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## ZigZag is NOT ZigZag!

<http://www.stevhopwoodforex.com/phpBB3/viewtopic.php?f=15&t=1313>

### ZigZag is NOT ZigZag!

Page 1 of 8

by Big Be

Posted: **Mon Dec 17, 2012 3:14 am**

Researching ZigZag outside of the MetaTrader world, you will see that before MetaTrader, ZigZag was designed in a very different way than the ZigZag in Metatrader. Metatrader's ZigZag is looking for the high and low of the last n bars, with a couple extra rules, as will be explained later. Originally ZigZag looked at price movements up and down. It looks at highs and lows, but with a price move percentage filter. I quote well-written selections from the Stockcharts.com website:

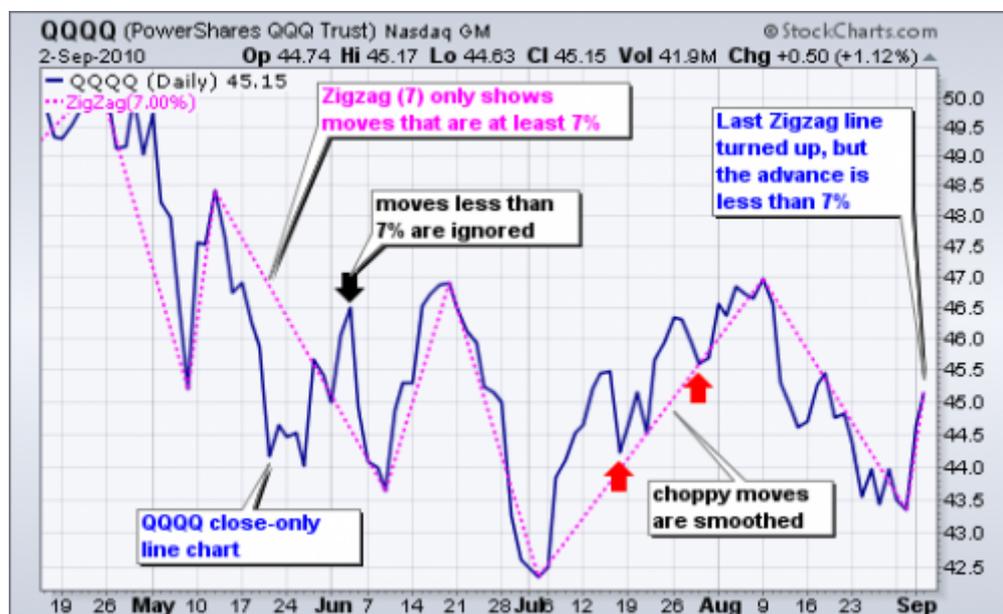
"ZigZag

"Introduction

"The ZigZag feature on SharpCharts is not an indicator per se, but rather a means to filter out smaller price movements. A ZigZag set at 10% would ignore all price movements less than 10%. Only price movements greater than 10% would be shown. Filtering out smaller movements gives chartists the ability to see the forest instead of just trees. It is important to remember that the ZigZag feature has no predictive power because it draws lines base on hindsight. Any predictive power will come from applications such as Elliott Wave, price pattern analysis or indicators. Chartists can also use the ZigZag with retracements feature to identify Fibonacci retracements and projections."

"Calculation

"The parameters box allows chartists to set the sensitivity of the ZigZag feature. A ZigZag with 5 in the parameter box will filter out all movements less than 5%. A ZigZag(10) will filter out movements less than 10%. If a stock traded from a reaction low of 100 to a high of 109 (+9%), there would not be a line because the move was less than 10%. If the stock advanced from a low of 100 to a high of 110 (+10%), there would be a line from 100 to 110. If the stock continued on to 112, this line would extend to 112 (100 to 112). The ZigZag would not reverse until the stock declined 10% or more from its high. From a high of 112, a stock would have to decline 11.2 points (or to a low of 100.8) to warrant another line."



The webpage has more info and example charts:

<http://stockcharts.com/school/doku.php? ... ors:zigzag>

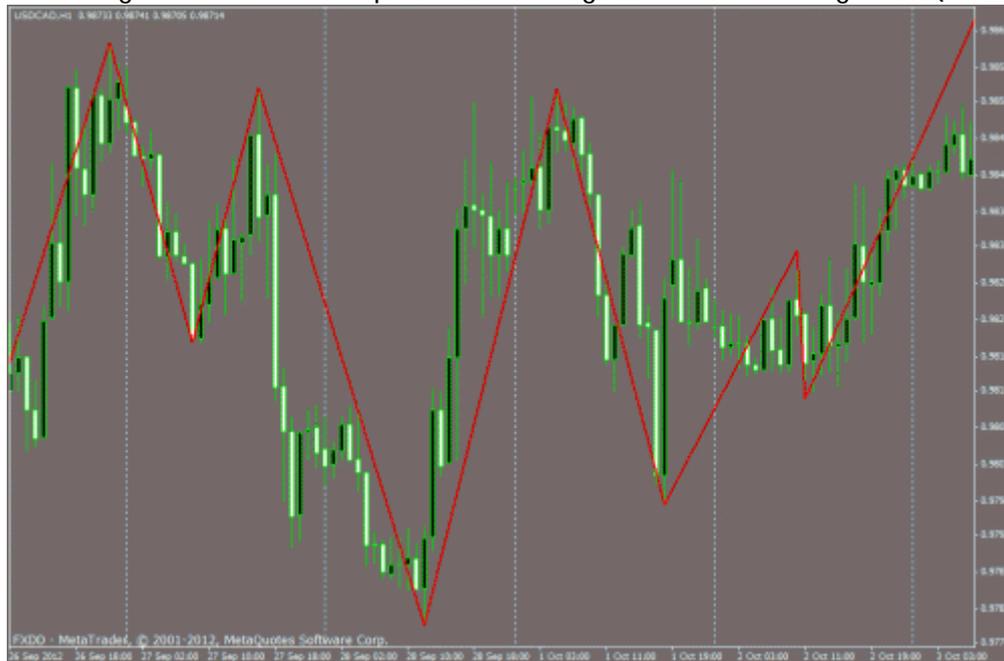
Sometimes the above principle is called a retracement indicator, and sometimes Fibonacci is mentioned. The original concept is a retracement indicator with a settable percent threshold. The Fibon levels are not a core requirement. And yes it repaints. MetaTrader's ZigZag repaints mostly "forwards", that is it resets as price moves higher and higher or lower and lower. Not certain if the original ZigZag behaves similarly, but I suspect it does.

In MetaTrader's ZigZag, percentage is NOT looked at.

Instead it looks back for the highest Highs and lowest Lows of the past n bars, called 'ExtDepth' in ZigZag.

There is one technical requirement in MetaTrader ZigZag's code. This is what distinguishes ZigZag from just a Highs and Lows indicator: To have a lower High, there must be an intervening Low. That is, High - Low - lower High. And to have a higher Low, there must be an intervening High: Low - High -- higher Low. And each High [Low] must "qualify", it must be the highest [lowest] of the past 'ExtDepth' number of bars. You can see all this if you study it on a chart.

This image shows two examples of lower Highs with intervening Lows (ExtDepth = 12):



In MetaTrader, most ZigZag derived indicators rely on the ZigZag built into MetaTrader, so incorporate this different concept called "ZigZag".

These include such indicators as "GP Lauer", "3\_Level\_ZZ\_Semafor\_TRO\_MODIFIED\_VERSION", a useful version MrPip and I modified called "3\_Level\_ZZ\_Corrected\_V2.1", various "Semaphore" versions we have put out, and others.

Big Be

## The Bugs Built into ZigZag, and ZigZag\_Corrected

by **Big Be**

Posted: **Mon Dec 17, 2012 3:19 am**

ZigZag's code is one of the most incomprehensible piles of MetaTrader I have ever studied.

However I can tell you with full certainty that ZigZag has two bugs built in:

1. ExtDeviation does nothing

You can test ExtDeviation by putting in any number: Try 0. Try 10,000. No change in the chart.

2. When ExtDeviation is fixed, it does not adjust for 5 Digits brokers (Digits = decimal places). So the exact same data on a 4 Digits broker will give a different ZigZag plot than on a 5 Digits broker. ZigZag was coded before 5 digit brokers existed.

What ExtDeviation is supposed to do:

Imagine a "double top" chart. Now imagine the second top is ONE pip less than the first top. As a trader, you would call that a second top. ZigZag with this bug may IGNORE the second high (chart middle).



In this image the second High is one pip below the first. ZigZag ignores it even though it is the actual turning point of the trend.

ExtDeviation is supposed to allow for "Close is good enough" in this type of situation. It should allow you to adjust the number of pips of tolerance. So if set to 5, it should recognize a high that is within 5 pips of the last high. The optimum number of Pips varies with time frame. It also probably varies, to a much lesser extent, with the average volatility range of the pair.

I give you ZigZag\_Corrected (light blue line):



With the above two bugs corrected, it now picks up the second slightly lower High, which is where the new trend starts.

For ExtDeviation (Pips tolerance) here are a couple time frame settings that work pretty well:

M5: 2.0

H1: 5.0 (used for blue line in chart above)

D1: 30.0

These may be modified a little for the volatility of the currency pair being used.

ZigZag\_Corrected is set to match the original ZigZag defaults in MetaTrader. These are not really very useful settings. To match the indicators exactly set ExtDeviation to 0, in ZigZag\_Corrected.

This gives a starting point for ZigZag use without bugs. Any indicator or EA that calls ZigZag would need the name changed in iCustom() from "ZigZag" to "ZigZag\_Corrected\_v3.2". Of course the ExtDeviation setting will need to be set appropriately.

Big Be

## ZigZag\_Corrected Settings

by **Big Be**

Posted: **Mon Dec 17, 2012 3:20 am**

The default settings match the plot of the original MetaTrader ZigZag, except for ExtDeviation, which would have to be set to '0' to match exactly. However we have not found much use for those settings.

At the nonprofit trader's club, <http://www.4XLA.org>, we have found certain settings for ZigZag derived indicators, especially Semaphores, to be useful.

1.

Lengths or ExtDepths of 34 and 69.

II.

ExtBackstep is apparently the number of previous Highs and Lows that it looks at, searched for up to 100 bars back.

Besides giving somewhat better results, setting ExtBackstep to 1 increases the speed some.

III.

For ExtDeviation (Pips tolerance) here are a couple time frame settings that work pretty well. This will occasionally give you an extra valid signal. If set too high it will give too many added signals that are not useful.

M5: 2.0

H1: 5.0 (used for blue line in chart above)

D1: 30.0

These may be modified a little for the volatility of the pair being used.

Note: Because it is constantly looking back, ZigZag and ZigZag based indicators run somewhat slowly. They are somewhat CPU intensive.

Big Be

## Better ZigZags?

by **Big Be**

Posted: **Mon Dec 17, 2012 3:23 am**

Is there a true Percent-based ZigZag for MetaTrader?

I have not written one.

I have found only two candidates:

"ZUP", on mql4.com, of which I have not been able to understand the percentage aspect. I suspect the code is buggy or incomplete.

And "Percent ZigZag", which I do not possess, in the Forex-TSD Elite section.

Update March 2014: I have bought and examined "Percent ZigZag", and it is NOT a true percent-based ZigZag. Sigh.

### Notes on coding a true Percent-based ZigZag

In stocks you can use a "percent of stock price". But "percentage of exchange rate" is not I believe very significant in Forex so a clever substitute should be used.

Here are ideas based on other work I have done:

Perhaps this could look at the high and low of the last six months for Daily charts, the last 10 or 20 days for hourly charts, etc.

Or better, consider multi-period ranges. Maybe the single highest high of the last five days minus the five days' single lowest low. If needed, average with (20 or 40 days' high minus 20 or 40 days' low). This gives you a range to take a percentage of. It would need some tuning but once final should be self-adjusting.

Other time frames would probably need different numbers of periods.

**Is there a fast, bug free, superior version of Semaphore available?**

Well I have written one but it is not available yet. I hope to offer it through the commercial section soon. Assuming that I get Steve's approval.

Big Be

**Re: ZigZag is NOT ZigZag!**

by jcl

Posted: **Mon Dec 17, 2012 12:01 pm**

It is known that many MT4 functions are not what they are supposed to be. For instance, iATR is NOT ATR. MT4 has many such little surprises to make programmer's life more interesting 😊.

**Re: ZigZag is NOT ZigZag!**

by Big Be

Posted: **Mon Dec 17, 2012 6:28 pm**

jcl,

Can you give us a link about ATR vs. iATR?

**Re: ZigZag is NOT ZigZag!**

by SteveHopwood

Posted: **Mon Dec 17, 2012 10:12 pm**

Great contribution Big Be. Thanks.

**Re: ZigZag is NOT ZigZag!**

by jcl

Posted: **Tue Dec 18, 2012 7:42 am**

*Big Be wrote:*

jcl,

Can you give us a link about ATR vs. iATR?

I have no link, but you can easily check yourself. The ATR is defined recursively:

$$\text{ATR}(\text{length}) = (\text{previousATR} * (\text{length}-1) + \text{True Range}) / \text{length};$$

this puts more weight on the recent ranges and gives the ATR a smooth appearance, like an EMA. MT4 however calculates its ATR by just adding all ranges and dividing by the length, like a simple MA:

$$\text{iATR}(\text{length}) = \text{sum}(\text{True Range}) / \text{length};$$

This returns a very different, more 'shaky' ATR value which is normally, dependent on what you do with it, less suited than the 'real' ATR.

**Re: ZigZag is NOT ZigZag!**

by garyfritz

Posted: **Tue Dec 18, 2012 1:46 pm**

FWIW, MT4 isn't the only one to define it as SMA(TrueRange). Tradestation's AvgTrueRange() function uses a simple average too, not an EMA.

But I suspect you're right -- the  $(\text{PreviousATR} * (\text{length}-1) + \text{TrueRange}) / \text{length}$  is the type of formula Wilder and others used, because it was easy to calculate in those calculate-by-hand days.

## Re: ZigZag is NOT ZigZag!

by **swordfish**

Posted: **Fri Dec 21, 2012 11:05 pm**

Thank you , Big BE.

With this improved Zig Zag, is it possible to code double top/double bottom and head-and-shoulder patterns?

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### Re: ZigZag is NOT ZigZag!

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by **Big Be**

Posted: **Sat Dec 22, 2012 4:57 pm**

*swordfish wrote:*

Thank you , Big BE.

With this improved Zig Zag, is it possible to code double top/double bottom and head-and-shoulder patterns?

You can see them often but I don't think it would pick out these patterns reliably, especially if a minor peak is less than n bars from being "in the clear". Possibly an original ZigZag as discussed above would work better.

Big Be

## ZigZag is NOT ZigZag!

by **MKFXTrader**

Posted: **Wed Jul 30, 2014 9:04 pm**

*Big Be » Mon Dec 17, 2012 4:14 am wrote:*

Researching ZigZag outside of the MetaTrader world, you will see that before MetaTrader, ZigZag was designed in a very different way than the ZigZag in MetaTrader. Metatrader's ZigZag is looking for the high and low of the last n bars, with a couple extra rules, as will be explained later. Originally ZigZag looked at price movements up and down. It looks at highs and lows, but with a price move percentage filter. I quote well-written selections from the Stockcharts.com website:

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"The parameters box allows chartists to set the sensitivity of the ZigZag feature. A ZigZag with 5 in the parameter box will filter out all movements less than 5%. A ZigZag(10) will filter out movements less than 10%. If a stock traded from a reaction low of 100 to a high of 109 (+9%), there would not be a line because the move was less than 10%. If the stock advanced from a low of 100 to a high of 110 (+10%), there

would be a line from 100 to 110. If the stock continued on to 112, this line would extend to 112 (100 to 112). The ZigZag would not reverse until the stock declined 10% or more from its high. From a high of 112, a stock would have to decline 11.2 points (or to a low of 100.8) to warrant another line."

The webpage has more info and example charts:

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Sometimes the above principle is called a retracement indicator, and sometimes Fibonacci is mentioned. The original concept is a retracement indicator with a settable percent threshold. The Fibon levels are not a core requirement. And yes it repaints. MetaTrader's ZigZag repaints mostly "forwards", that is it resets as price moves higher and higher or lower and lower. Not certain if the original ZigZag behaves similarly, but I suspect it does.

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Instead it looks back for the highest Highs and lowest Lows of the past n bars, called 'ExtDepth' in ZigZag.

There is one technical requirement in MetaTrader ZigZag's code. This is what distinguishes ZigZag from just a Highs and Lows indicator: To have a lower High, there must be an intervening Low. That is, High - Low - lower High. And to have a higher Low, there must be an intervening High: Low - High -- higher Low. And each High [Low] must "qualify", it must be the highest [lowest] of the past 'ExtDepth' number of bars. You can see all this if you study it on a chart.

This image shows two examples of lower Highs with intervening Lows (ExtDepth = 12):

In MetaTrader, most ZigZag derived indicators rely on the ZigZag built into MetaTrader, so incorporate this different concept called "ZigZag".

These include such indicators as "GP Lauer",

"3\_Level\_ZZ\_Semafor\_TRO\_MODIFIED\_VERSION", a useful version MrPip and I

modified called "3\_Level\_ZZ\_Corrected\_V2.1", various "Semaphore" versions we have put out, and others.

Big Be

Big B,

Thank you for correcting the zig zag indicator. I've been using it for awhile and I really appreciate your work. I was wondering if you could also correct this version of zig zag channel alert. Or if possible you could incorporate that into your indicator. The indicator looks to be drawing from the same default mt4 code. I attach the indi for your consideration. Thank you in advance for your consideration.

## ZigZag is NOT ZigZag!

by MKFXTrader

Posted: **Thu Jul 31, 2014 7:47 pm**

Big Be,

Any help with request please? 🙏👉

## ZigZag is NOT ZigZag!

by **fxozgirl**

Posted: **Thu Jul 31, 2014 8:35 pm**

*MKFXTrader » Fri Aug 01, 2014 5:47 am wrote:*

Big Be,

Any help with request please? 📊 🤔

MKFXTrader, this last post on this thread (before yours yesterday) was in 2012. I have not seen BigBe around the forum for some time, so no point getting frustrated, it is not likely you are going to get a response from him.

Perhaps try sending him a private message, he may respond in this manner.

## ZigZag is NOT ZigZag!

by **MKFXTrader**

Posted: **Thu Jul 31, 2014 9:37 pm**

*fxozgirl » Thu Jul 31, 2014 9:35 pm wrote:*

*MKFXTrader » Fri Aug 01, 2014 5:47 am wrote:*

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Perhaps try sending him a private message, he may respond in this manner.

Thank you. I did not even notice to look.

## ZigZag is NOT ZigZag!

by **Big Be**

Posted: **Fri Aug 01, 2014 2:37 am**

MKFXTrader,

I got your request and downloaded your indi, but I have been too busy to look at it. I will as soon as I can.

## ZigZag is NOT ZigZag!

by **MKFXTrader**

Posted: **Fri Aug 01, 2014 6:45 am**

*Big Be » Fri Aug 01, 2014 3:37 am wrote:*

MKFXTrader,

I got your request and downloaded your indi, but I have been too busy to look at it. I

will as soon as I can.

Thank you very much Big Be.

## ZigZag is NOT ZigZag!

by **eigenvector**

Posted: **Fri Aug 01, 2014 7:22 am**

Big Be, thanks for your explanation of ExtDeviations. Allow me to assist with a better definition of ExtBackstep:

ExtBackstep is apparently the number of previous Highs and Lows that it looks at, searched for up to 100 bars back.

ExtBackstep is a variable that controls how many bars back the indicator will repaint prior highs and lows. Let's say ExtBackstep is set to 3. After a new high A is made, A is stored in the buffer that stores highs. But 3 bars later, a newer high B is made. So the algorithm erases all the previous highs (including A) within the last 3 bars, and then puts in the new high (B) on the current bar in the buffer that stores highs. The same principle applies to new lows.

Thus I refer to ExtBackstep as the repaint variable.

## ExtBackstep Explanation

by **Big Be**

Posted: **Fri Aug 01, 2014 8:00 am**

eigenvector,

I agree it is the repaint variable.

But, in the strategy tester, it will repaint the last high/low even 6 or more bars later when set to 3, if that is the first higher high or lower low.

## ZigZag Channel Modified

by **Big Be**

Posted: **Fri Aug 01, 2014 8:04 am**

I got a couple surprises - good ones. The channel indi is actually a competently written indi. By "Coders Guru" explains why. And the change you wanted turned out to be one of the easiest I have been asked for. So here you are.

I don't know how you are using it (I would like to see). I would set ExtBackstep to 1 and suggest trying ExtDepth at 18 and up to see what works best. Set ExtDeviation per what I wrote above.

Latest version on page 7.

.

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### ZigZag Channel Modified

by MKFXTrader

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Posted: **Fri Aug 01, 2014 8:22 am**

*Big Be » Fri Aug 01, 2014 9:04 am wrote:*

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I don't know how you are using it (I would like to see). I would set ExtBackstep to 1 and suggest trying ExtDepth at 18 and up to see what works best. Set ExtDeviation per what I wrote above.

.

Thank you so much Big Be.



I'm using the recommended setting for SD from second post. Just to confirm it is for 5 digit broker. 5.0 not .5 for SD. Default was set at .5 when I first downloaded it from your 1st page..

I'm currently using:

ExtDepth: 12

ExtDeviation : 5.0

ExtBackstep : 3

on the 4hr TF.

### ZigZag Channel Modified

by Big Be

Posted: **Fri Aug 01, 2014 8:33 am**

I changed the Object names very slightly so that the old and new can be compared on the same chart. Or the two Corrected versions of Channels can be compared on the same chart to find best settings. Change colors in one to tell them apart.

Latest version is on page 7.

.

## ZigZag is NOT ZigZag!

by fxozgirl

Posted: **Fri Aug 01, 2014 8:35 am**

*MKFXTrader » Fri Aug 01, 2014 7:37 am wrote:*

*fxozgirl » Thu Jul 31, 2014 9:35 pm wrote:*

*MKFXTrader » Fri Aug 01, 2014 5:47 am wrote:*  
Big Be,

Any help with request please? 🙄

MKFXTrader, this last post on this thread (before yours yesterday) was in 2012. I have not seen BigBe around the forum for some time, so no point getting frustrated, it is not likely you are going to get a response from him.

Perhaps try sending him a private message, he may respond in this manner.

Thank you. I did not even notice to look.

Hi MKFX, I see you managed to get in contact with Big Be 😊

Big Be...welcome back and thanks for some more great work 🙌

## ZigZag Channel Modified

by **MKFXTrader**

Posted: **Fri Aug 01, 2014 8:39 am**

*Big Be » Fri Aug 01, 2014 9:33 am wrote:*

I changed the Object names very slightly so that the old and new can be compared on the same chart. Or the two Corrected versions of Channels can be compared on the same chart to find best settings. Change colors in one to tell them apart.

The only thing that I wish could be improved is on some instances a horizontal break should draw and trigger an alert instead of a TL that goes nowhere. You should never draw a TL on a lower low to lower low or HH to HH. I attach a chart for your review. You can see the blue horizontal line is dawn perfect. The red one should just be a horizontal line of that HL where I have the arrow. Same thing would be done for uptrend. Hope it's understandable. This is GOLD chart on 15min TF for example only. Is that something that can be easily fixed? Much would be greatly appreciated.

## ExtDeviation Settings

by **Big Be**

Posted: **Fri Aug 01, 2014 8:42 am**

MKFXTrader,

You need to interpolate between the values I gave for other timeframes. For H4 go between 5 and 30, try 10 to 15.

## ZigZag is NOT ZigZag!

by **MKFXTrader**

Posted: **Fri Aug 01, 2014 8:44 am**

*fxozgirl » Fri Aug 01, 2014 9:35 am wrote:*

*MKFXTrader » Fri Aug 01, 2014 7:37 am wrote:*

*fxozgirl » Thu Jul 31, 2014 9:35 pm wrote:*

*MKFXTrader » Fri Aug 01, 2014 5:47 am wrote:*

Big Be,

Any help with request please?



MKFXTrader, this last post on this thread (before yours yesterday) was in 2012. I have not seen BigBe around the forum for some time, so no point getting frustrated, it is not likely you are going to get a response from him.

Perhaps try sending him a private message, he may respond in this manner.

Thank you. I did not even notice to look.

Hi MKFX, I see you managed to get in contact with Big Be 

Big Be...welcome back and thanks for some more great work 



## ZigZag is NOT ZigZag!

by **Big Be**

Posted: **Fri Aug 01, 2014 8:51 am**

Thank you fxozgirl and MKFXTrader. 

## ExtDeviation Settings

by **MKFXTrader**

Posted: **Fri Aug 01, 2014 8:52 am**

*Big Be » Fri Aug 01, 2014 9:42 am wrote:*

MKFXTrader,

You need to interpolate between the values I gave for other timeframes. For H4 try between 5 and 30, try 10 to 15.

I'll try and play around with the other settings over the weekend. Using this on the 4hr Tf filters out a lot of noise. Hopefully you can write the request above. That would be so awesome. Love your work Big Be.

## Horizontal Lines

by **Big Be**

Posted: **Fri Aug 01, 2014 8:54 am**

MKFXTrader,

I don't quite get it. Pretend I am a school kid and make it real clear to me.

Thanks,

## Horizontal Lines

by **MKFXTrader**

Posted: **Fri Aug 01, 2014 9:02 am**

*Big Be » Fri Aug 01, 2014 9:54 am wrote:*

MKFXTrader,

I don't quite get it. Pretend I am a school kid and make it real clear to me.

Thanks,

Ok. If you see the chart I attached, where the beginning of the LL, it should not draw down to the lower low because once a zigzag line is created on that upmove (small retrace) the TL should be a horizontal at the first point of that low where I have the arrow. Once price breaks the horizontal, you receive the alert. TL is never drawn the way it is drawn displayed by the red TL. Hope it makes a little sense because my English is not so good. I attach another chart

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### Horizontal Lines

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by MKFXTrader

Posted: **Fri Aug 01, 2014 9:07 am**

*Big Be » Fri Aug 01, 2014 9:54 am wrote:*

MKFXTrader,

I don't quite get it. Pretend I am a school kid and make it real clear to me.

Thanks,

Here is another chart. Horizontal TL should be drawn where I have place the red arrows. Since we are in an uptrend, and slight pullback, a horizontal TL should be drawn on the created HH.

### Horizontal Lines

by **Big Be**

Posted: **Fri Aug 01, 2014 5:03 pm**

So when the ZZ is going down, you want the upper line to be horizontal.

When the ZZ is going up you want the lower line to be horizontal.

That is not so simple. Assuming I can do it - I am not expert in these lines - it may take me a few days as I am real busy right now.

### Horizontal Lines

by MKFXTrader

Posted: **Fri Aug 01, 2014 9:04 pm**

*Big Be » Fri Aug 01, 2014 6:03 pm wrote:*

So when the ZZ is going down, you want the upper line to be horizontal.

When the ZZ is going up you want the lower line to be horizontal.

That is not so simple. Assuming I can do it - I am not expert in these lines - it may take me a few days as I am real busy right now.

No, I think you have it the other way around. In a downtrend, an established lower low should be a horizontal line unless a higher low is formed and thus would negate the horizontal line. It would then just draw a normal trendline to the higher low. In an uptrend it would be vice versa. In a downtrend, you should only have a horizontal line on lower lows while trendlines are drawn only when a lower high is formed. In an uptrend, you should have only horizontal lines on higher highs and trendlines drawn only when a lower high is formed. Hope that makes sense. I attach three screenshots for review. Correct trendlines should only be drawn this way. I don't know if this is even possible to code but, I attach charts for your review.:

### Horizontal Lines

by **Big Be**

Posted: **Sat Aug 02, 2014 5:50 pm**

It was a bit tricky.  
Try this.

## Horizontal Lines

by **MKFXTrader**

Posted: **Sat Aug 02, 2014 7:58 pm**

*Big Be » Sat Aug 02, 2014 6:50 pm wrote:*

It was a bit tricky.  
Try this.

I think we are almost there but not quite yet. If possible can you look at the 1st chart I posted in the last post? Also I will attach a current hourly chart of what the indicator is still doing. TL's should not be drawn from a high to a higher high or a low to a lower low. Example: When you have an establish zig zag high(B) and it falls lower to retrace(C) but does not fall lower then the previous low(A), stops and creates a new zig zag going back up and passing (B), a horizontal line should have been made at the formation of the B to C move creating a break alert when it passes back up to break the B line. The chart I attach should also have a TL that ran from point A to point C for the break downward if wave E would've went lower to breach the TL. In this case wave E did not breach the TL but established a new lower high, thus a new TL would now be drawn from point C to E since it is now the most up to date zig zag points. With the new zig zag point at E being created the horizontal line above should jump from B wave to D wave giving another point of potential break and alert. Hope this makes sense. Vice versa for a

downtend. I really do appreciate your time and effort on this project. 🙌 You're a great programmer and I wish you many many green pips for your contribution to the retail trading community.

## Horizontal Lines

by **Big Be**

Posted: **Sun Aug 03, 2014 6:22 am**

It is hard to "think" like a computer. The computer does EXACTLY and ONLY what you tell it to, every time. Assuming the computer, the operating system, the platform (like MetaTrader) and one's coding are all functioning properly.

You can code rules that have to do with quantities. But most people do not think in quantities, so the difficulty is in communications.

-----  
So, we need clear rules that state what you want. You started out saying or implying you use the ZZ Channel. Now you are moving to something else. I am getting confused. I still would like you to show how you trade with the ZZ Channel.

What I get out of your examples:

If ZZ is blank or moving up, and if the recent ZZ Low is higher than the previous Low, then put a horizontal line at the intermediate High.

The low side of the ZZ Channel should show too.

And the Reverse:

If ZZ is blank or moving down, and if the recent ZZ High is lower than the previous High, then put a horizontal line at the intermediate Low.

The high side of the ZZ Channel should show too.

-----

You see, I need to know what to change in the last version. I will not do another version until I understand. And I may not do it until you show me how you use it. (I am trying to be greedy, though I am out of practice.) :-)

## ZigZag is NOT ZigZag!

by MKFXTrader

Posted: **Sun Aug 03, 2014 12:04 pm**

Ok Big Be. I try to clear things up. I trade using zig zag indicator. The only reason I requested to update the channel indicator was because it was designed to draw the trend lines and also had an alert. I would've been ok had your zigzag corrected indicator had this function. Now how the trendlines are drawn needs to be correct.

As you know, A TL is drawn from Low to Higher Low for an uptrend, while a high and a lower High for a downtrend. You are looking for a breakout of the channel to take the trade. Be it a breakout of a continuation or a breakout from a proper drawn trendline.

What I'm trying to adjust is how it draws for the continuation of the trend. Because right now it doesn't do that but rather the TL's are drawn Low to lower lows and on top it draws high to higher high which doesn't make sense. What you want is a horizontal line on the break of the continuation of the trend.

Attached chart you have many examples on how a proper TL should be drawn to trade breakout. Yellow TL's are correct TL's. Red TL's are NOT correct. Let me know if this is at least understandable. Then I can answer more questions if you have them so it doesn't become confusing. What is important is that I trade using zigzag to help me recognize highs/lows of the market.

## ZigZag is NOT ZigZag!

by MKFXTrader

Posted: **Sun Aug 03, 2014 2:22 pm**

Another example of downtrend.

## Horizontal Lines

by Big Be

Posted: **Mon Aug 04, 2014 5:00 am**

MKFXTrader,  
Thanks for your work.

I see a problem with doing it the way you want. It would not put the horizontal line until the last leg starts. But it repaints (shows up) after a new High or low, which usually puts the line there only around the time it is breaking through that line, which is not very helpful. Play it in the strategy tester to see. (Let me know if you need to know how I test indicators in the Strategy Tester.)

So the way I coded it may be as good as that will get.

There may be other aspects of it we can modify usefully, pertaining to the angled trend lines. We can put conditions on when it plots, or changes, or does nothing for example.

## Horizontal Line

by **Big Be**

Posted: **Wed Aug 06, 2014 6:24 pm**

MKFXTrader,  
Good News.

I think I have put together what you wish for!

First tell me if you know how to test indicators in the strategy tester? Only in this way can you give me good feedback rapidly.

Note: I have not examined the trends texts code (upper left area) nor the Alert code. No point before the lines act right.

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All times are UTC  
Page **4** of **8**

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## ZigZag is NOT ZigZag!

<http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=15&t=1313>

### Horizontal Line

by MKFXTrader

Page 5 of 8

Posted: **Wed Aug 06, 2014 7:53 pm**

*Big Be » Wed Aug 06, 2014 7:24 pm wrote:*

MKFXTrader,

Good News.

I think I have put together what you wish for!

First tell me if you know how to test indicators in the strategy tester? Only in this way can you give me good feedback rapidly.

Note: I have not examined the trends texts code (upper left area) nor the Alert code. No point before the lines act right.

That's great Big Be. 🙌 I knew you could do it.

Unfortunately, I've actually never used strategy tester nor ever run back test. I have only ever forward test.

## Using the MetaTrader Strategy Tester to Test Indicators

by **Big Be**

Posted: **Thu Aug 07, 2014 3:27 am**

Follow these directions and you can learn this in about 10 minutes.

Open the Strategy Tester. (If you can't figure that out you have no business trading by computer.)

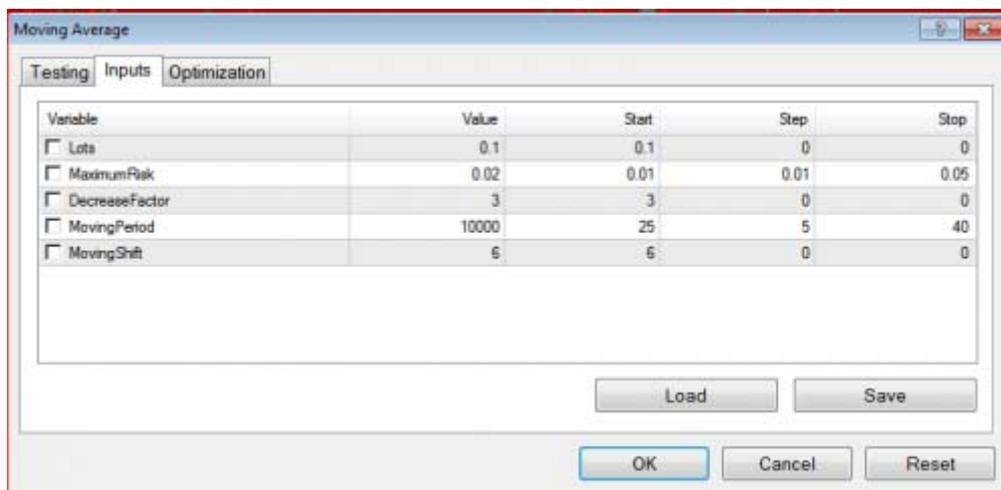


Adjust the window height if needed. (Double-click left border, or Click and drag.)

Under "Expert Advisor" choose "Moving Average".

Click on Expert Properties in the Strategy Tester.

Under "Inputs", set the MovingPeriod to 10,000. This keeps it out of the way.



Ignore other settings. Click OK.

Set a chart for which you have data already (look at your charts). Ideally you want 1 Minute data available, especially if you just want to see if an indicator is behaving correctly. The smaller the Timeframe, the faster it will test.

Under "Model" I normally use "Every Tick", which is the slowest but most like real price action. One of the others may work for testing indicators, but I have not needed it.

Set a start date and end date within the Pair and Timeframe data you see on a chart.  
 Check "Use Date".  
 Check "Visual Mode".

For safety, set the year date in "Skip To" to like 2000.

"Optimization" should be NOT checked for this.

The slider to the right of "Visual Mode" should be at halfway or anywhere left of center.

Ignore other settings.

Click Start.  
 Click the >> button unless it shows ||. You are pausing it.

Put your indicator or template, or template then indicator, on the chart.

Move the slider right (click and drag). Try 31.  
 32 is fast. It may be too fast. 31 is about 100 times slower. What about 10 times slower? Sorry, this is MetaTrader. So we set it to 25-31 and use lower Timeframes. Or 32 with a higher Timeframe, like Daily.

Click the || to start it.  
 Observe.  
 Click >> to pause as needed.

=====

Note: The Strategy Tester will not give accurate prediction of how a real full time EA will do. It is good for checking if things are working right, comparisons, finding good settings, even practice trading.

## Using the MetaTrader Strategy Tester to Test Indicators

by MKFXTrader

Posted: **Thu Aug 07, 2014 10:49 am**

*Big Be » Thu Aug 07, 2014 4:27 am wrote:*

Open the Strategy Tester. (If you can't figure that out you have no business trading by computer.)



I almost fell out of my chair.

I'll try and backtest over the weekend. Do you want to attach the new zigzag channel indi?

Thanks Big Be.

Thanks for the laugh.

### Latest Channels Version

by **Big Be**

Posted: **Sat Aug 09, 2014 5:24 am**

This is close to what MKFXTrader wanted. See images in next post.

It is good but probably not perfect... Partly my limitations in coding and partly each decision will have examples where you wish it was different.

Also got the Trend text code useful. "Triangle trend" is when Price is between the two horizontal lines.

I set it up to plot and then keep the lines for a while... it's tricky because the initial plot (when you first start or re-initialize it) is somewhat separate code from the continuing (forward) plot, and you have to try to get them to agree. Could still be bugs too, though I didn't notice anything today.

The key question is, Does it work usefully most of the time?

I hope more than one of you tries it and gives feedback.

#### SETTINGS

Here is Coders Guru's explanation for the settings:

[http://www.xpworx.com/download-free/mt4 ... icator.php](http://www.xpworx.com/download-free/mt4...icator.php)

BreakPips of 5 pips above/ below the trend line before the Alert signals is too big in lower Timeframes, though probably good for H4 and up, maybe H1.

I changed ExtBackstep to '1' as never could see an advantage to longer and it just slows it down.

I suggested ExtDeviation settings earlier (or you interpolate between what I suggested).

Page 1, second post, and page 3, fifth post.

Template: I set period to 9 for faster testing with still a realistic indicator display.

You also need installed the indicator from the first page.

# Latest Channels Version

by **Big Be**

Posted: **Sat Aug 09, 2014 9:50 pm**



As chart goes forward, both channels can appear.



## maybe a bug

by **bourgenot**

Posted: **Sun Aug 10, 2014 11:42 am**

MKFX Hello, I put your new indicator (ZigZag\_Corrected\_v3.2\_HZ\_Channels\_w-alert\_v3.1.mq4). It's Sunday FOREX is close, ok. But with your indicator, my system Takes 9 minutes to boot, and nothing appears on screen, unless your identity. I let you check with your account. Congratulations and thanks for your work, Respectfully. For myself i work with ATR, you can find me in manual session .. Have good time ..

## ZigZag is NOT ZigZag!

by **Big Be**

Posted: **Sun Aug 10, 2014 5:07 pm**

Sorry, you need installed the indicator from the first page.

## ZigZag is NOT ZigZag!

by **bourgenot**

Posted: **Sun Aug 10, 2014 5:12 pm**

OK, merci!

## Strategy Tester - How hard is it?

by **Big Be**

Posted: **Mon Aug 11, 2014 6:13 pm**

It takes about 10 minutes to learn to use the Strategy Tester as above.

## Latest Channels Version

by **Big Be**

Posted: **Tue Aug 12, 2014 5:38 pm**

The new version above will show nothing if there is not a recent higher low or lower high. Try another time frame or pair, or wait a while, or [use the Strategy Tester](#).

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<http://www.stevehopwoodforex.com/phpBB3/>

## ZigZag is NOT ZigZag!

<http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=15&t=1313>

### Latest Channels Version

Page 6 of 8

by **Big Be**

Posted: **Tue Aug 12, 2014 6:00 pm**

Hello!

I can only make this indicator better if you tell me what it does wrong and right for you. Although I have good ideas, I don't know if they are what you need.

## ZigZag is NOT ZigZag!

by **bourgenot**

Posted: **Tue Aug 12, 2014 7:04 pm**

.MERCII!

## ZigZag is NOT ZigZag!

by **fxozgirl**

Posted: **Tue Aug 12, 2014 8:49 pm**

Thanks Big Be...I have been following along & looking forward to giving this indicator a try!



## Different Version of ZigZag Channel

by **Big Be**

Posted: **Wed Aug 13, 2014 8:51 pm**

This has the same types of lines but puts them up sooner. Is it better or ?

## Different Version of ZigZag Channel

by **MKFXTrader**

Posted: **Thu Aug 14, 2014 8:02 am**

*Big Be » Wed Aug 13, 2014 9:51 pm wrote:*

This has the same types of lines but puts them up sooner. Is it better or ?

Great work BigBe. This latest channel indi is much better. Only problem I'm having is that it doesn't alert for some reason. Are you having the same issue?

Also what constitute a red TL or blue TL being drawn? Right now it either shows up both blue or both red on the same chart. It would be more visually appealing if one can have blue TL for the upper and red for lower TL. Hope that makes sense. Very minor so if it's too much of a problem, don't worry about it. From what I can see, it looks like the horizontal TL always shows up the same color as the diagonal TL.

Other than those two minor adjustments, I say you did a really splendid job coding this. It's much faster and seems to be drawing proper TL's as I have described should be.

Thanks BigBe

## Different Version of ZigZag Channel

by **Big Be**

Posted: **Thu Aug 14, 2014 6:34 pm**

Thank you MKFXTrader.

Re Colors: Red is usually used to indicate go Short and Blue or Green for go Long. You can easily reverse that in the Inputs if you wish, and save in a template. You had said that the horizontal line was for a continuation of the same trend after a pullback so the color is the same.

Re Alerts: until we have the indicator just right I am not worrying about such. If you tell me exactly when you think an alert should happen I can look at the code. But see my next post.

## Different Version of ZigZag Channel

by **Big Be**

Posted: **Thu Aug 14, 2014 7:04 pm**

If it is always the way you wanted for trading, we are done with the channel lines. If it is sometimes and not sometimes, look this over.

This will show the potential flexibility of the indicator. Same chart, different settings of "Back".  
Note: When going forward, the blue lines and red lines persist until replaced by a newer Higher-Low or Lower-High. When first put up the recent version only looks to see if these existed in the last few highs and lows. (This might be changeable to look further back, but it means more work.)

These images show variations based on looking Back at different sets of points. (Put up the ZigZagCorrected (white line here), with same settings, to see the High / Low points.)

Default, Back = 1 This would persist going forward and with next segment formed you would see this, which is now Back = 2.



Back = 0 Not too useful as the trend line changes with each higher or lower (as applicable) tick.



Back = 3



Back = 5



On this chart at this moment Back = 1 or 4 shows nothing.

The horizontal line could even be put (instead) on an earlier high or low if it exists.  
 Caution: any change we make would apply to all cases. We can make a rule conditional but it has to be expressed as a numerical formula or rule.

By now you probably think I am just trying to confuse you. 😊

## Different Version of ZigZag Channel

by MKFXTrader

Posted: **Thu Aug 14, 2014 7:35 pm**

*Big Be » Thu Aug 14, 2014 7:34 pm wrote:*

Thank you MKFXTrader.

Re Colors: Red is usually used to indicate go Short and Blue or Green for go Long. You can easily reverse that in the Inputs if you wish, and save in a template. You had said that the horizontal line was for a continuation of the same trend after a pullback so the color is the same.

Re Alerts: until we have the indicator just right I am not worrying about such. If you tell me exactly when you think an alert should happen I can look at the code. But see my next post.

BigBe,



I think you got it as good as it's going to get. Great job. I knew you could do it.



I would go ahead and put the alert function back in. A pop up alert like the original code with the ability to set the pip breakage criteria in the inputs tab.

I'm not too concern about the color of the TL's. It was very minor observation.

This is a great addition to any trading strategy. Let's do this.

## ZigZag is NOT ZigZag!

by MKFXTrader

Posted: **Thu Aug 14, 2014 7:51 pm**

Close to a 100 pip trade on E/N hourly TF with a break of the lower horizontal TL.

## ZigZag is NOT ZigZag!

by MKFXTrader

Posted: **Thu Aug 14, 2014 7:55 pm**

Took 120 pips here on G/CHF hourly TF with a break of the lower diagonal TL. Could've netted another 50 pips today but I didn't take it.

Not many trades this week but these were very powerful trade setups this week.

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## ZigZag is NOT ZigZag!

<http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=15&t=1313>

### ZigZag Channel - Alerts - Your Opinions Needed

Page 7 of 8

by **Big Be**

Posted: **Fri Aug 15, 2014 9:02 pm**

Setting up the Alerts rules is tricky.

BreakPips seems to be very good filter, but you need to set it right for each timeframe and maybe pair.

To trigger an Alert, what existed before is that a single bar had to open below a line and move above the line by "BreakPips" amount in the SAME bar (or vice-versa).

I appreciate your opinions on these questions:

What if it takes a few bars to move that much past the line, from an open on the other side of the line? How many bars do you give it? 3? 6? 10?

Or do you just ignore the move?

Would you automatically increase the amount of Breakpips if it takes more than say, 2 bars? or leave it alone?

Or, Would you wait for the bar to close past the line before taking the signal?

AND to take the signal on the initial bar, multiply BreakPips by maybe 1.5?

So if set to 4 pips, it has to move 6 pips past on the initial bar, or close 4 or more pips past the line.

This may all seem picky but the point is to get more good Alerts and filter out poorer signals.

You will see these kinds of situations more often on the 1 minute timeframe (set Breakpips to 1), but they will come up on all timeframes.

Next challenge: When you have both red and blue lines showing, Do you give precedence to the most recent lines or treat them as equal? You could have situations where opposite signals could be generated at the same time or very close in time, with out a change in actual trend.

### ZigZag Channel - Alerts - Your Opinions Needed

by **MKFXTrader**

Posted: **Sat Aug 16, 2014 10:15 am**

*Big Be » Fri Aug 15, 2014 10:02 pm wrote:*

Setting up the Alerts rules is tricky.

BreakPips seems to be very good filter, but you need to set it right for each timeframe and maybe pair.

To trigger an Alert, what existed before is that a single bar had to open below a line and move above the line by "BreakPips" amount in the SAME bar (or vice-versa).

I appreciate your opinions on these questions:

What if it takes a few bars to move that much past the line, from an open on the other side of the line? How many bars do you give it? 3? 6? 10?  
Or do you just ignore the move?

Would you automatically increase the amount of Breakpips if it takes more than say, 2 bars? or leave it alone?

Or, Would you wait for the bar to close past the line before taking the signal?  
AND to take the signal on the initial bar, multiply BreakPips by maybe 1.5?  
So if set to 4 pips, it has to move 6 pips past on the initial bar, or close 4 or more pips past the line.

This may all seem picky but the point is to get more good Alerts and filter out poorer signals.

You will see these kinds of situations more often on the 1 minute timeframe (set Breakpips to 1), but they will come up on all timeframes.

Next challenge: When you have both red and blue lines showing, Do you give precedence to the most recent lines or treat them as equal? You could have situations where opposite signals could be generated at the same time or very close in time, with out a change in actual trend.

BigBe,

I think you may be over thinking this. It would be best if you just set up the alert like the original. Alert of the break by x number of pips. That's it. A pop up alert. If you want a good alert and filter out the bad, you get that by trading the higher TF's. I can't speak about the 1/5/15/30 min TF's as I don't trade those TF's. It's best IMO to use this particular tool and strategy ONLY on the hourly and above. Hope this helps. Don't over think it. Pop up alert like the original on a break by x number of pips.

When trading you can choose to take the trade on the break by current candle or wait til the close of that candle. That should be up to the trader, and shouldn't be worried about coding it so. What's important is you get an alert each time price hits that line in the sand. Keep it simple my friend.

Cheers

## ZigZag Channel - Alerts - Your Opinions Needed

by **Big Be**

Posted: **Sat Aug 16, 2014 8:31 pm**

MKFXTrader,

Thanks for your input. The existing rules would not alert this good trade for example, as the open above the lower line at 'X' does not drop 5 pips for two more bars (arrow).



Unfortunately, two days earlier, the third red candle that penetrated the bottom line DID qualify, but the trend kept going up.  
Do you run a tight stoploss?

Can you tell us more about what you look for to take a trade?  
Also, any particular pairs you watch / avoid?

## Latest Channels Version

by **Big Be**

Posted: **Sat Aug 16, 2014 8:54 pm**

This also looks and deals with one more set of points earlier so will more often show lines when first put up or reset.  
Also minor code improvements.

## ZigZag Channel - Alerts - Your Opinions Needed

by **MKFXTrader**

Posted: **Sat Aug 16, 2014 9:22 pm**

*Big Be » Sat Aug 16, 2014 9:31 pm wrote:*

MKFXTrader,

Thanks for your input. The existing rules would not alert this good trade for example, as the open above the lower line at 'X' does not drop 5 pips for two more bars (arrow).

Unfortunately, two days earlier, the third red candle that penetrated the bottom line DID qualify, but the trend kept going up.  
Do you run a tight stoploss?

Can you tell us more about what you look for to take a trade?  
Also, any particular pairs you watch / avoid?

Yes, SL is kept tight with the max SL set at the top/bottom of candle wick that penetrates the TL. The example you are describing regarding the missed signal from the previous two day scenario doesn't look like a TL would've been drawn there yet at that time since a lower high would've not been drawn yet. Put the zig zag corrected indicator on there with the same settings and you'll see what I mean. The only signal would've been after those two dojis. Beautiful drop from there, no? Look at the risk reward.

The Best advice is to cut losses early and let profits run. High R/R and use daily ADR's to measure movements. Most important is to trade pairs with high ADR's. This is just one major component of my trading strategy and you're involved in making it a reality. I thank you for your kindness in coding this channel indicator. Anything I can do for you, send me a PM.

Is the last attached indicator with the alert function?

## Latest Channels Version

by **MKFXTrader**

Posted: **Sat Aug 16, 2014 9:24 pm**

*Big Be » Sat Aug 16, 2014 9:54 pm wrote:*

This also looks and deals with one set of points earlier so will more often show lines when first put up or reset.  
Also minor code improvements.

Can you elaborate? The last update seem to have been pretty solid except for the missing alerts.

## Latest Channels Version

by **Big Be**

Posted: **Sat Aug 16, 2014 9:34 pm**

Alerts no longer work in the Strategy Tester. I added a comment (at the top left) to tell you when an alert triggers, though it stays up until the next one.

I will check the sequence you mentioned above.  
Edit: Yes you are right about 11 Feb.

## Latest Channels Version

by **MKFXTrader**

Posted: **Sat Aug 16, 2014 9:42 pm**

*Big Be » Sat Aug 16, 2014 10:34 pm wrote:*

Alerts no longer work in the Strategy Tester. I added a comment (at the top left) to tell you when an alert triggers, though it stays up until the next one.

I will check the sequence you mentioned above.

I meant is the alert function now active for forward testing? I didn't mean for strategy tester.

## Latest Channels Version

by **Big Be**

Posted: **Sat Aug 16, 2014 9:55 pm**

*MKFXTrader » Sat Aug 16, 2014 1:42 pm wrote:*

I meant is the alert function now active for forward testing? I didn't mean for strategy tester.

It should work - though haven't tested it forward.  
And with limitations as described above.

## Latest Channels Version

by **MKFXTrader**

Posted: **Sat Aug 16, 2014 10:08 pm**

*Big Be » Sat Aug 16, 2014 10:55 pm wrote:*

*MKFXTrader » Sat Aug 16, 2014 1:42 pm wrote:*

I meant is the alert function now active for forward testing? I didn't mean for strategy tester.

It should work - though haven't tested it forward.  
And with limitations as described above.

Can you elaborate on the update of the most recent version you just posted? I didn't run into any problems with the version before that except that the alert did not work.

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## ZigZag is NOT ZigZag!

<http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=15&t=1313>

### Latest Channels Version

Page **8** of **8**

by **Big Be**

Posted: **Sun Aug 17, 2014 3:02 am**

MKFXTrader,

This is the biggest change as I said above:

"This also looks and deals with one more set of points earlier so will more often show lines when first put up or reset."

Meaning you don't always have to wait a bunch of bars to see more lines.

"Also minor code improvements."

Such as the alerts code is somewhat better (= more alerts).

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