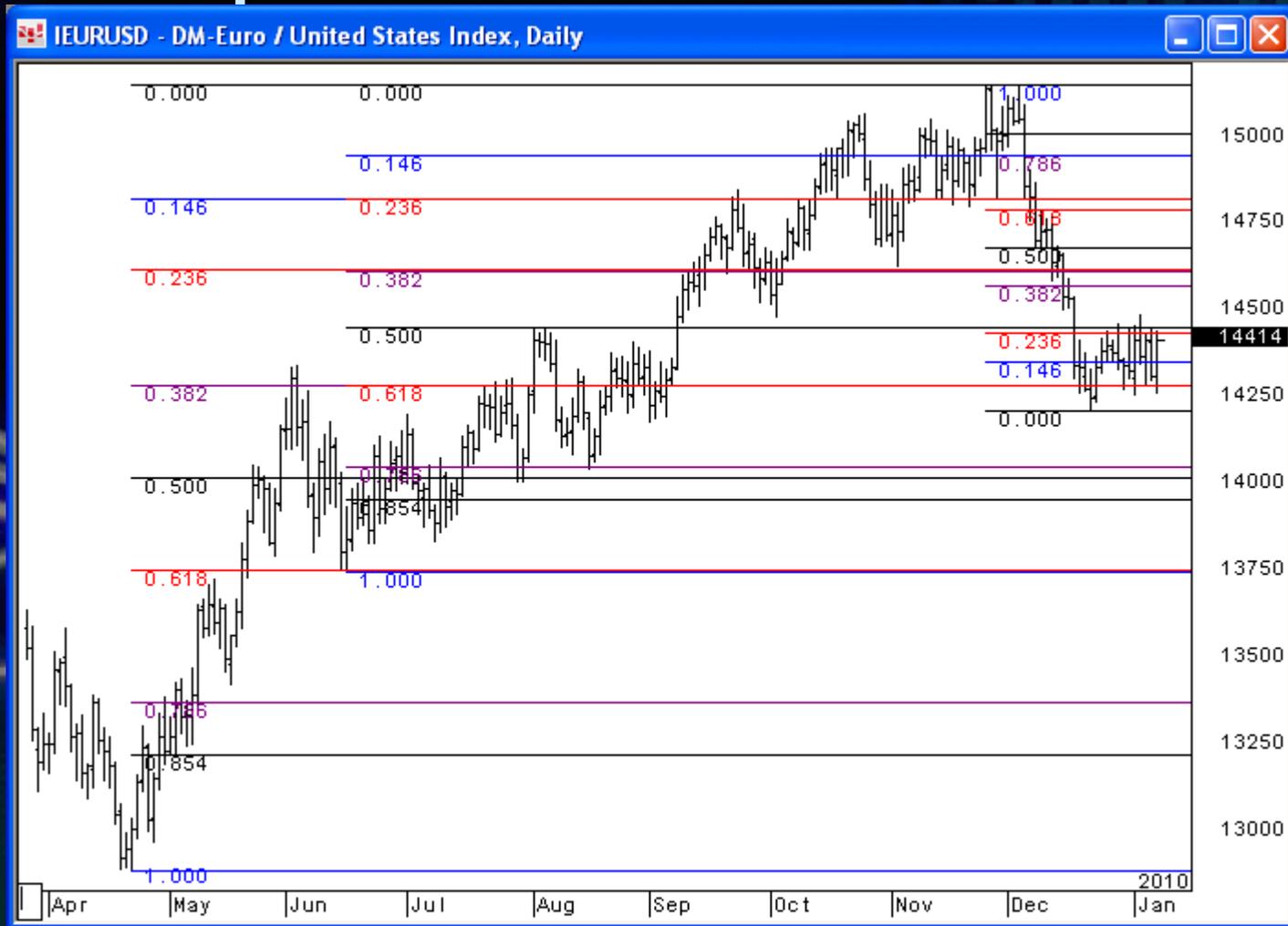


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Multiple Fibonacci retracements



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William Delbert Gann



Gann developed a complex set of mathematical methods based on time and price analysis, which helped him make 264 successful trades out of 286 transactions in various stocks in only 25 market days during the month of October, 1909.

William Delbert Gann

(1878 – 1955)

Trading strategies

He had different strategies for four situations:

- Bull market
- Bull market top (reversal from bull to bear market phase)
- Bear market
- Reversal phase from bear to bull market

Importance of number 3

Majority of moves will generally occur in time period of three - days, weeks or months.

Never trade in the direction of the trend on its third day.

Nine mathematical proofs of any point of resistance

1. Angles from top and bottoms,
2. Angles running horizontally (previous tops and bottoms)
3. Time cycles (vertical angles)
4. Crossing of important angles originating at zero
5. Crossing or coming together of angles from double or triple tops or bottoms
6. Crossing of double or triple tops or bottoms
7. Past resistance/support
8. Volume of sales
9. Squaring of time and price

Important features of Gann analysis

1. Geometric forms
2. Geometric angles
3. Ratios
4. The squaring of price and time
5. The cardinal square

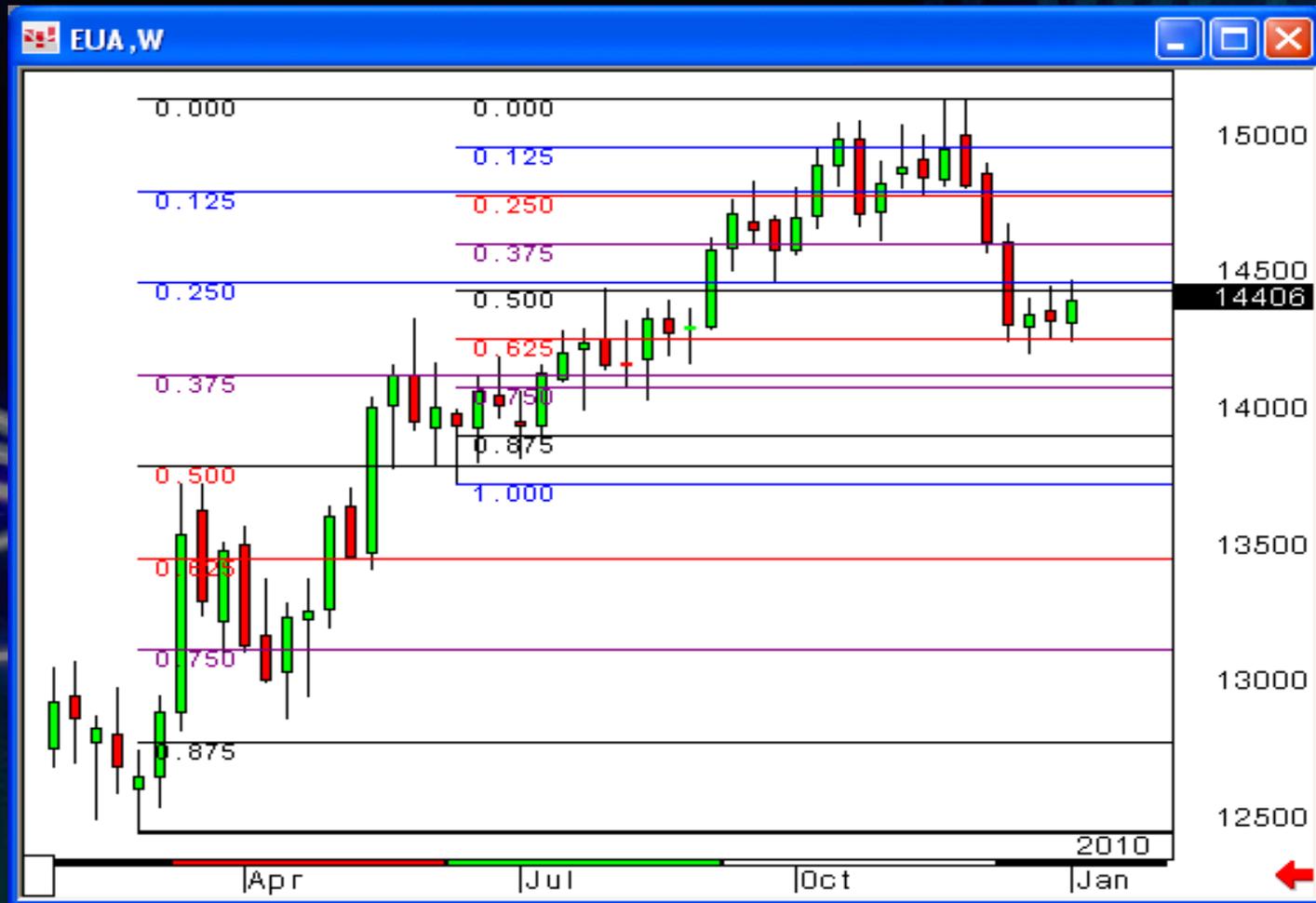
Gann percentage retracements

Gann attached importance to the 1/8 breakdowns along with the 1/3 and 2/3 retracements.

1/8	2/8	3/8	4/8	5/8	6/8	7/8	8/8
12.5%	25%	37.5%	50%	62.5%	75%	87.5%	100%

Advantage? Smaller steps, more signals.

Gann percentage retracements



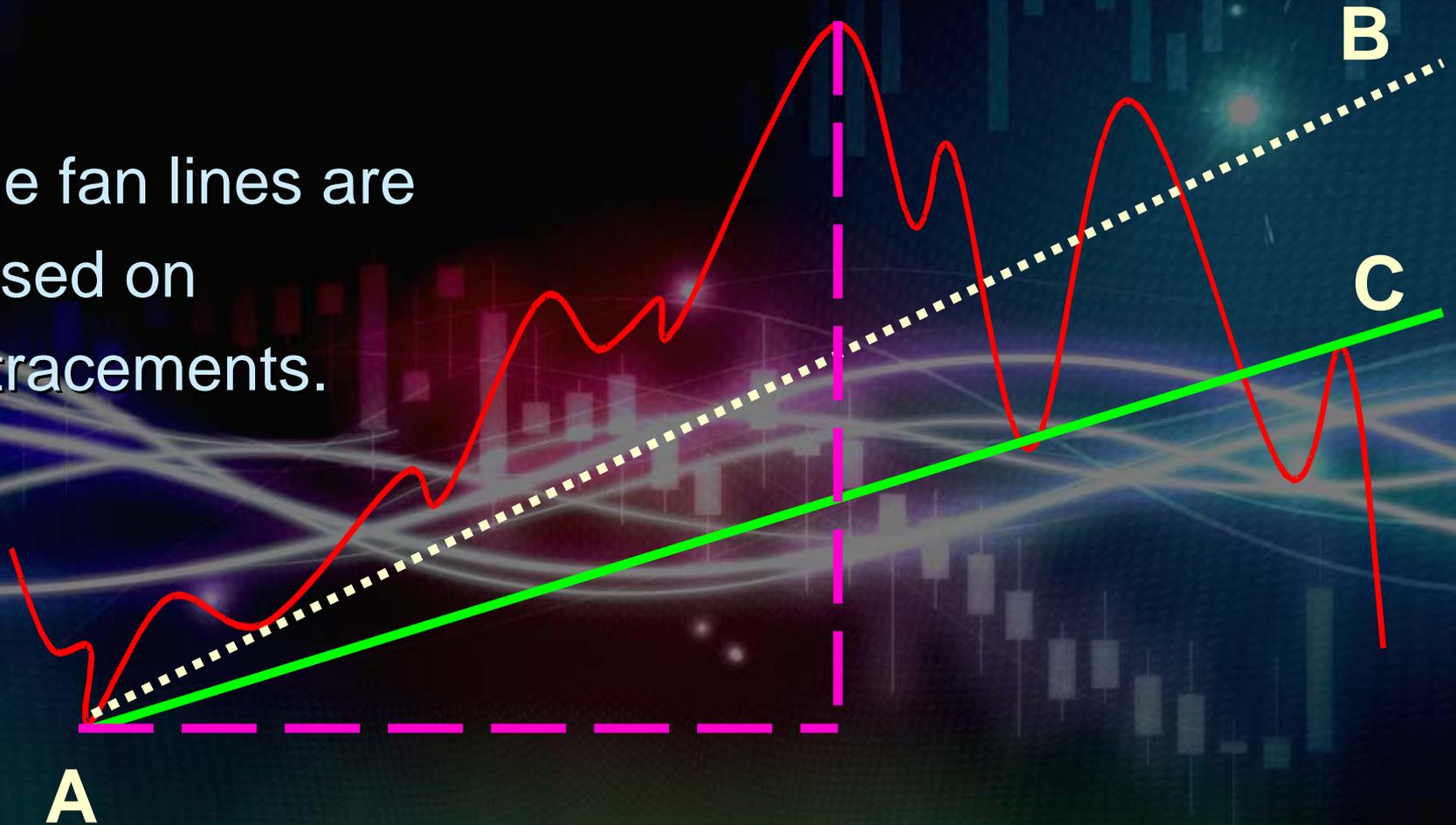
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Fan Lines

- While most retracements focus on horizontal lines drawn at specific percentages, the retracement analysis can be enhanced by using fans based on the same percentages.
- Therefore, you can draw fans based on the Dow, Fibonacci and Gann percentage retracements.

Fan Lines

The fan lines are based on retracements.



Fan Lines

- Measure the range of a trend.
- Divide it into the ratios that you like (Fibos?)
- To plot the first fan line, connect the origin and the .382 of the range.
- To plot the second fan line, connect the origin and the price at the .618 level.

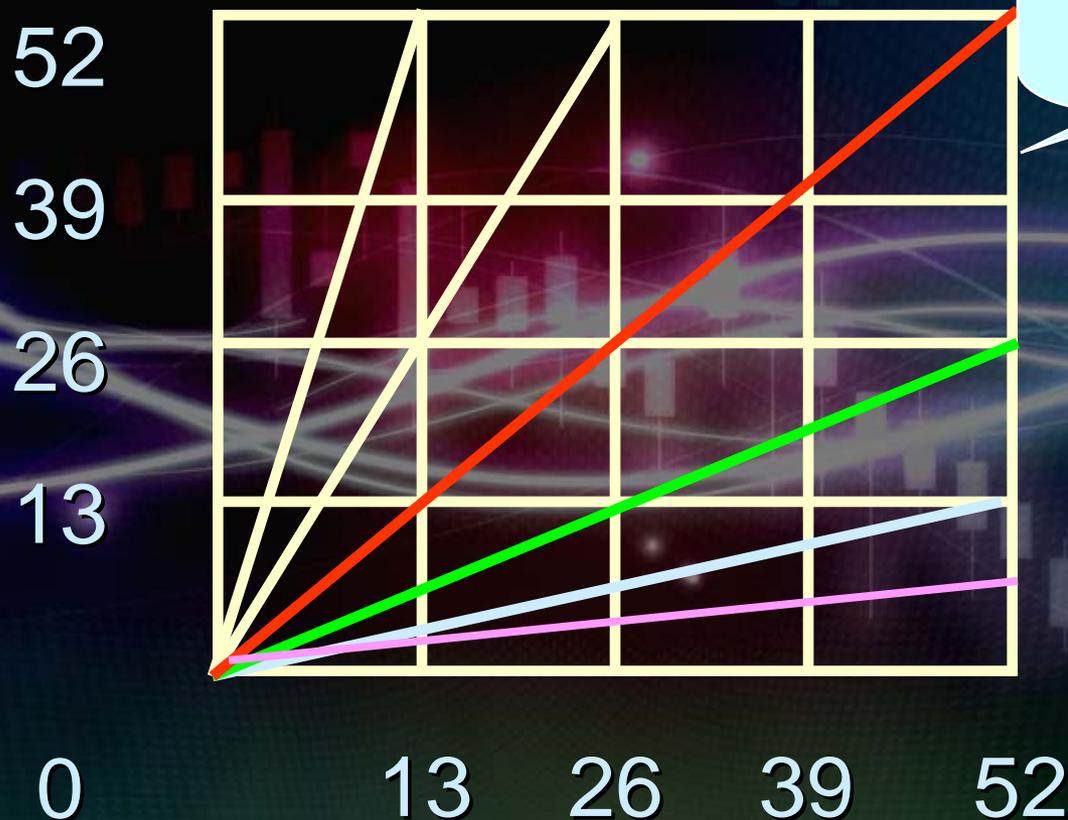
Fibonacci Fan Lines



Gann Geometric Angles

- The core line, (anchor line), which connects the extremes of the trend is represented as **1X1**.
- *Steeper lines* are determined by a ratio of **1X8**, **1X4**, **1X3** and **1X2**.
- *Flatter lines* are determined by price and time ratios of **2X1**, **3X1**, **4X1** and **8X1**.

Time Cycles on a Geometric Square



The 45° angle in the most important

Gann Geometric Angles

- The steeper (1X8, 1X4, 1X3 and 1X2) lines are not really useful.
- Focus on the flatter lines: **2X1**, **3X1**, **4X1** and **8X1**.

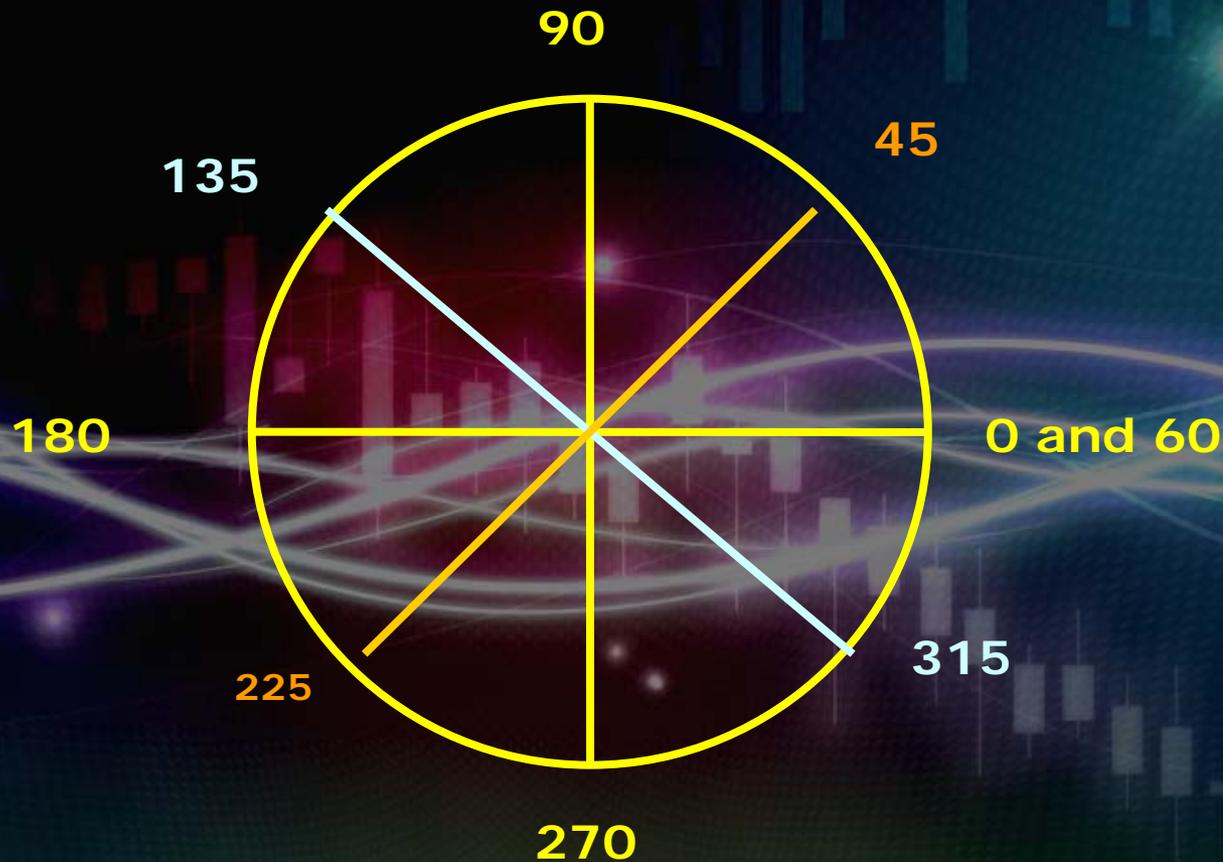
Gann Fan Lines



Gann Geometric Forms

- Gann employed other geometrical forms, such as circles.
- A circle has 360 degrees, and this number, along with fractions of 360, is omnipresent in his work.
- Gann extrapolated 30, 90, 120, 180 and 360 days from significant chart points.
- These forward periods are potential reversal dates.
- The secondary reversal dates are 45, 135, 225 and 315.

Gann Geometric Forms

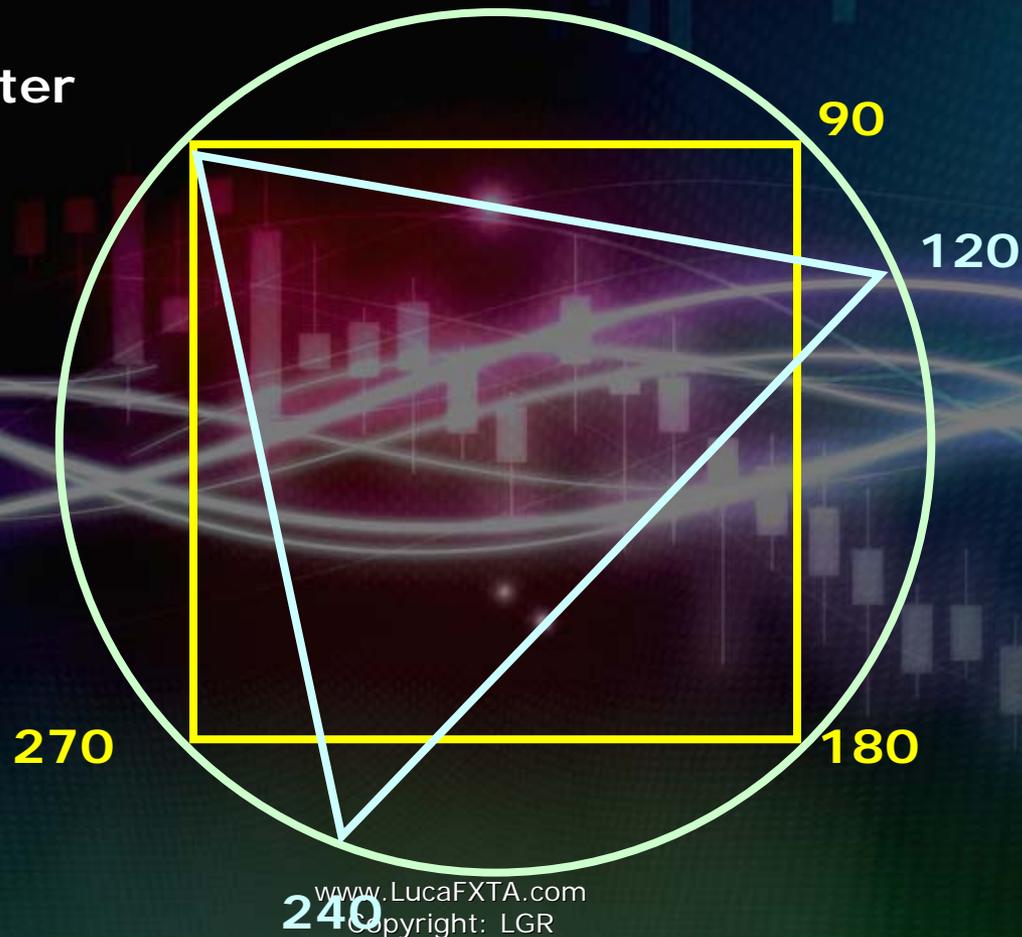


Gann Geometric Forms

- If you begin from a significant low, move clockwise by 90 degrees, 180 degrees, 270 degrees and 360 degrees.
- Conversely, if you start from a significant peak move counter clockwise by 90 degrees, 180 degrees, 270 degrees and 360 degrees.

The Gann Emblem

Pointer



Gann Geometric Forms Application

USD/JPY peaked on November 27.

Possible reversal days are:

- 45: January 11
- 60: January 26
- 90: February 25
- 119: March 26 (120 falls on a Saturday)
- 136: April 12 (135 falls on a Sunday)

Arcs

- Those looking for a time target in addition to the price target might consider arcs, also based on percentage retracements.
- Plot the retracements on the anchor line and draw arcs from either the peak of an uptrend or the trough of a downtrend.

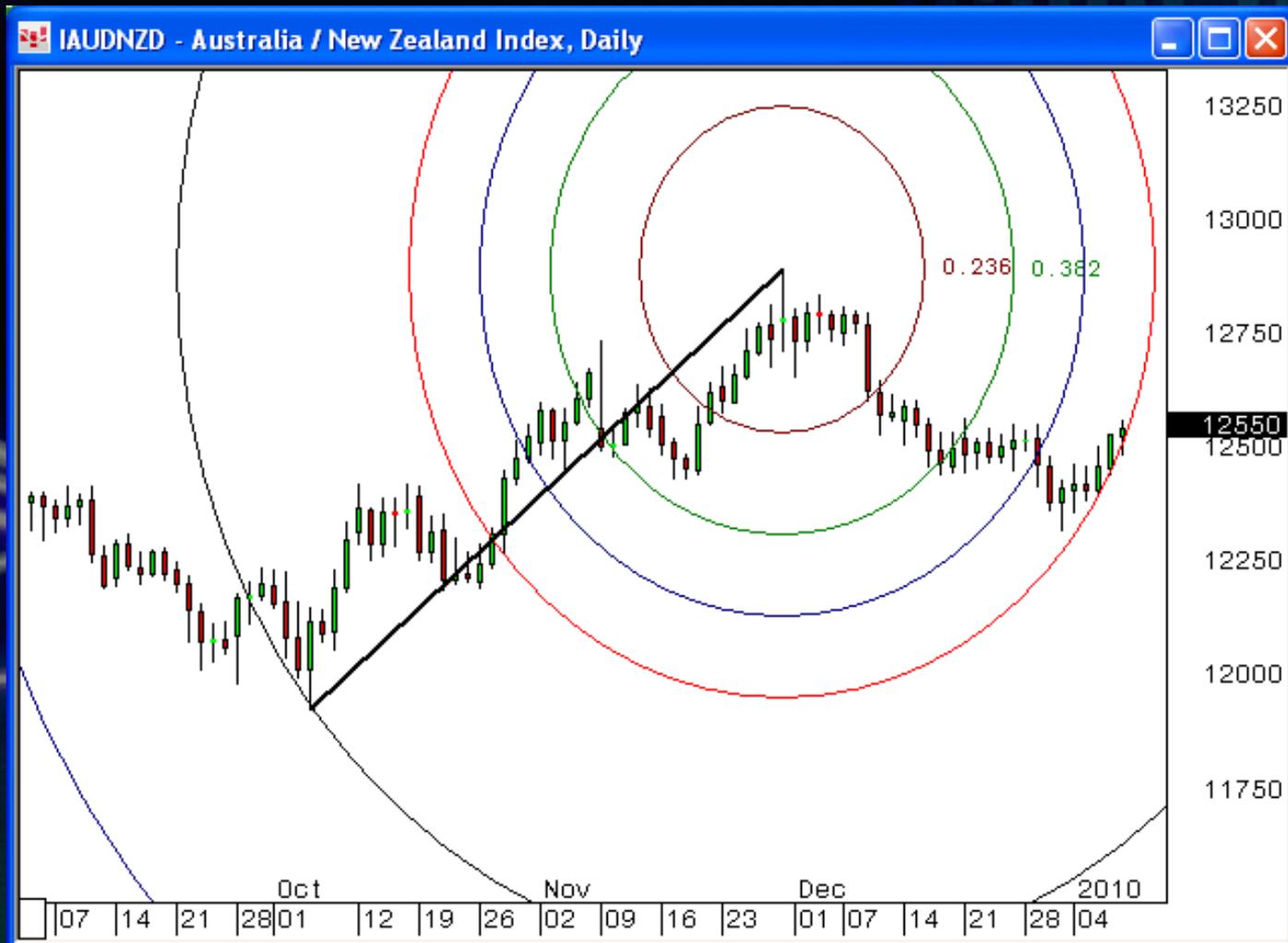
Fibonacci arcs

Fibonacci arcs provide both price and time objectives.

Divide the length of a trend by the Fibonacci ratios at .382, .50 and .618.

With a compass, extrapolate these levels in the future in order to achieve price and time targets for retracements.

Arcs



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Fibonacci Lines, Fans and Arcs



Fibonacci Retracements of Free-Angled Channels

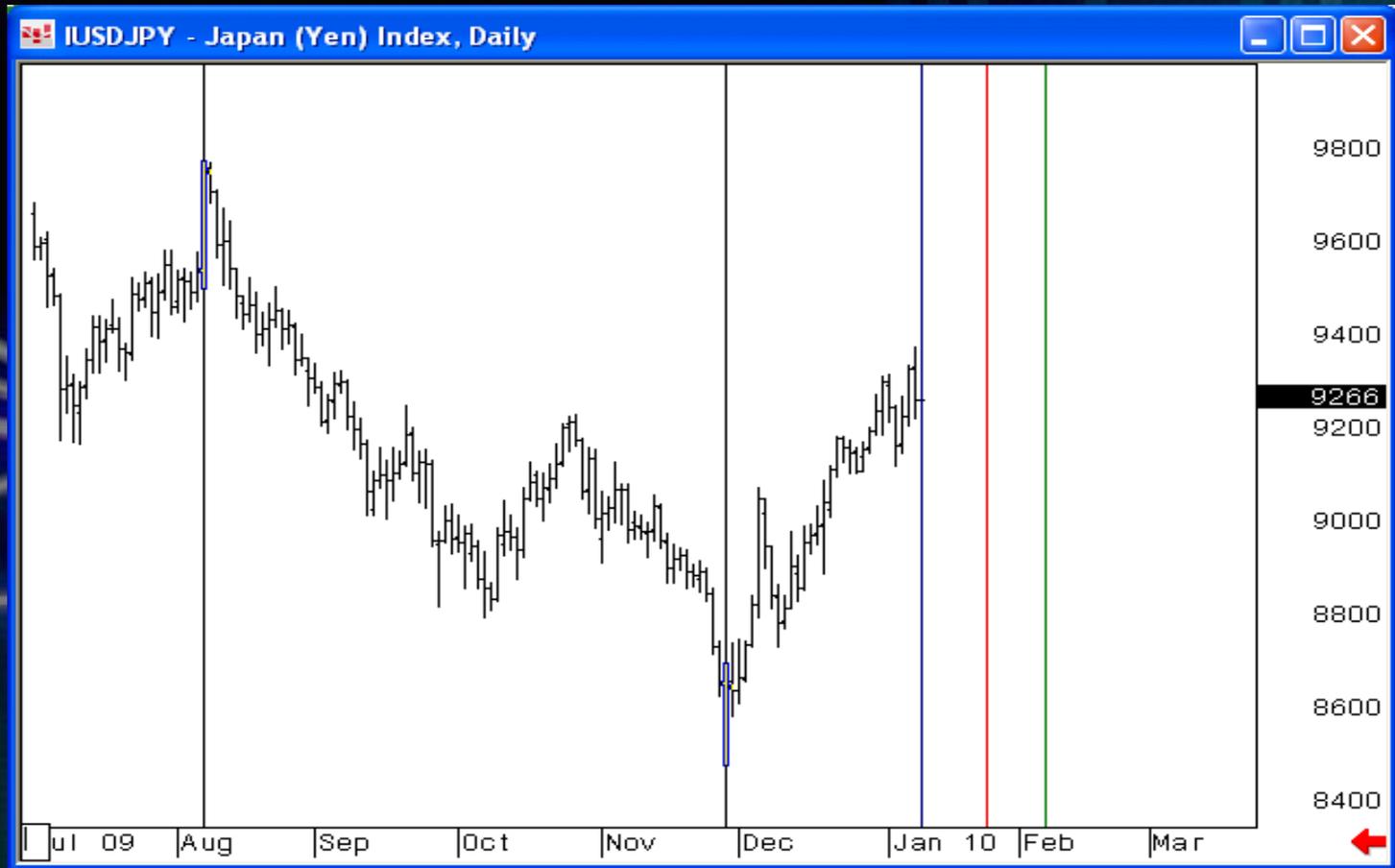


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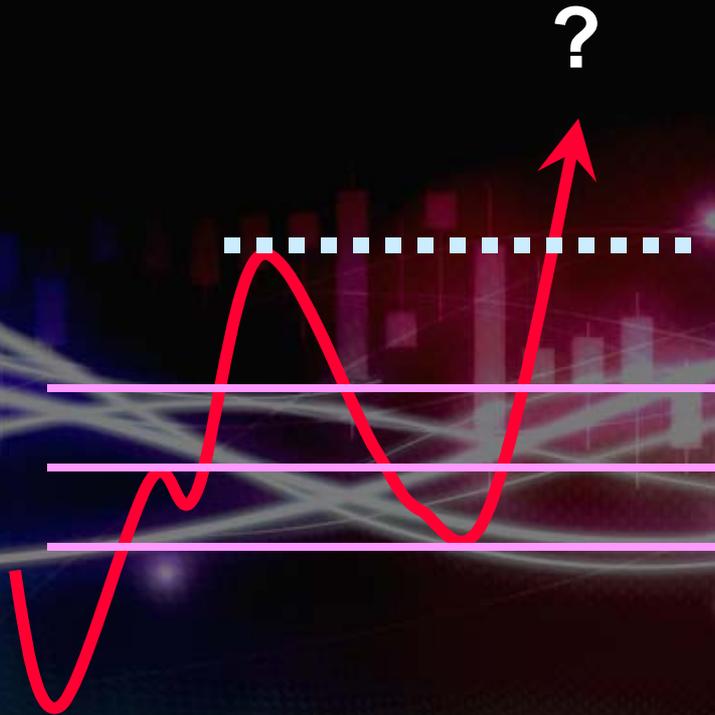
Fibonacci Time Extensions



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Price Extensions

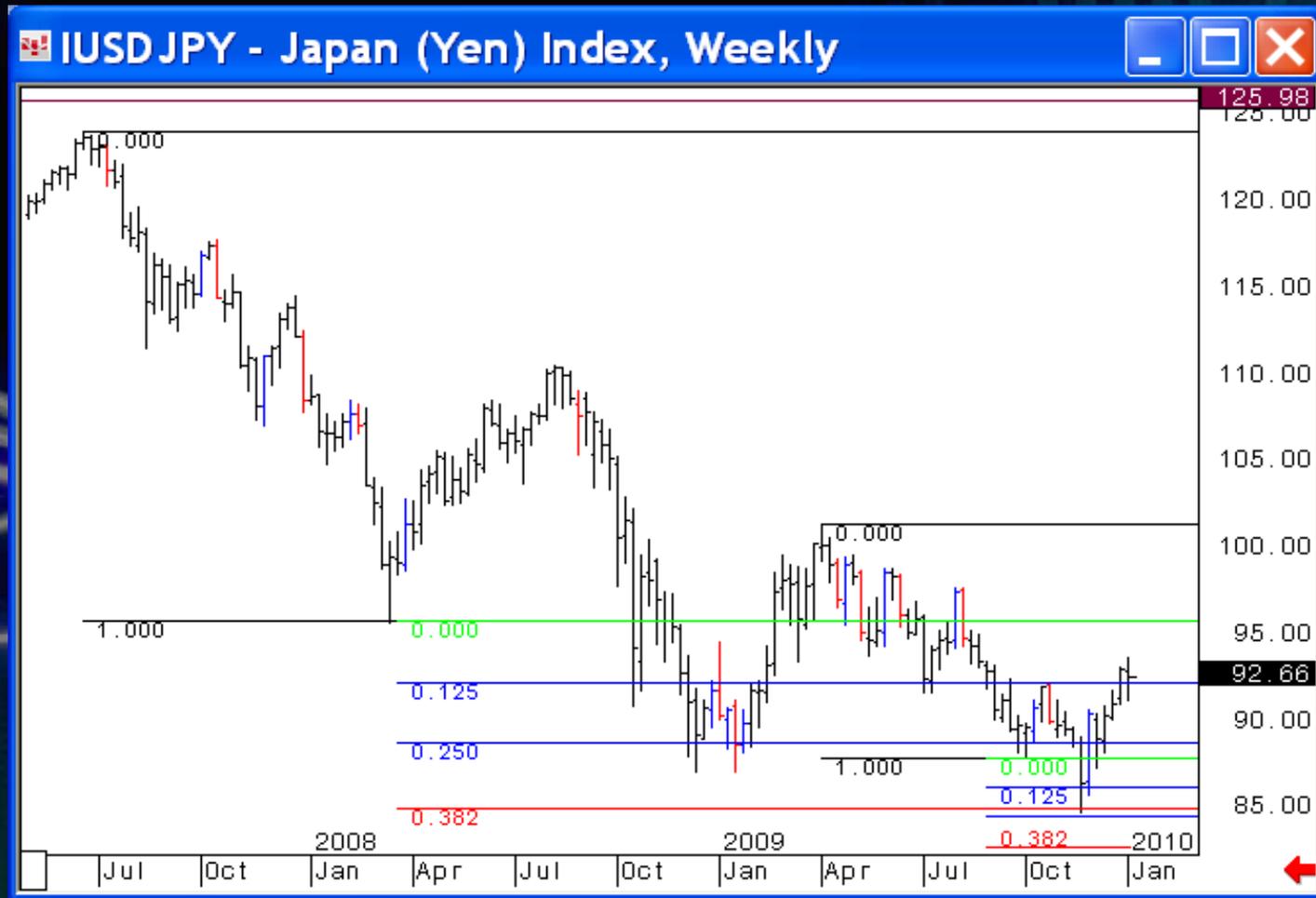


When a rebound from retracement of a previous trend exceeds the previous high (in an uptrend) or low (in a downtrend), erase the old retracements and apply extensions.

Price Extensions

- Retracement ratios are equally valued for targeting prices on extensions.
- In the case of the **Gann** ratios, the extensions will be placed at: 1.125, 1.25, 1.375, 1.5, 1.625, 1.75 and 1.875.
- In the case of the **Fibonacci** ratios, the extensions will be placed at: 1.382, 1.5 and 1.618.

Extensions



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The background features a dark blue gradient with several glowing, curved lines in shades of white and light blue. In the upper right, there is a faint, semi-transparent candlestick chart. In the center, there is a faint, semi-transparent line graph with a red and white color scheme. A bright green starburst light is visible in the upper right quadrant.

*Ichimoku versus
MACD*

The background features a dark blue gradient with several faint, semi-transparent candlestick charts. One chart is prominent in the upper right, showing a series of vertical bars with wicks. Another chart is visible in the lower right, and a third, more colorful one (with red and purple highlights) is partially obscured behind the text in the center. Overlaid on these charts are several glowing, abstract lines in shades of yellow, orange, and white, which appear to be flowing or oscillating across the frame. There are also a few small, bright light spots scattered throughout the background.

Ichimoku Kinkou-Hyo

Ichimoku

- Method developed by Goichi Hosoda (a.k.a. *Ichimoku* Sanjin) in the 1930s
- The system itself was finally released to the public in 1968, after decades of testing.

Ichimoku

Ichimoku = "one look"

Ichimoku kinkou-hyou = One-look at the equilibrium prices

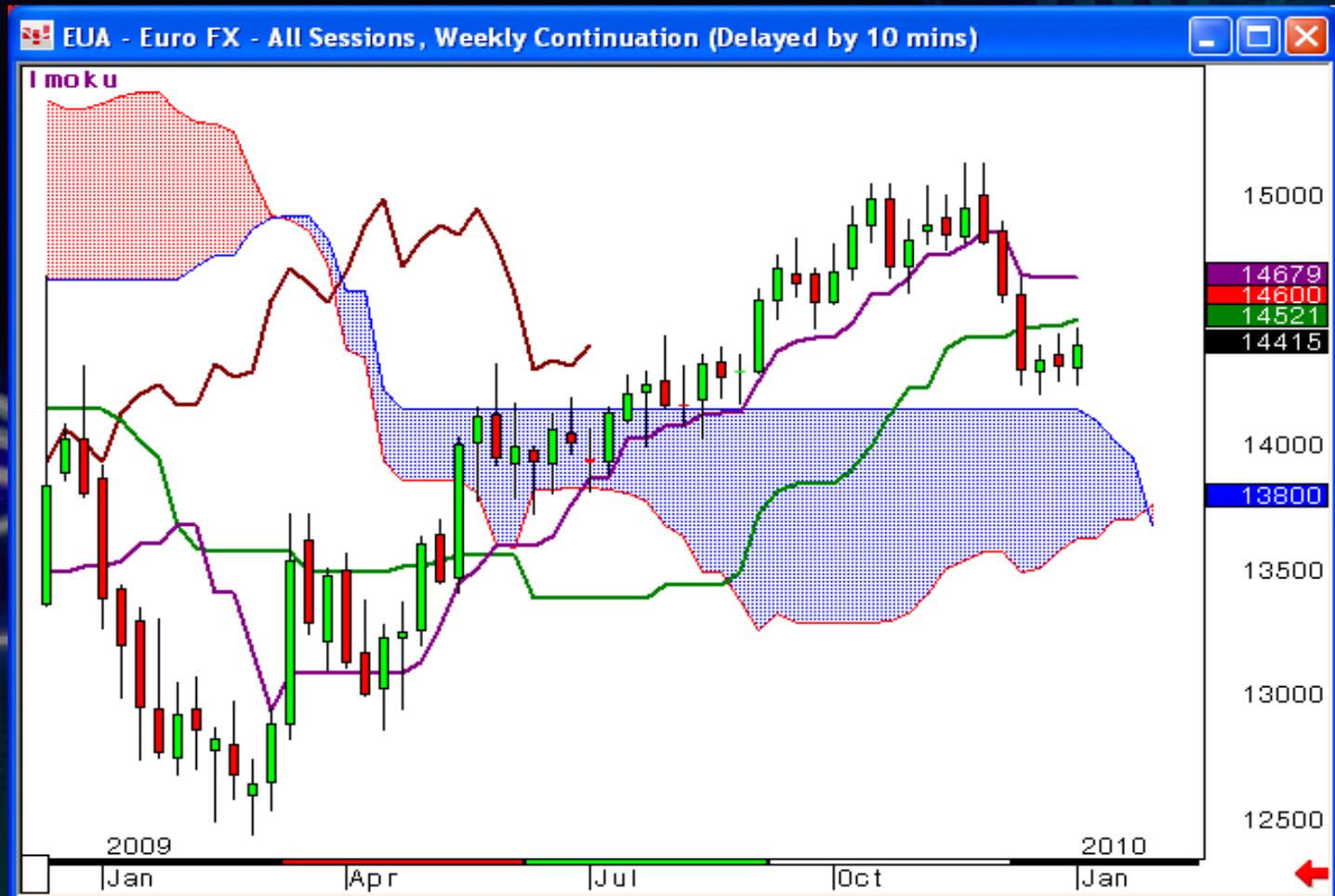
Ichimoku consists of 5 lines:

- Trend Line (Kijun)
- Signal Line (Tenkan)
- Lagging Line (Chiku)
- Cloud (Senkou Span A and B)

Ichimoku

- **Trend line** - buy the currency when if the Trend line is advancing and sell them if the Trend line is declining.
- **Signal line** - buy the currency when it crosses above the Trend line; sell when it crosses below the Trend line.
- **Lagging line** - buy the currency if both the Lagging line and the price are rising.
- **The cloud** - two lines form an area of support or resistance.

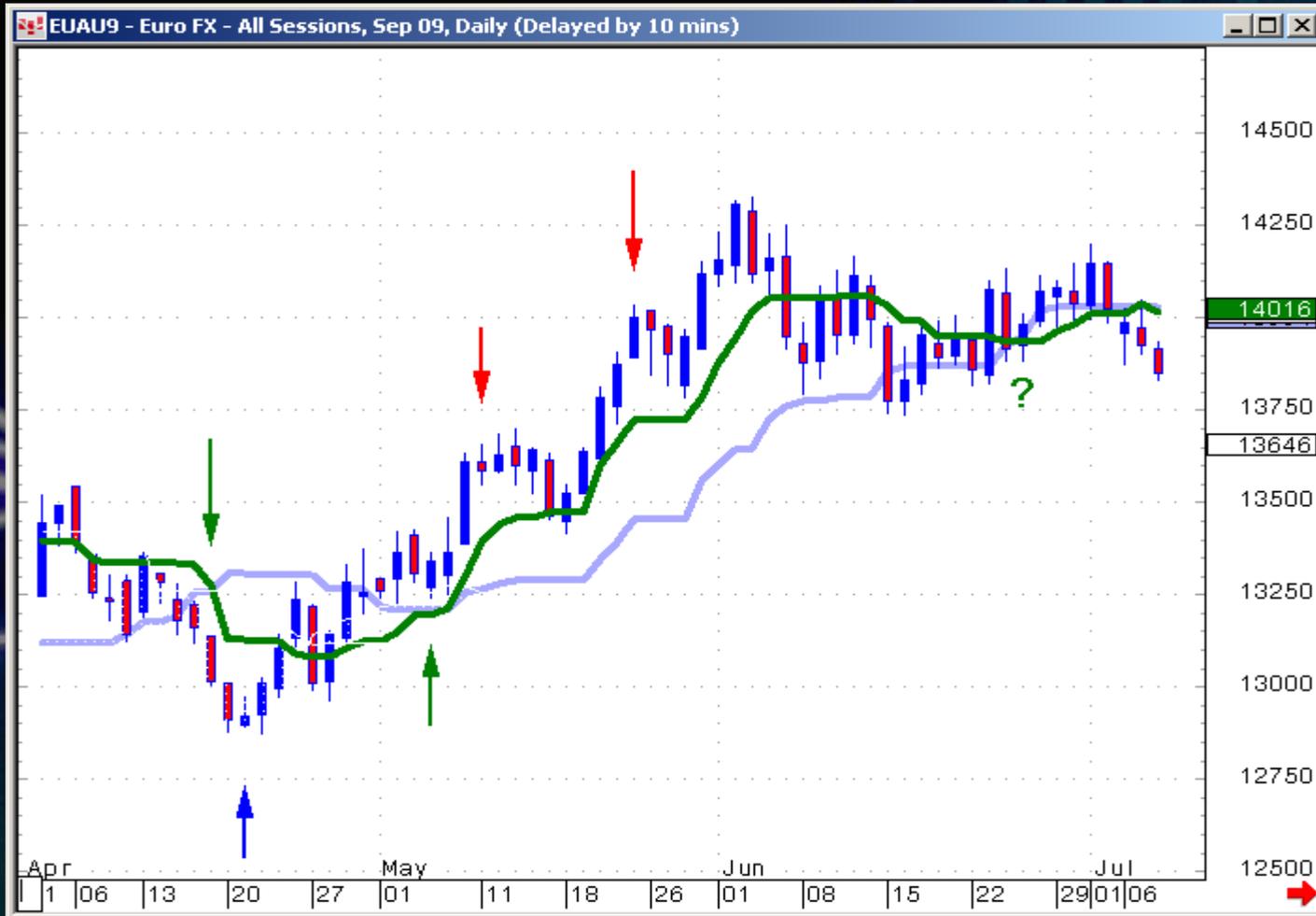
Ichimoku



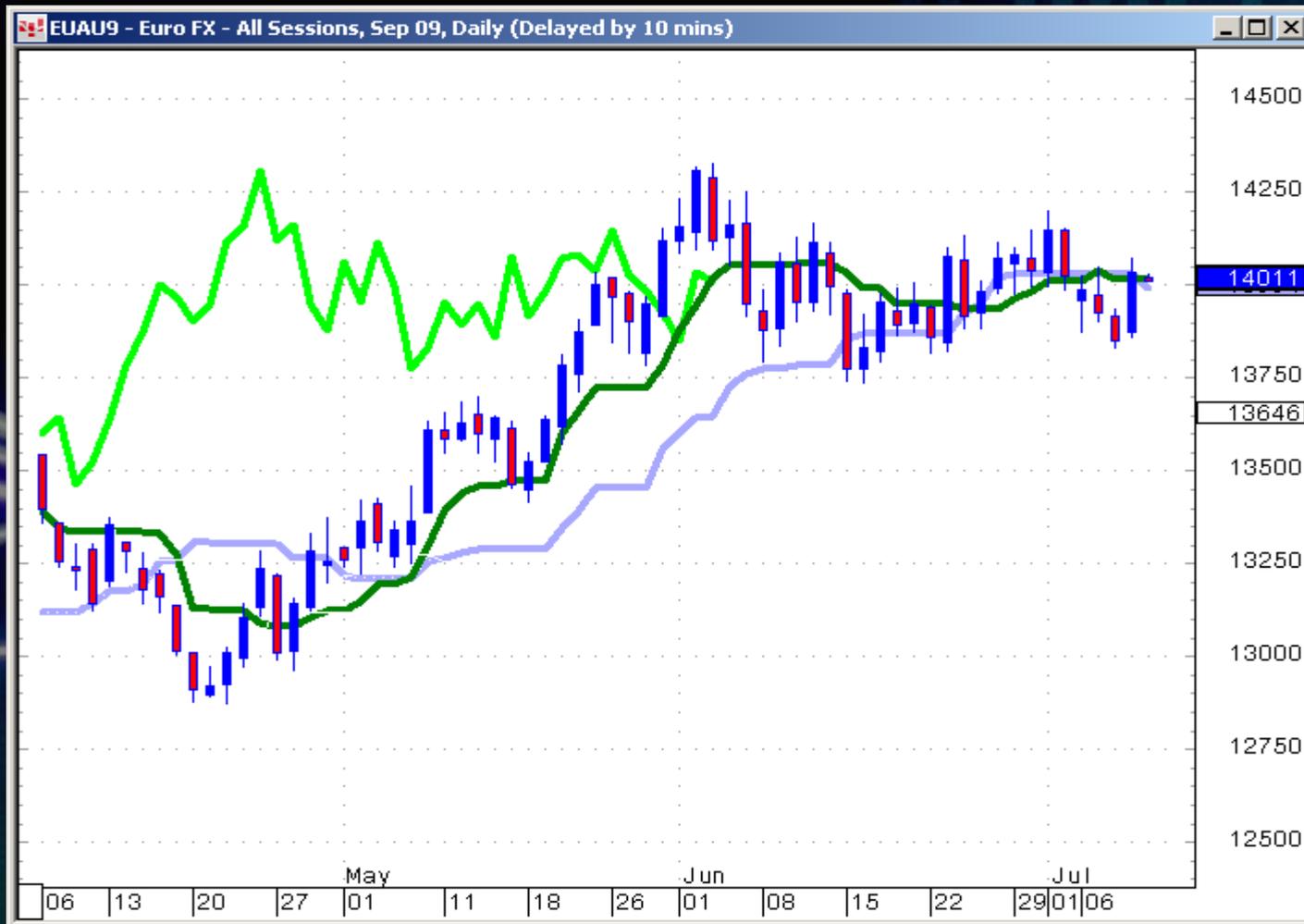
Trend line



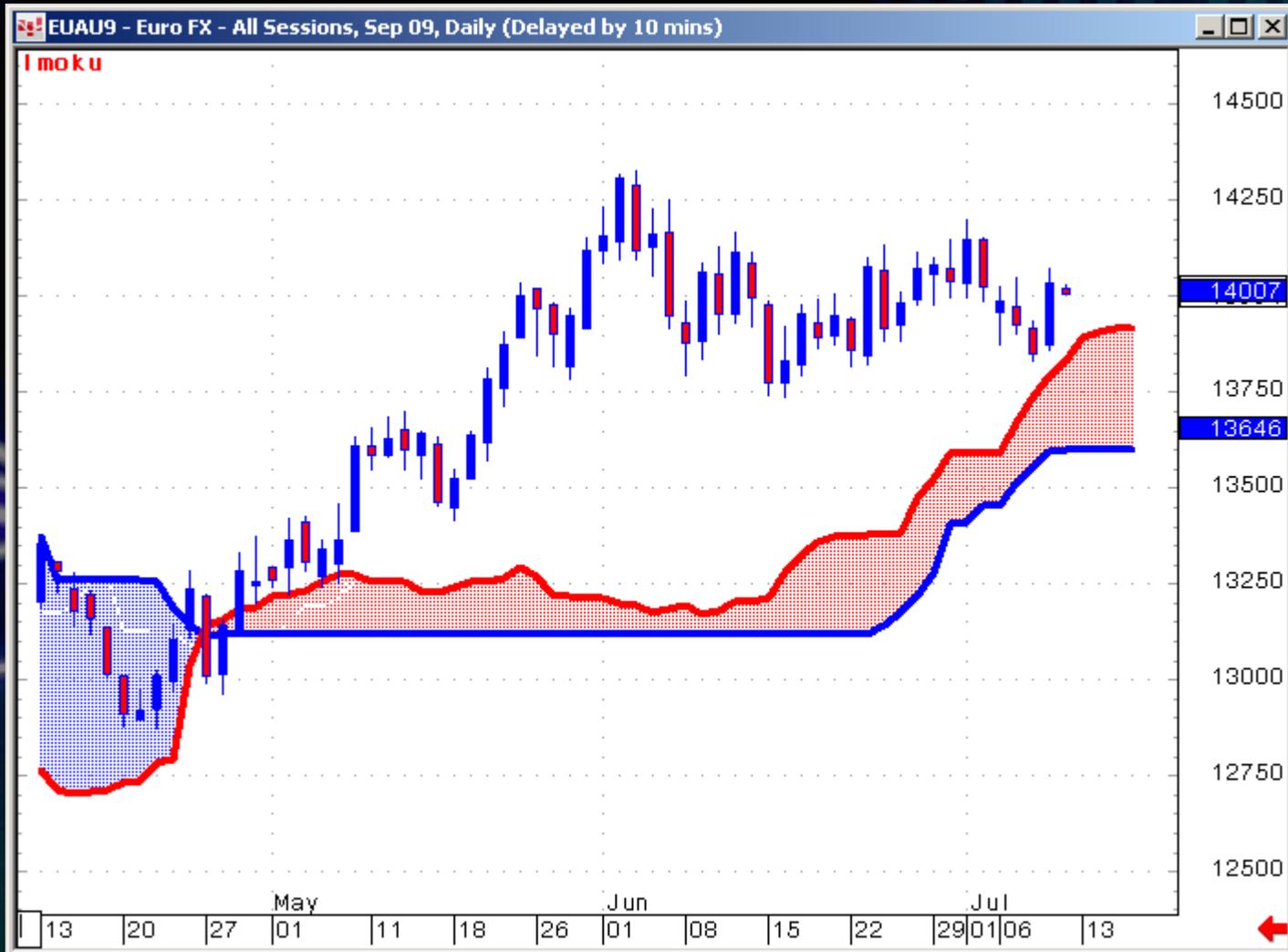
Signal + Trend Lines



Lagging Line



Cloud



Cloud – USD/JPY Daily



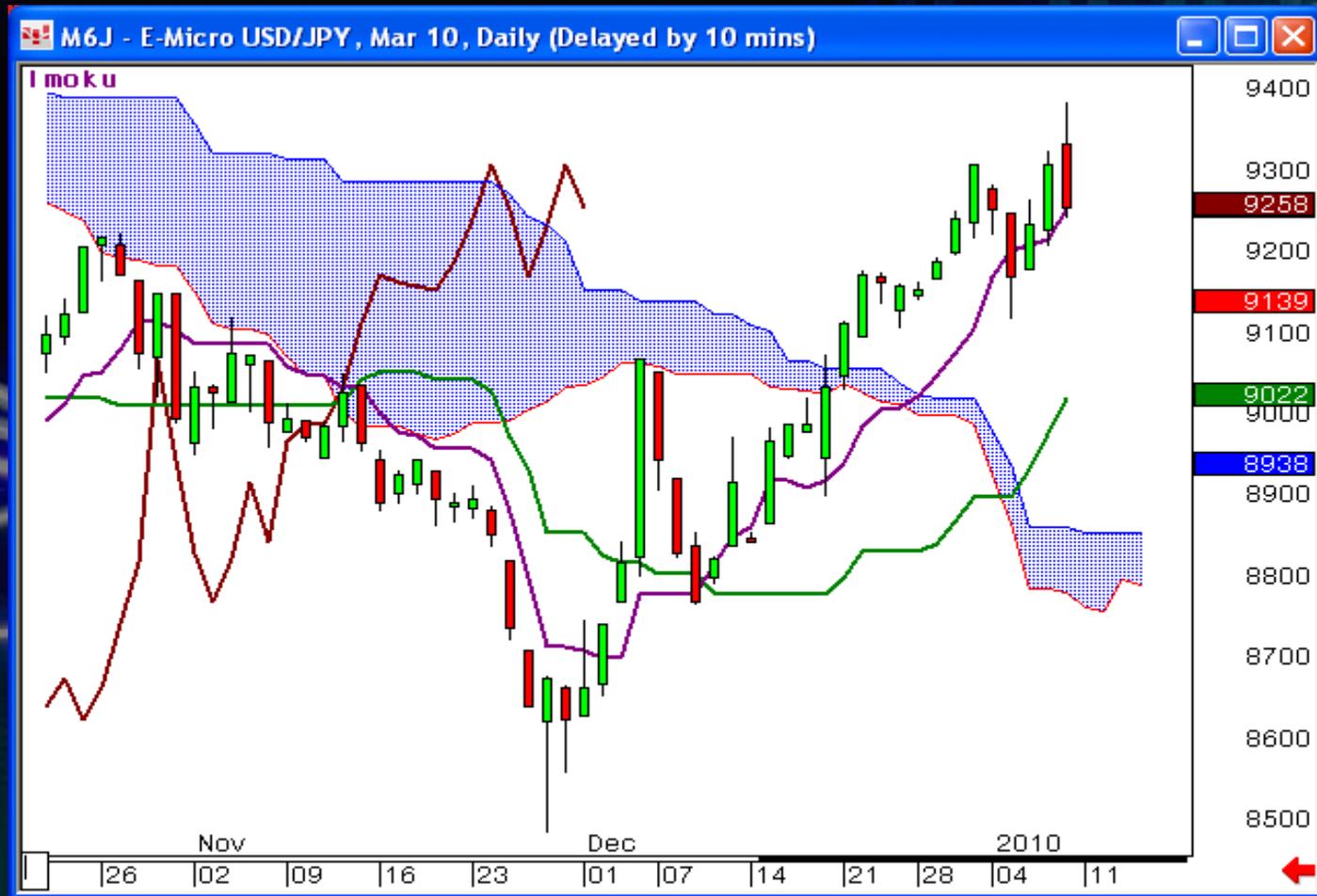
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Ichimoku – M6JH0

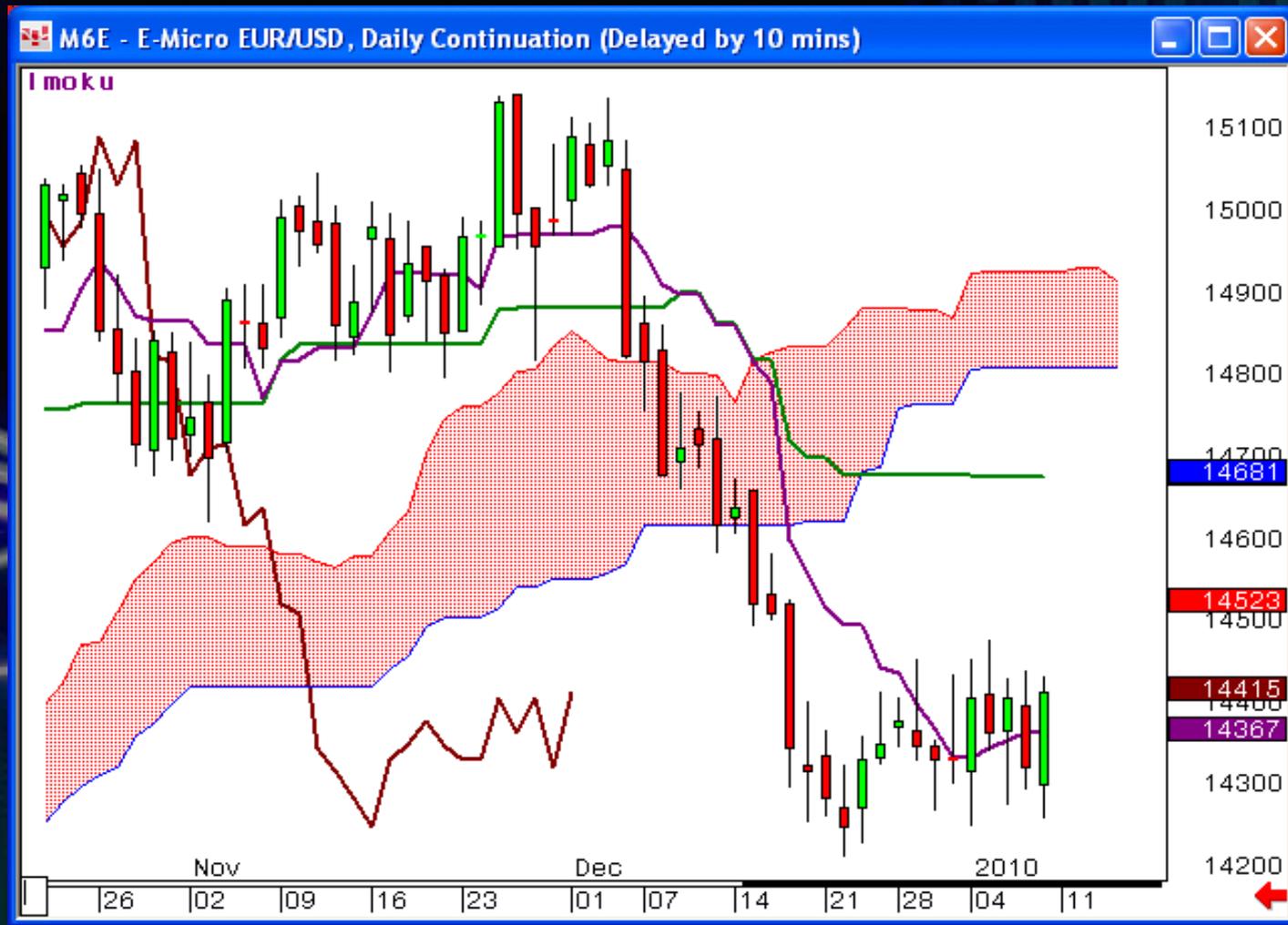


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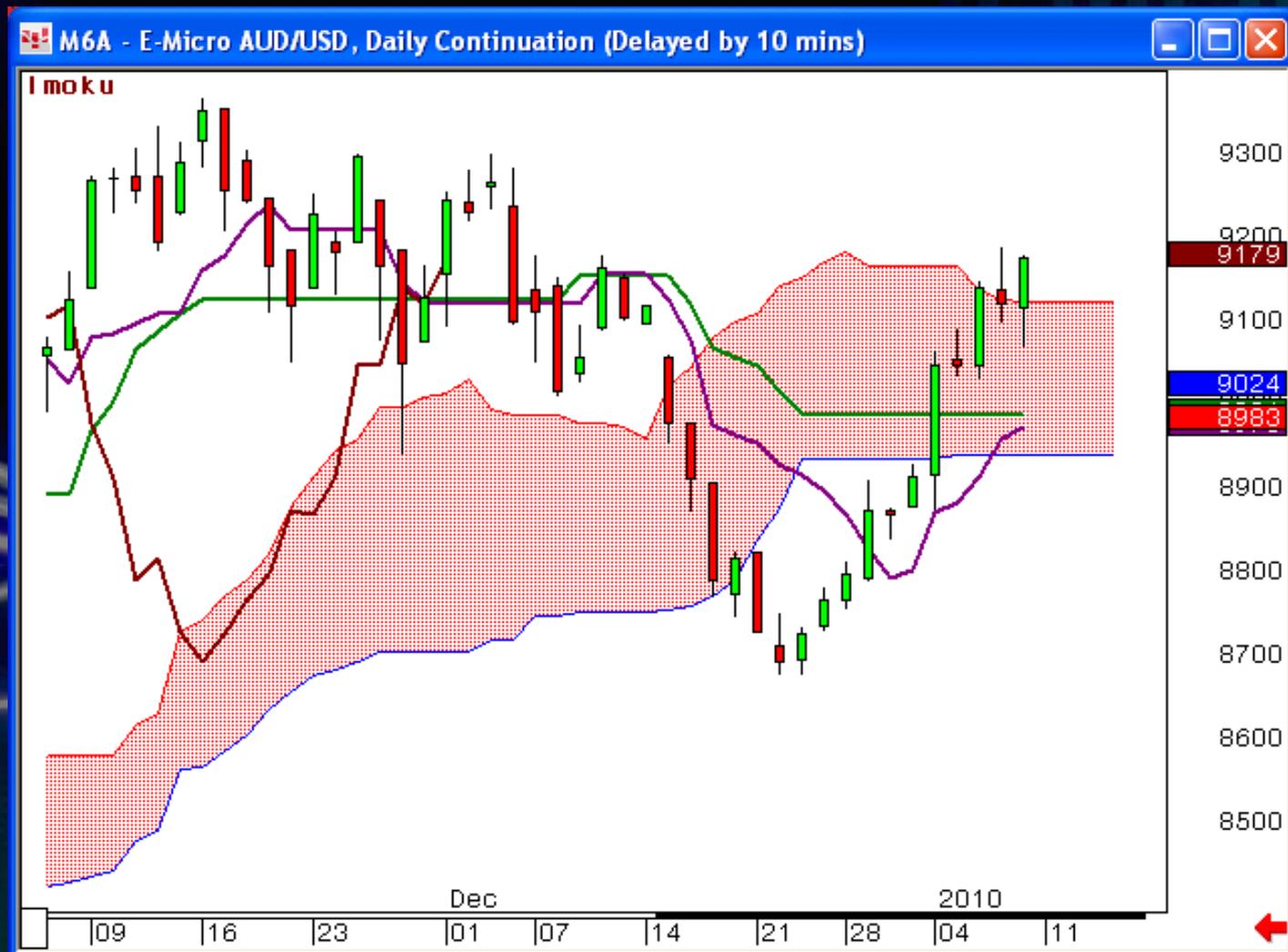
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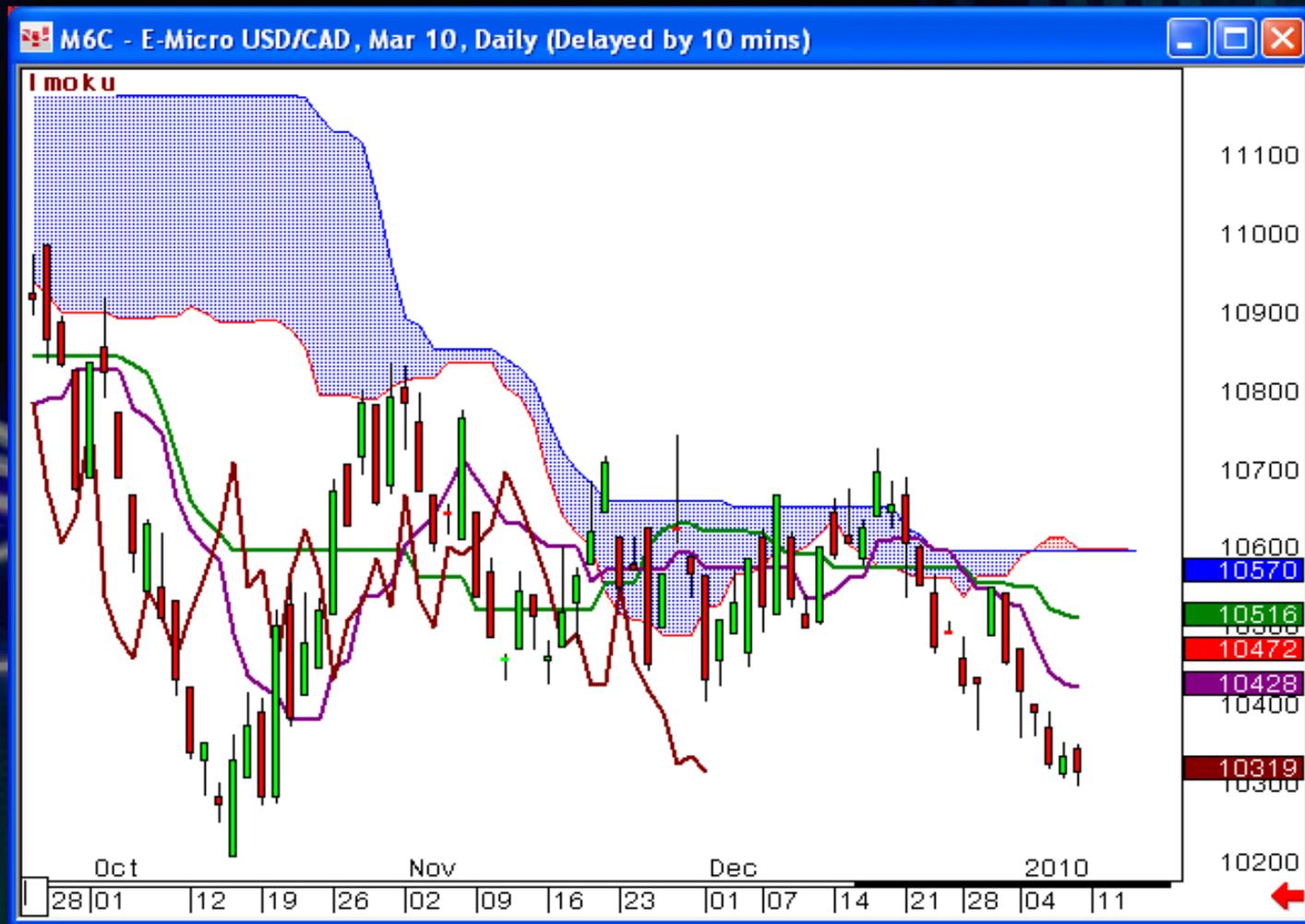
Ichimoku – M6EH0



Ichimoku – M6AH0



Ichimoku – M6CH0

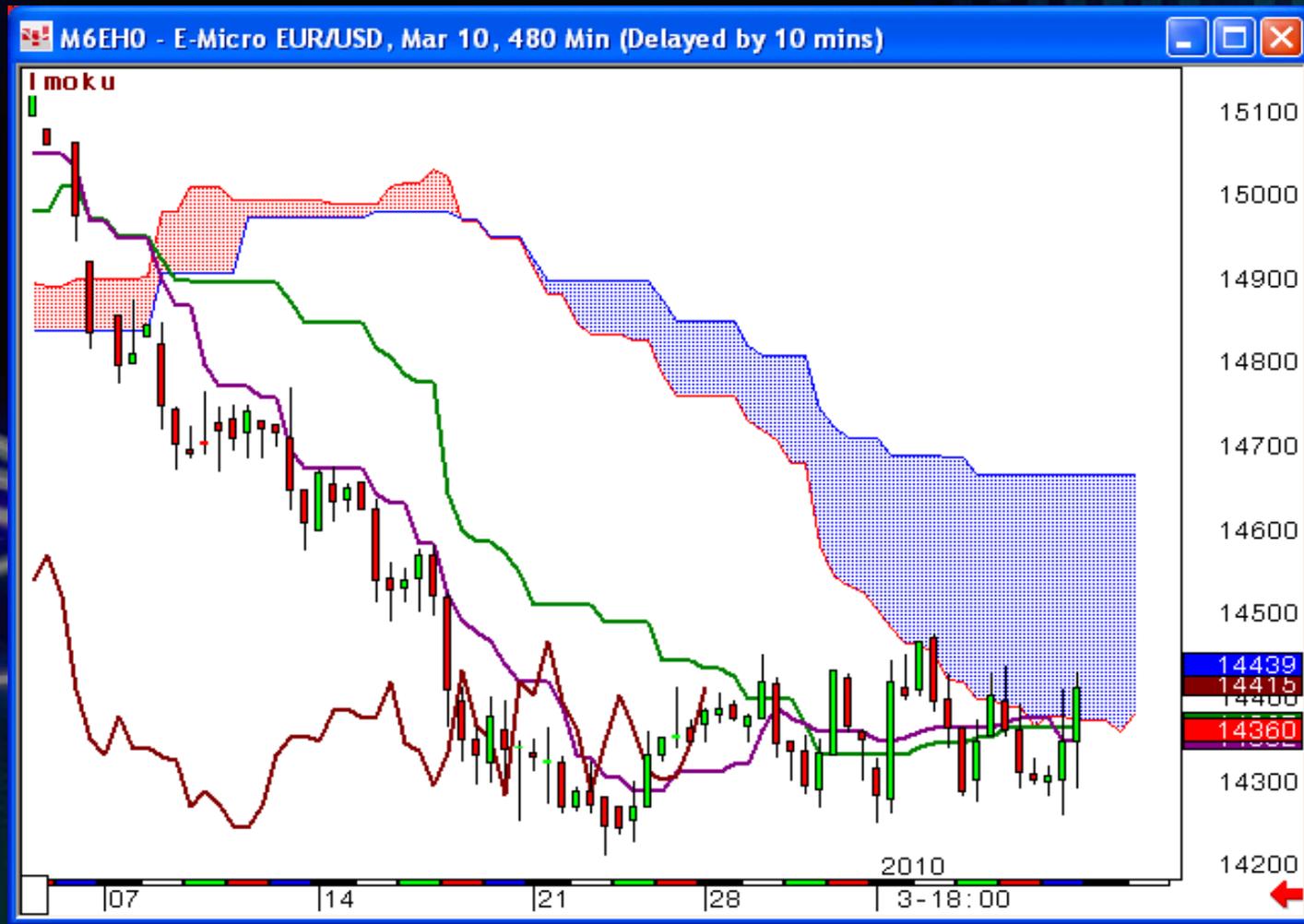


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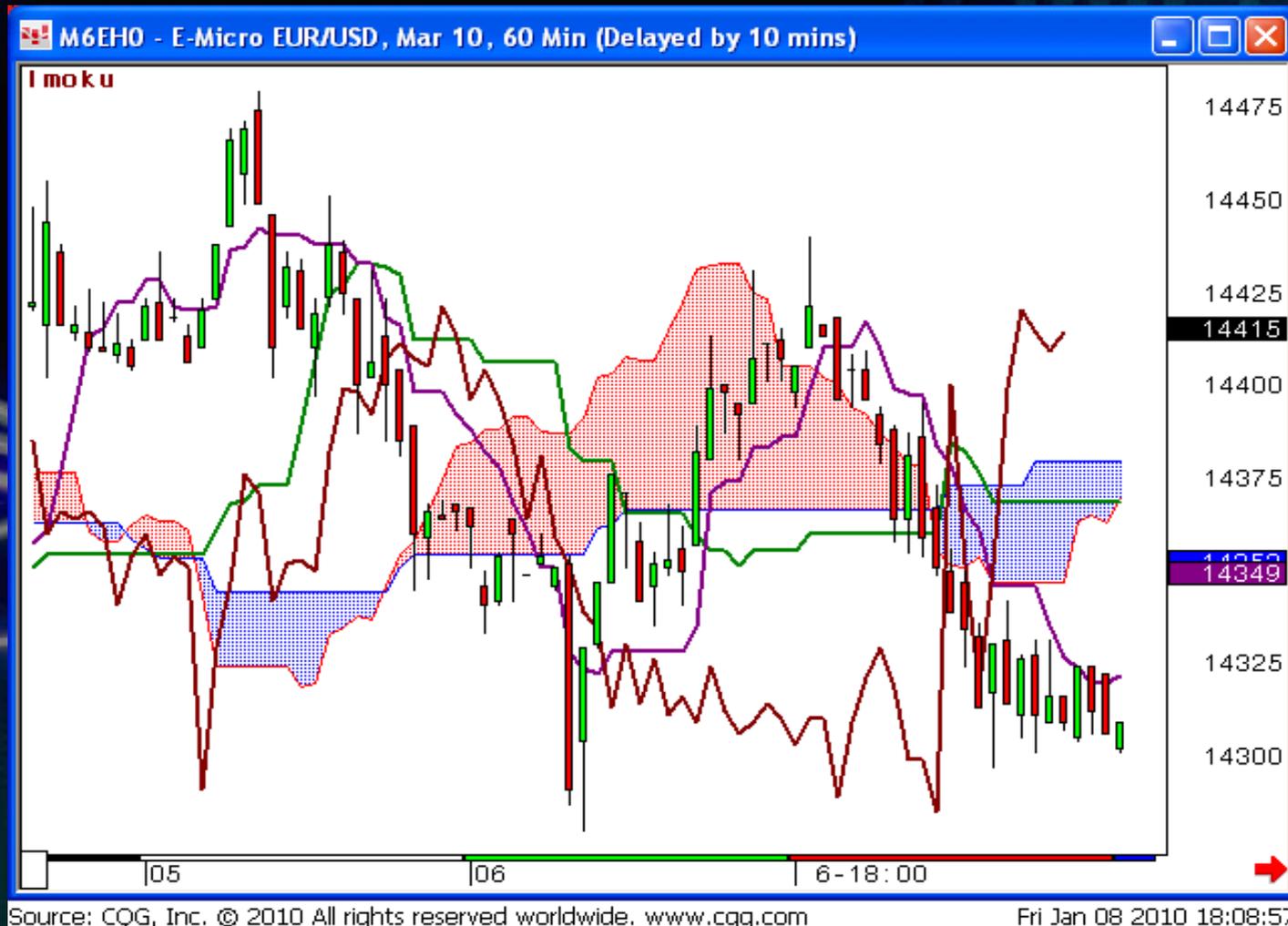
Ichimoku – M6EH0 – 480 minutes



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Ichimoku – M6EH0 – 60 minutes



MACD

- In the mid 1960s George Appel designed the Moving Average Convergence Divergence indicator (MACD) for entry and exit points, and for measuring the momentum of the trend.
- Hosoda used three key time periods for its input parameters: 9, 26, and 52.
- Appel, in turn, used 9, 12, and 26.

MACD

The MACD consists of two lines:

1. The difference between two exponential moving averages on 12-day and 26-day, and
2. A 9-day exponential moving average = trigger or signal line

MACD

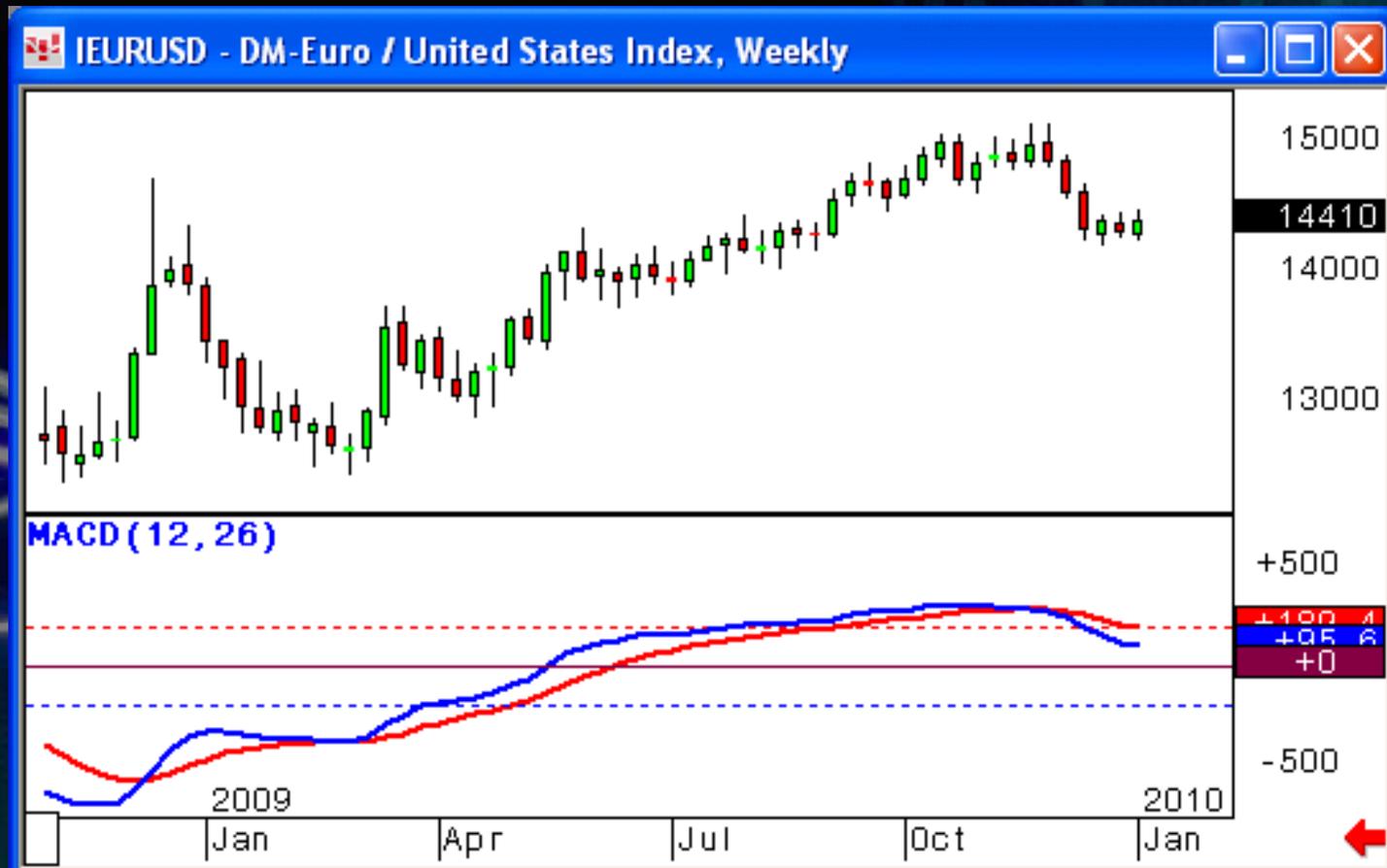
The MACD gives buying signals when:

- It rises above the zero line
- The trigger line is above the difference between the 12-day and 26-day averages
- Bullish divergence with the currency

The MACD provides selling signals when:

- It falls below the zero line
- The trigger line falls below the difference between the 12-day and 26-day averages
- Bearish divergence with the currency

MACD



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MACD



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Ichimoku Vs. MACD



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MACD New Duration



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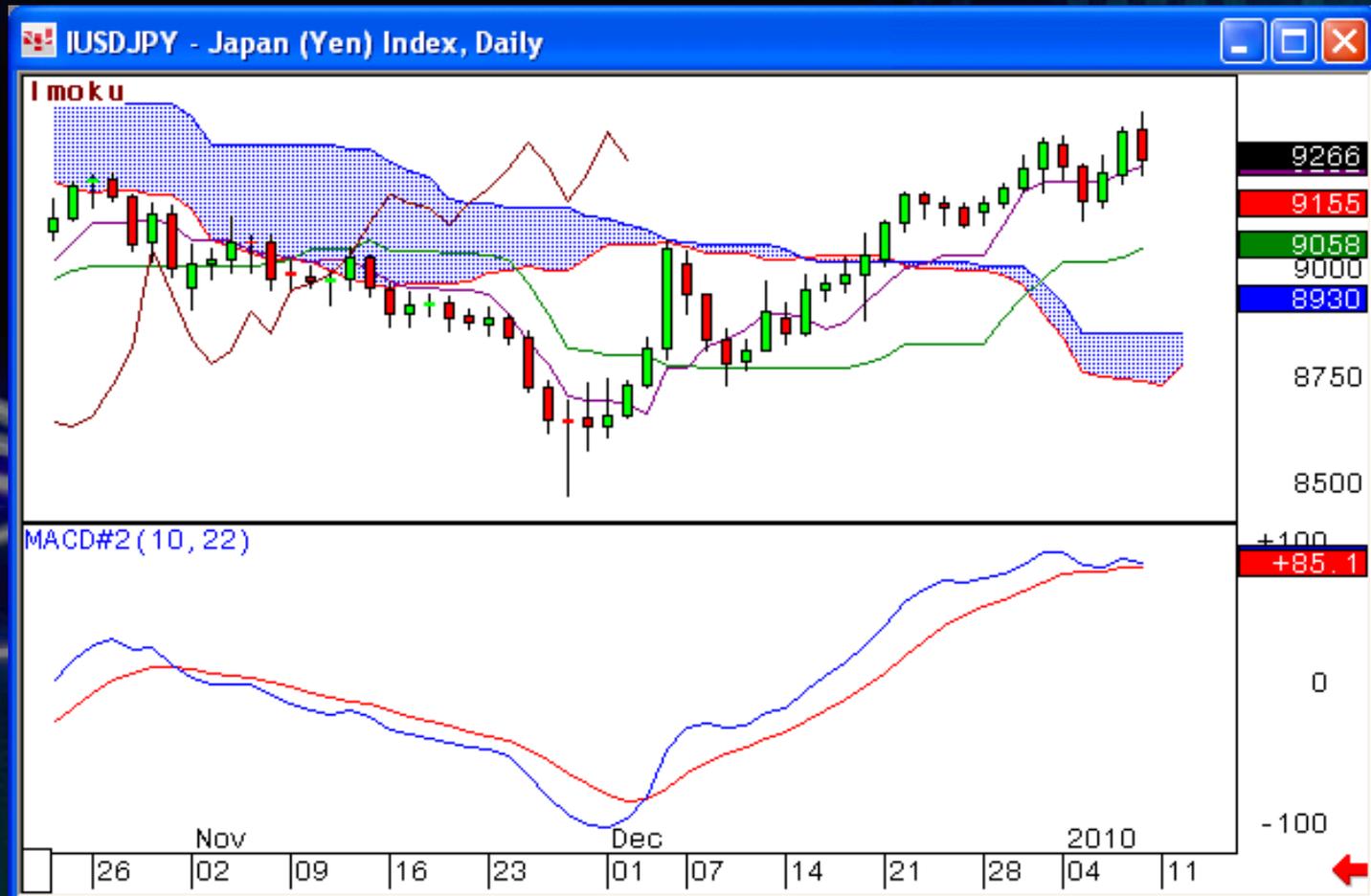
Ichimoku and MACD New Duration



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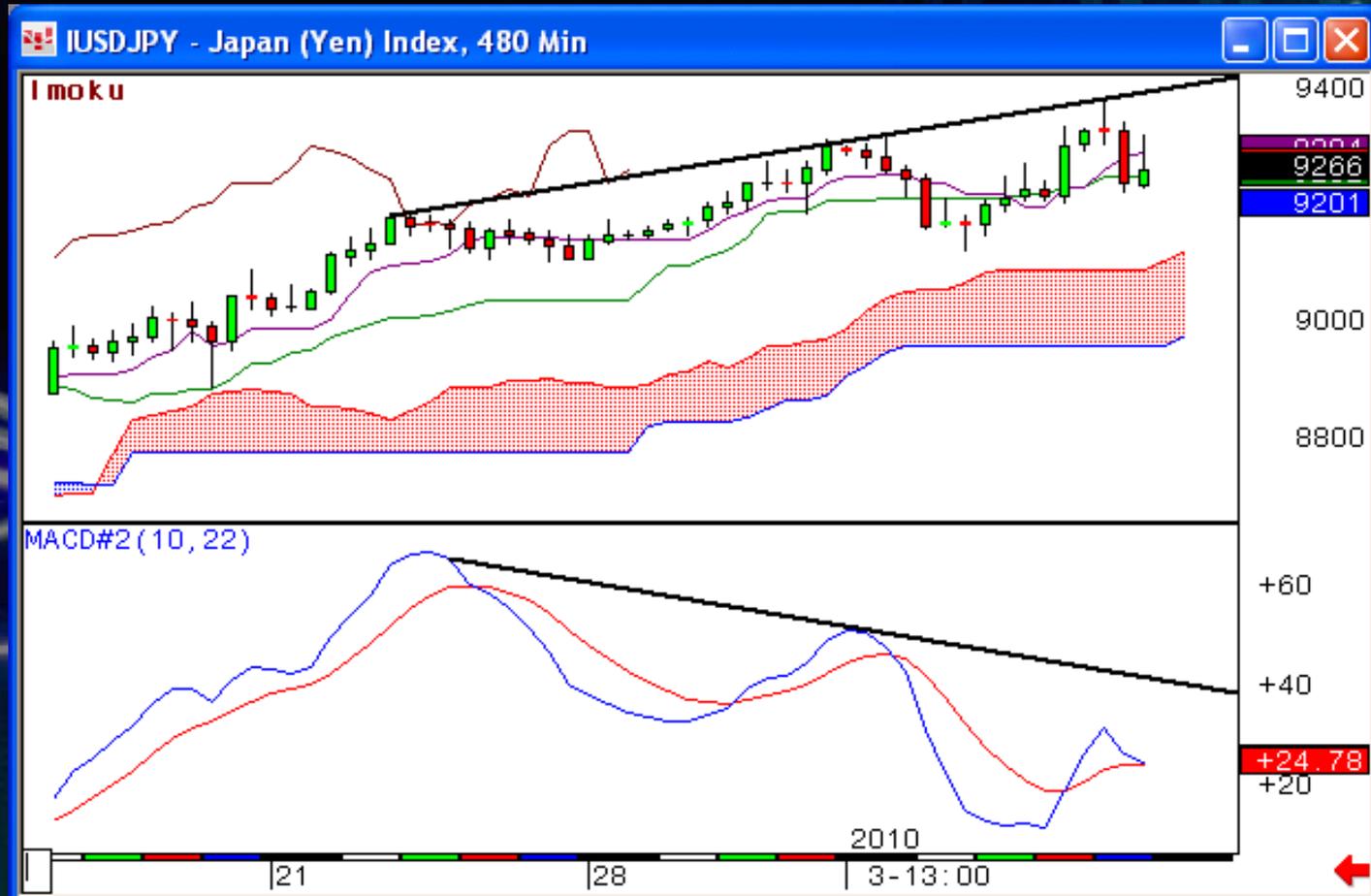
USD/JPY – Daily



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USDJPY – 480 minutes



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Proprietary Signals

IUSDJPY - Japan (Yen) Index, Daily



MA (Exp, 21.000)



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IUSDJPY - Japan (Yen) Index, Weekly



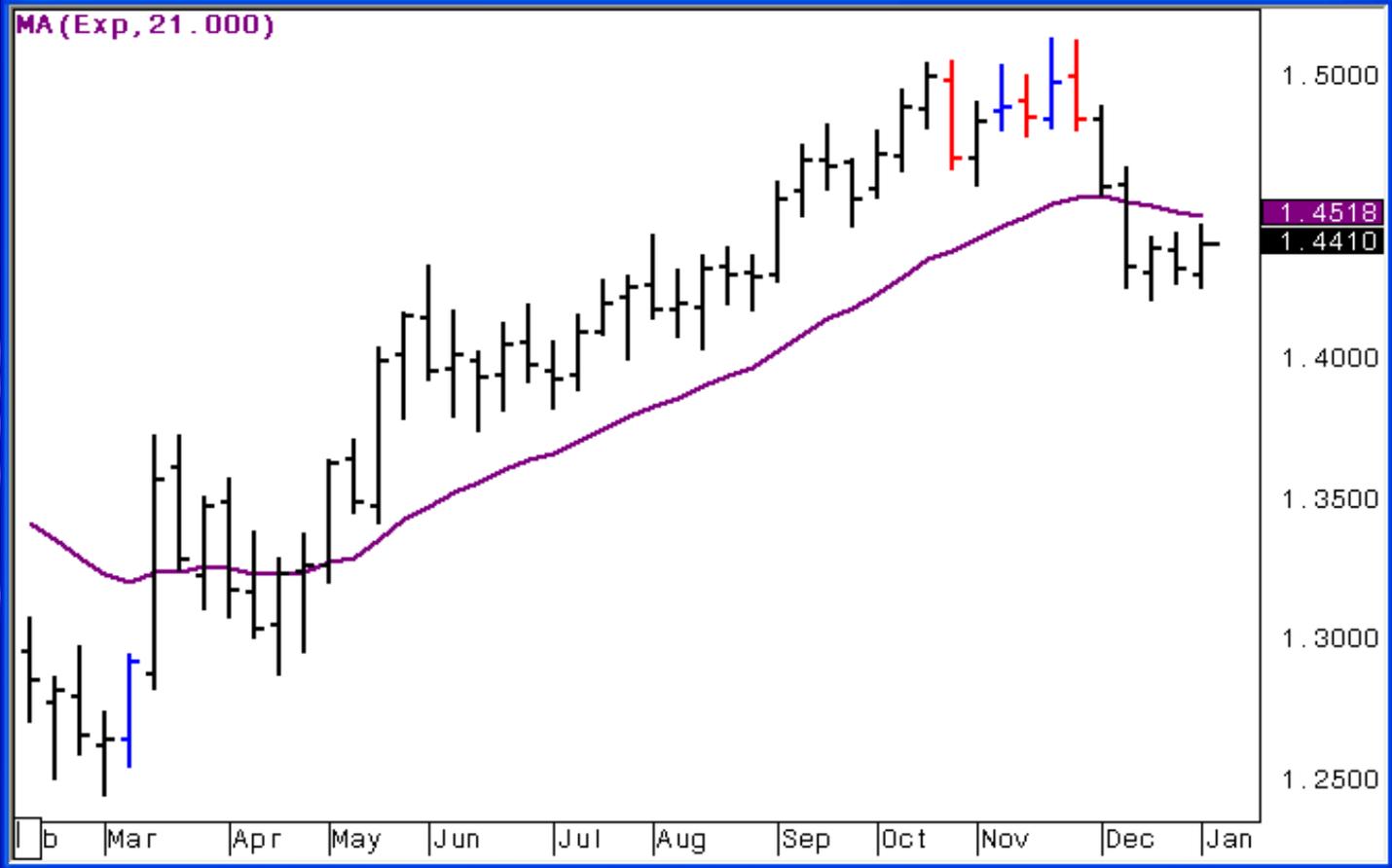
MA (Exp, 21.000)



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IEURUSD - DM-Euro / United States Index, Weekly



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IEURUSD - DM-Euro / United States Index, Daily



MA (Exp, 21 . 000)



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IGBPUSD - Great Britain (Pound) Index, Weekly



MA (Exp, 21 . 000)



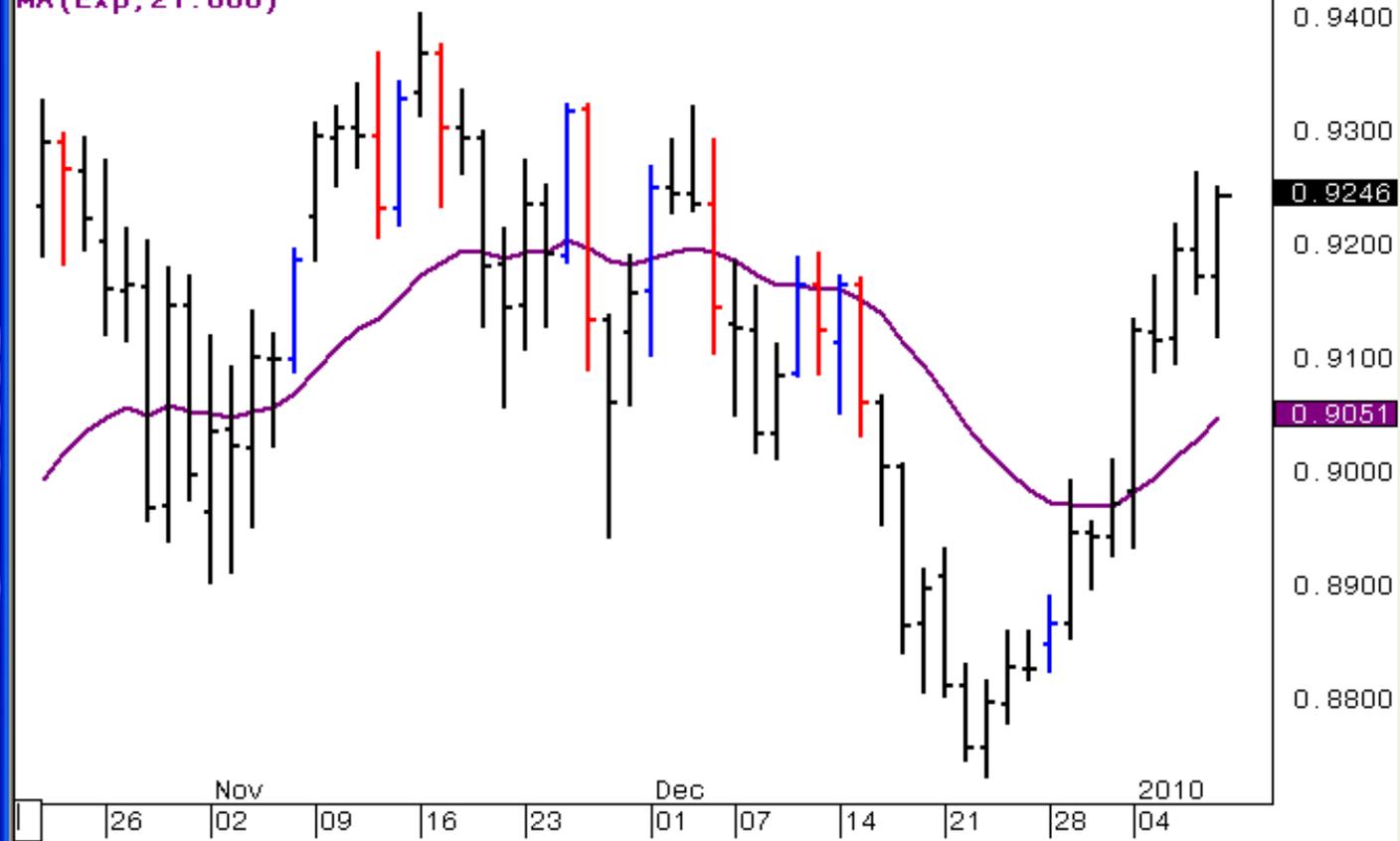
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IAUDUSD - Australia (Dollar) Index, Daily



MA (Exp, 21 .000)



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