

# ZoneTraderPro NinjaTrader AutoTrader Manual

Welcome to the ZoneTraderPro AutoTrader manual. Prior to using the ZoneTraderPro AutoTrader strategy you should be completely familiar with all of its parameters and concepts. If you ever have a question, please contact me directly at [chris.knox \(at\) ZoneTraderPro.com](mailto:chris.knox@ZoneTraderPro.com) or at 954-380-4854.

The AutoTrader strategy is meant to take advantage of four distinct patterns that occur with the ZoneTraderPro software. Those patterns are the countertrend and trend trades in the ES and ZN market and the tick divergence pattern in the ES market. The ZoneTraderPro AutoTrader strategy was developed so that a trading plan could be implemented based upon historical patterns which have occurred in these markets. The parameters in the strategy are meant to give the user as much control as possible to execute a trading plan.

What is a trend and counter trend trade? These two patterns form the basis of the ZoneTraderPro theory. As price reacts between the zones of support and resistance we form patterns. The simplest of the patterns is the counter trend trade, because we are just trading at the light blue support or resistance zone. The trend trade pattern occurs when we have a retracement to intermediate support or resistance. In this picture we have a long counter trend trade and a short trend trade.

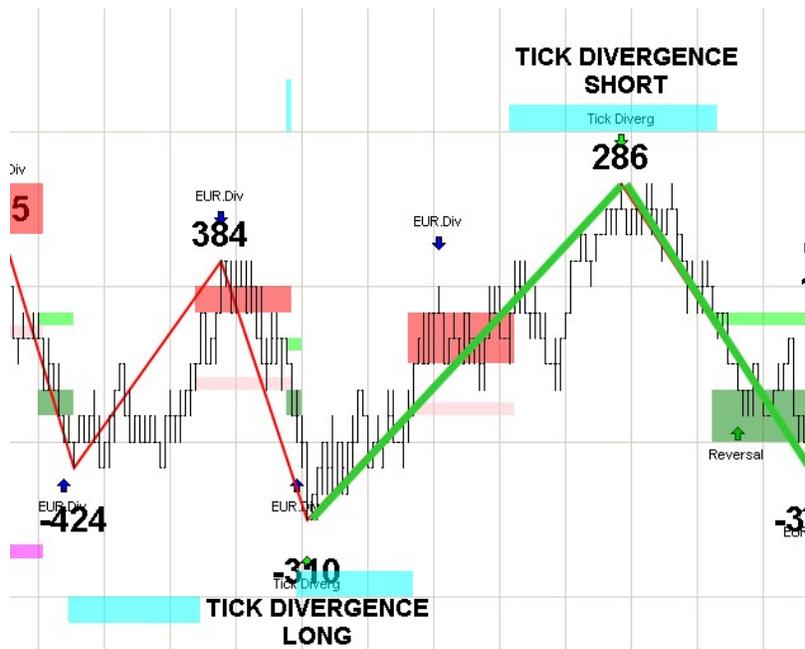
## Trend and Counter Trend Trades



## ES Tick Divergence Trade

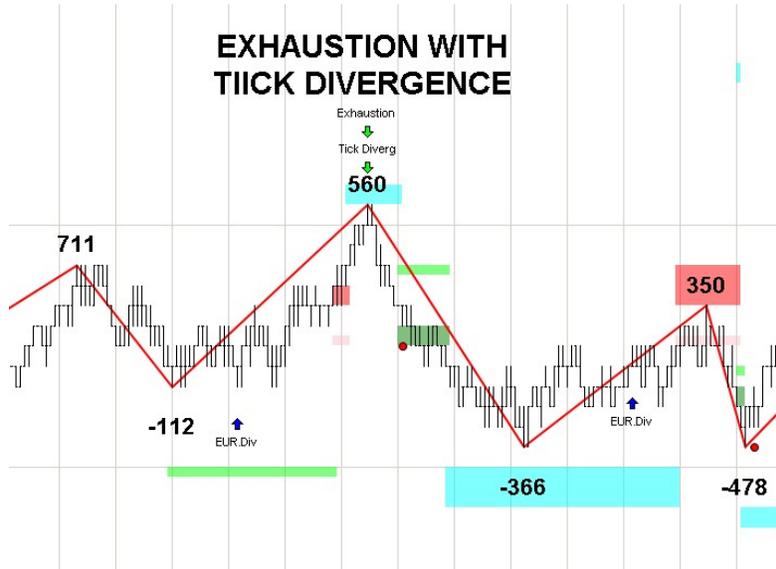


The tick divergence pattern on the ES contract is also a countertrend trade that takes into account the value of the \$TICK. If price in the ES is making higher highs and higher lows that are not being confirmed with higher highs and higher lows in the \$TICK that is what gives us a tick divergence pattern. In the chart below, the first long trade we are comparing the -310 number to the -424 and in the short trade we are comparing the 286 to the 384.

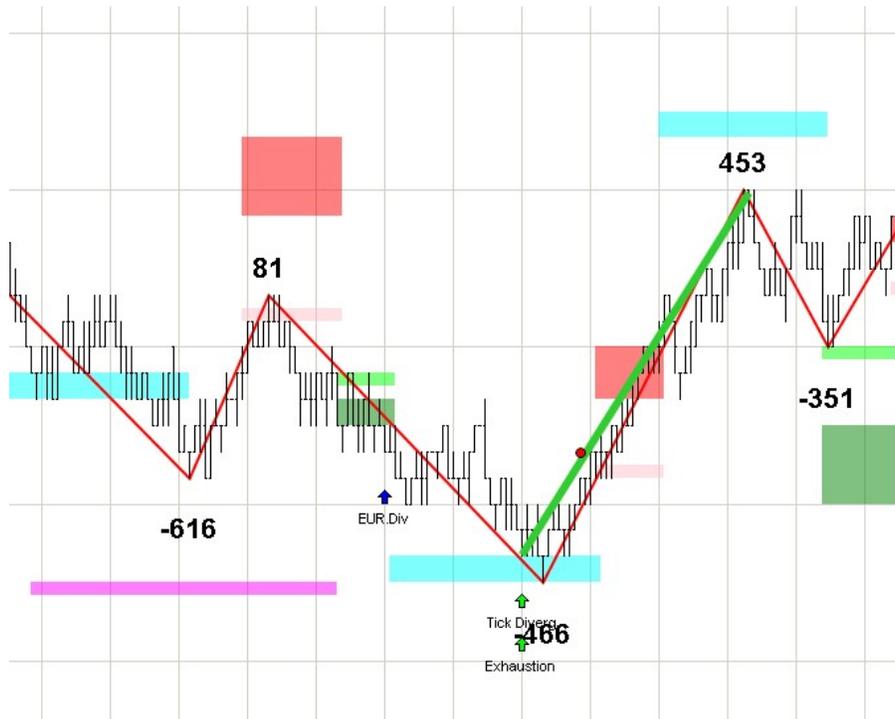


ZoneTraderPro will deliver two different strategies to its customers. One strategy will contain the ZtpTrendTrade and the ZtpCountertrend trades.

# Exhaustion Pattern Trade



The exhaustion pattern normally occurs after a large move and the market has found a reversal point. In the above example, after a 6.5 point move up, there is significant volume after a small 6 tick retracement. These are the late buying weak hands that couldn't pull the trigger as the market was going up. The market reverses at a minor support and trades to the blue counter trend zone, setting up a perfect 3 point short trade. The strategy can be set to trade only exhaustion, only tick divergence, or filter for both conditions.



## Set up and Parameters

The ZoneTraderPro AutoTrader strategy is installed on your computer through an executable file in three simple steps.

1. Shut down NinjaTrader
2. Run the ZoneTraderPro Strategy Executable
3. Restart NinjaTrader

Once the strategy has been loaded onto the machine right-click a chart and choose strategies and load ZoneTraderPro Strategies. This will bring up the set of parameters for the strategy.

### Countertrend Trade Entry Section

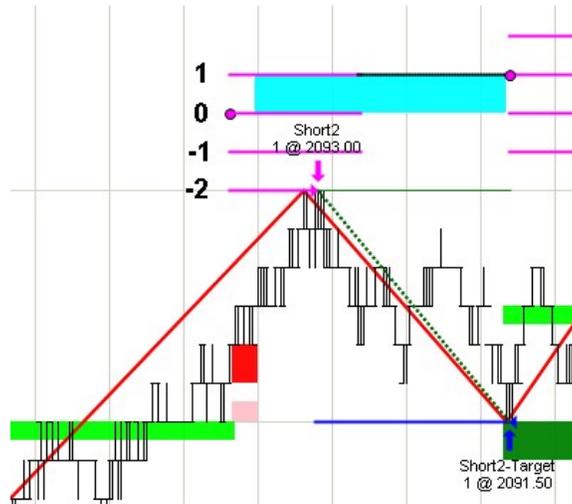
The first section of the parameters is where you tell the strategy where you want to enter a trade and how many contracts you want to use. You have the ability to enter trade from four different and unique prices. These prices are based on where the zones have drawn. In a short trade breakeven is considered the bottom of the zone. In a long trade breakeven is considered the top of the zone. With primary entry offset set at zero that means we are entering one contract at the bottom of the blue countertrend zone. With secondary entry offset set at -1 and third entry offset set it -2, that means we are entering one contract one tick before the blue zone, and one contract to ticks before the blue zone. With the fourth entry offset set at one that means we are entering one contract at one tick into the blue zone.

Entry	
02: Primary Entry Offset (Ticks)	0
03: Secondary Entry Offset (Ticks)	-1
04: Third Entry Offset (Ticks)	-2
05: Fourth Entry Offset (Ticks)	2
06: Primary Entry Quantity	0
07: Secondary Entry Quantity	1
08: Third Entry Quantity	1
09: Fourth Entry Quantity	0
10: Trading Directions	Both



**It is extremely important that Primary Entry Offset be a 0 (zero). This is because other parameters use it to set stops and targets. Changing the number will end up placing stops and targets at unexpected locations.**

Those entries would look like this on a chart. The pink lines on the chart denote where your orders are going to be placed, and when the order had gone into effect. You will notice that as soon as we exited the first short trade for profit, the strategy immediately placed your next four orders. The dark blue line on the chart represents the target which was placed and not adjusted at the time of the entry. You are entry orders are always being placed as early as possible and they are being adjusted to the correct values based on price movement.



Breakeven (the 0 value and Primary Entry Offset) is always the bottom of the zone on a short trade and the top of the zone on a long trade.

You are able to set the trading direction to take only long trades, short trades, or trade in both directions.

## Trade Management Section

The trade management section of the parameters allows you to set the initial profit target, the initial stop loss, and the use of the NinjaTrader simulated stop.

Trade Management	
11: Primary Target (Ticks)	9
12: Primary Stoploss (Ticks)	5
13: Simulated Stop Orders	False
14: Simulated Stop Orders Size	150
15: Long Maximum Daily Loss (U)	500
16: Short Maximum Daily Loss (L)	500

The primary target and primary stop loss will set your targets and stops provided you have not used any of the other parameters we will talk about shortly to readjust them.

## Long and Short Maximum Daily Loss

With the maximum daily loss parameter you are able to set a specified dollar amount where the auto trader will stop taking trades in a particular direction if that value is exceeded. You are able to have multiple strategies running on different charts, and each strategy can have its unique stop loss number. If one strategy stops out, but the other does not, the strategy that did not hit its' stop will continue to trade. Place a 0 (zero) in the parameter if you do not want to use it. **The value does not include commissions.**

## Simulated Stop

It is critical that before using the NinjaTrader simulated stop you understand its risk and consequences. For more information on the NinjaTrader simulated stop please refer to [NinjaTrader support](#).

<http://www.ninjatrader.com/SupportBridge.php>

You're not going to see the simulated stop in the Superdom but you will see a hard stop that is five ticks from the simulated stop. This is because the simulated stop is held locally on your machine and the hard stop you see in the Superdom is held at the exchange. If you should lose connectivity to the Internet or your computer should crash the stop that is five ticks away ask as a failsafe. Both the sim stop and hard stop paint a grey line on the charts.

HOLD	BUY	PRICE	SELL		
		2092.25	LMT	1	×
		2092.00	LMT	1	×
		2091.75			
		2091.50			
		2091.25			
		2091.00			
		2090.75	1635		
		2090.50	434		
		2090.25	LMT 388	4s	×
		2090.00	386		
		(2) 2089.75	316		
		<b>2089.50</b>	111		
	183	<b>2089.25</b>			
	365	2089.00			
	436	2088.75			
	627	2088.50			
	699	2088.25			
	2310	2088.00			
		2087.75			
		2087.50			
		2087.25			
		2087.00			
		2086.75			
		2086.50			
		2086.25			
		2086.00	SLM	4s	×
		2085.75			
		2085.50			
	ASK	+ TARGET	ASK		
	BID	- TARGET	BID		
	MARKET	<b>\$125.00</b>	MARKET		
<	REV	4	CLOSE	C	×

On the chart you will see a dark gray line which represents where your stop currently is. In the example below notice that the stop was adjusted once trade reached four ticks favorable.



**If you become aware of a lost connection or a computer crash you should immediately contact your broker and exit out of all orders and then not allow NinjaTrader to restart connected to the Internet so that pending orders are not executed.**

## Illiquidity Trigger

The illiquidity trigger is a market based method to shut down the strategy in case of illiquidity and volatility. Once enabled the illiquidity trigger has six parameters which you can adjust. The most important value is the trigger volume itself. The Trigger Volume is based on the cumulative value of the first five levels of the bid and ask.

Illiquidity trigger	
24: Enabled	<b>True</b>
25: Trigger Volume	<b>2000</b>
26: Exit Entire Position	<b>False</b>
27: Timeout (minutes)	<b>5</b>
28: Enable Alert	<b>False</b>
29: Alert Sound File Name	<b>alert4.wav</b>
30: Alert email address	
Indicators	

In the following image there are 10,497 contracts on the ask, and 11,397 contracts on the bid which represent the total of the nearest five price levels. If either of those numbers were to drop to 2000 or less all of the pending strategy orders would be canceled, except the target and the stop.

HOLD	BUY	PRICE	SELL
		128'050	
		128'045	
		128'040	
		128'035	
		128'030	
		128'025	
		128'020	
		128'015	
		128'010	
		128'005	10497
		128'000	2590
		127'315	2506
		127'310	2763
		127'305	2375
		(4) 127'300	263
1162		127'295	
2211		127'290	
2777		127'285	
2556		127'280	
2667		127'275	
11397		127'270	
		127'265	
		127'260	
		127'255	
		127'250	
		127'245	
		127'240	
		127'235	
	ASK	+ TARGET	ASK
	BID	- TARGET	BID
	MARKET	312.50	MARKET



The next setting, Exit Entire Position, **will exit your entire position in a market order** if the value is set to true.

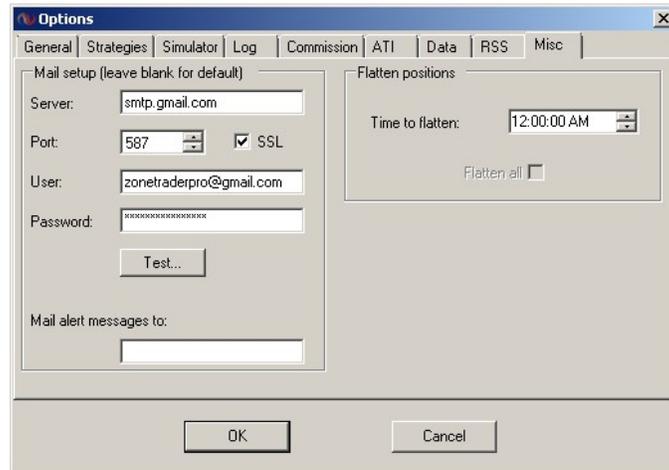
The next setting, Timeout (minutes), is how long the strategy will stay in the paused mode before it is reactivated. If the Illiquidity Trigger is triggered again during the five-minute wait period the five minutes will start all over. The strategy will not begin to place orders until there has been sufficient liquidity for the time that you set.

The next two parameter settings, Enable Alert and Alert Sound File Name, will play a wave file alerting you that the Illiquidity Trigger had been activated.

Lastly, the Email Alert Address can be used to notify you via email or text message to your cell phone in case of an alert. If you would like to set up the alert to send a text message to your phone please refer to the following NinjaTrader forum post to set up. NinjaTrader advised the easiest account to use would be a Gmail account.

<http://www.ninjatrader.com/support/forum/showthread.php?t=45339>

Lastly you must configure the Send Mail protocol in the Control Center. This is found under the Tools – Options – Miscellaneous tab in the Control Center. Here is my Gmail setup. I went with Gmail.



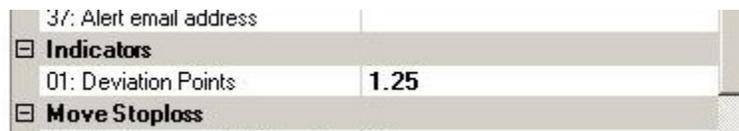
## Indicators

There is one parameter setting under indicators. This value tells the strategy what a zigzag is and matches the value found in the Zigzag\_ZTP indicator.

The value for the ZN is .075

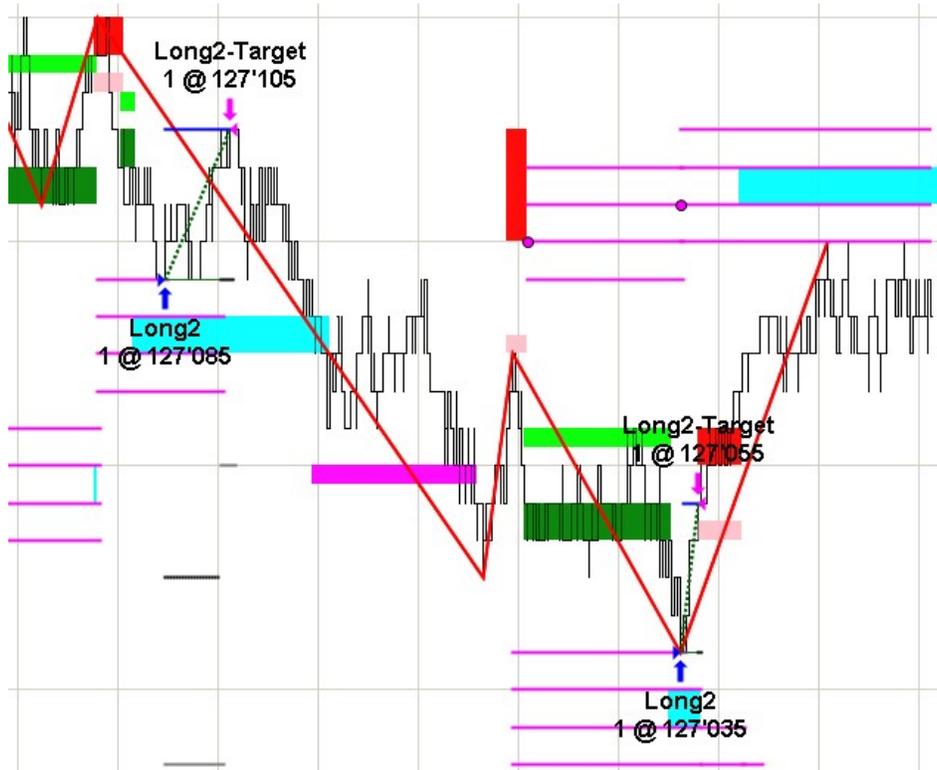
The value for the ES is 1.25

It is not a good idea to put the ZigZagZTP *indicator* on the chart. The strategy when active will place that indicator on the chart. Do not try to remove ZigZagZTP if the strategy is active. By having two instances of ZigZagZTP you are making the computer work harder. Also if you use the wrong parameter on the strategy, the zones will not draw properly, so this is how you know you used the correct parameter setting. **Don't put anything on the chart you don't need and make the computer work harder than it has to.**





When this feature is used, it will also cancel unfilled orders. In the example below you can see two trades where this happened. The 1<sup>st</sup> trade is the most important. We were looking to buy 4 contracts, however only one contract from the -1 level was filled. When we traded at 4 ticks favorable the stop was moved, and then the target gets filled, the other three orders are cancelled out, so we take a profit on one contract and avoid a full loss on 4 contracts.



**Key point when setting the parameters is the Breakeven Trigger is relevant to your entry, not how many ticks favorable the trade goes. The breakeven offset is relevant to the blue countertrend zone.**



Move Stoploss	
17: Breakeven on 1st Target Level	<b>False</b>
18: Breakeven trigger level (Ticks)	<b>6</b>
19: Breakeven offset (Ticks, from entry)	<b>2</b>
20: Use Breakeven	<b>True</b>

Here we see a trade that had 6 ticks between the 0 entry point and touching the top of the green intermediate support zone. The 1<sup>st</sup> entry had 4 favorable ticks and the 2<sup>nd</sup> entry had 5 favorable ticks, so the breakeven trigger setting of 6 was not a true condition.

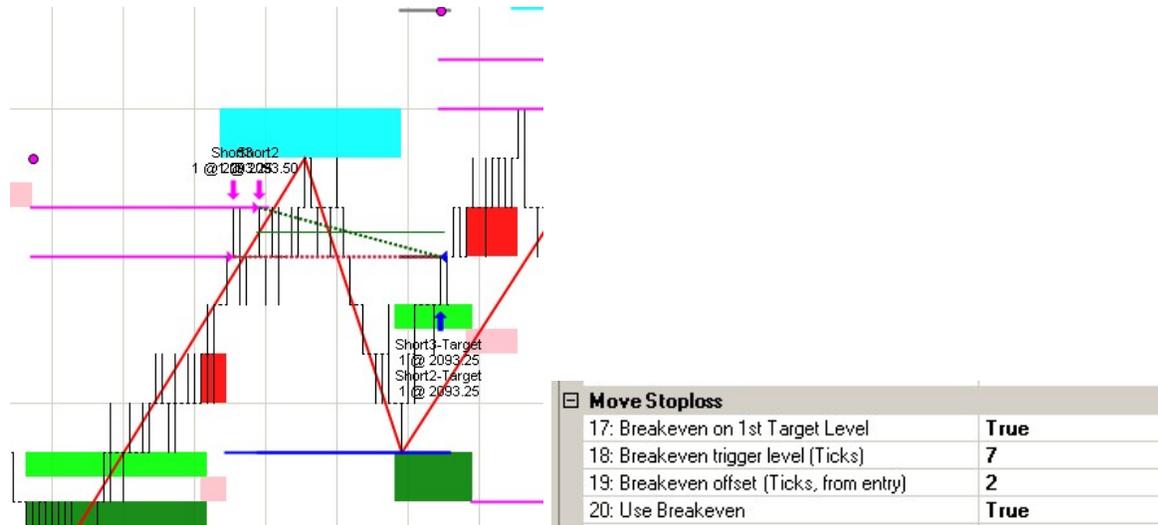


Move Stoploss	
17: Breakeven on 1st Target Level	<b>False</b>
18: Breakeven trigger level (Ticks)	<b>5</b>
19: Breakeven offset (Ticks, from entry)	<b>2</b>
20: Use Breakeven	<b>True</b>

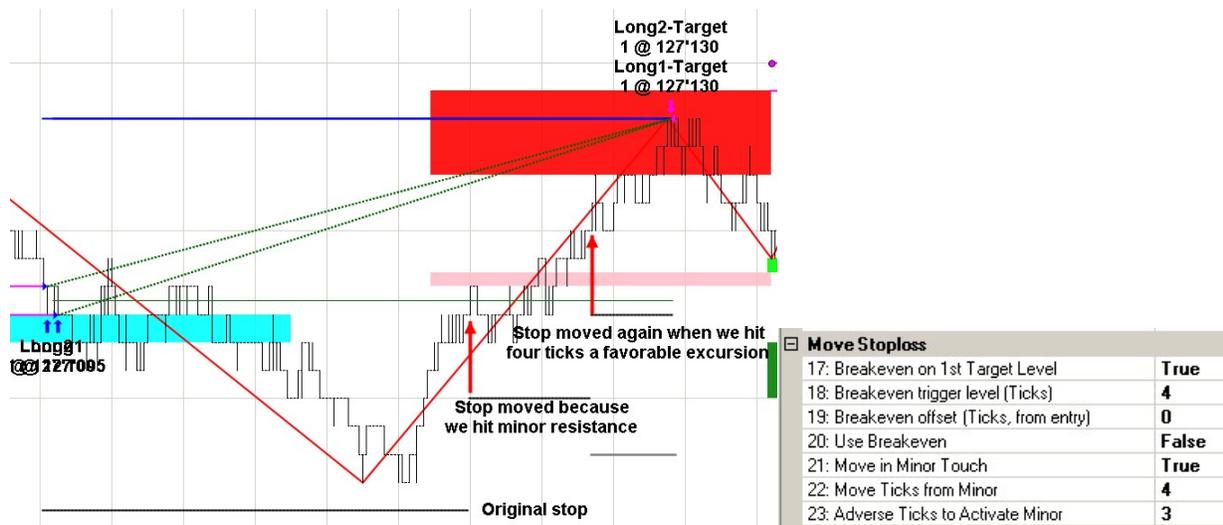
With setting now at 5, the stop moved and you exited the trade two ticks from the blue zone. The breakeven offset uses the blue zone to calculate where to move the stop.

If you wanted to set the function to move when the intermediate zone is touched, the first parameter Breakeven on 1<sup>st</sup> Target Level and Use Breakeven needs to be set to true. If you wanted to use this function so that it always uses the intermediate zone, the Breakeven Trigger Level needs to be set higher. The intermediate zone could paint at 8-9 ticks, and unless the number is higher, it will adjust to the lower of the two.

In this example the Breakeven on 1<sup>st</sup> Target Level is True, The Intermediate Zone painted at 6 ticks, so a Trigger Level = 5 would have been necessary to trigger based on ticks. Since it is at 7, the Breakeven on First Target Level moved the stop to the -2 level when the intermediate zone was hit.



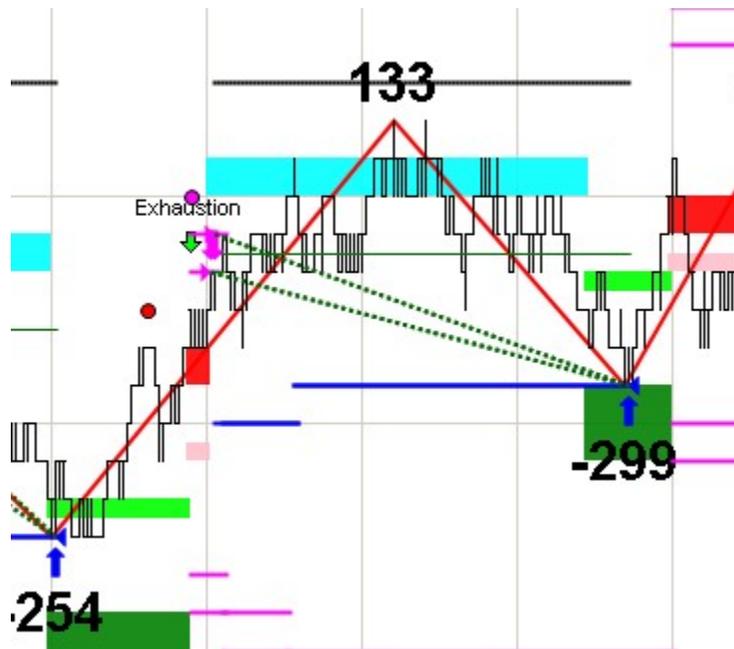
The second part of the feature will move the stop if the minor zone is touched. This is meant to lower your risk in trades that marginally go in your favor, but then reverse. When Move In Minor Touch is set to true, the stop will move to the value set in Move Ticks From Minor. The parameter Adverse Ticks to Activate Minor is the value of adverse excursion necessary to activate this feature. In the example below, the stop was moved to four ticks from the minor zone once minor resistance was touched. It moved again to Breakeven (Breakeven offset = 0) when the trade went four ticks of favorable excursion.



The Move Stop on Red Dot will move the stop to the number of ticks designated in the Move Stop Offset in Red Dot parameter. In the example below we are using the following settings. Our original stop is 5, but if we have a Red Dot appear, the stop will move to 3. This setting is active whether or not you are in a trade. That means if the red dot occurs before the trade, the stop will be overridden to the value that has been set.

28: Move Ticks from Minor	3
29: Adverse Ticks to Activate Minor	3
30: Move Stop on Red Dot	<b>True</b>
31: Move Stop Offset on Red Dot (Ticks)	3
<b>Move Target</b>	
32: Move Profit Target	<b>False</b>
31: Non-Divergent tick target (TICKS)	12
<b>Trade Management</b>	
17: Primary Target (Ticks)	10
18: Primary Stoploss (Ticks)	5
19: Simulated Stop Orders	<b>True</b>
20: Simulated Stop Orders Size	150
21: Long Maximum Daily Loss (USD)	0
22: Short Maximum Daily Loss (USD)	0
<b>ZioZao BidAskRatio</b>	

In this trade the red dot appears before we have entered a trade so our initial stop loss (where the dark grey line is) is only 3 ticks from the primary entry price.



Here the red dot occurs after we have entered a trade. The stop is moved from 5 to 3 (dark grey line on chart) and it saves taking a full loss on the trade.



## Move Target

There are 4 Move Target options. The first two Move Target functions will move a profit target if a trade has had adverse excursion. There are two functions available, Move Target to Breakeven and Move Target to Minor. The next Move Target function will offset the target from the opposite blue zone. This function allows an exit from a trade at the area you would be reversing the trade direction at. The last Move Target function will Use the Intermediate Zone as a target and override the Primary Profit Target set in Trade Management Section.

<input type="checkbox"/> <b>Move Target</b>	
19: Move Profit Target	<b>True</b>
20: Adverse Ticks From Primary	<b>4</b>
21: Target offset (Ticks, from entry)	<b>0</b>
22: Move Profit Target to Minor Support	<b>True</b>
23: Adverse Ticks From Primary	<b>6</b>
24: Target offset from opposite blue	<b>1</b>
25: Use Intermediate Zone	<b>True</b>
<input type="checkbox"/> <b>Parameters</b>	

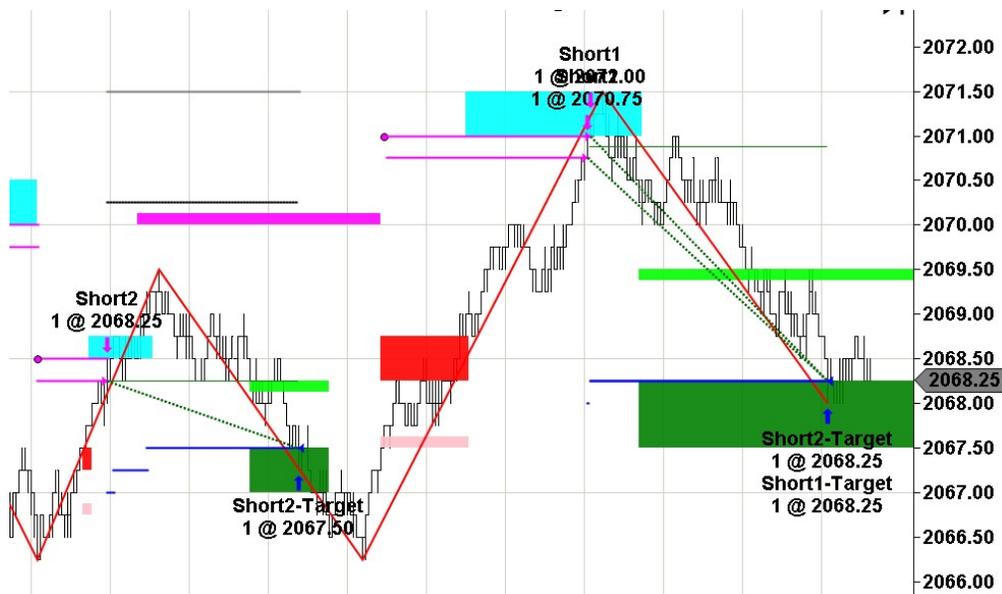
The Move Profit Target when set to true will look to Adverse Ticks from Primary and will set the new profit target to breakeven when there has been adverse excursion which is set in Parameter Line 20. The next parameter Target Offset will then offset the stop based on this entry. The above entries would first move the profit to breakeven if there were four ticks of adverse excursion, and then move the profit target to the minor support or resistance zone if there were six ticks of adverse excursion. Because you told the strategy to use the intermediate zone when you place the order, this setting does not affect the use of the other two.



The next setting, Move Profit Target to Minor, will move the profit target to minor support/resistance when there is adverse excursion. This logic is useful in a strong trend, where it is likely price will only return to minor. In the chart below, the adverse excusing was set to 4, and the trade was exited profitably by exiting at minor.



The last function is Use Intermediate Zone which will place your target at the intermediate zone. This will allow you to automatically adjust the target to the intermediate zone, which is a logical target of a counter trend trade. The 1<sup>st</sup> trade only had 4 ticks of profit but the next trade had an 11 tick profit.



This logic is also useful on the ZN where the intermediate zone will sometimes paint at 3-4 ticks.



With Use Intermediate Zone set to true, and you use the adjustment buttons at the top of the chart, the logic will not continue to place the target at the next intermediate zone (if the 1<sup>st</sup> time it was not filled). You will need to click Target Intermediate to manually reset the target to an intermediate zone. **By using the buttons, that takes control from Use Intermediate Zone.**



## Session

The session tab defines the beginning and end of the trading session and allows you to pause the strategy for a known news event. The strategy will begin to place orders at the Session #1 Begin Time and will stop placing orders at the Session #1 End Time. Close all at EOD set to true will close the position with a market order at the Session #1 End Time. Close all at News Time set to true will close all positions with a market order at the beginning of a news event. Pause #1 Begin Time will cancel all pending orders to initiate positions and Pause #1 End Time will begin to place orders after the pause. Pause #2 and #3 Begin Time and Pause #2 and #3 End Time provide the same functionality for a second known news event. Backtest is used to back test the strategy; however **the back test is not accurate** because of the computations that occur in real time. The back test function does not account for these. Note: In order to prevent an inadvertent order at the start time, until a zigzag is completed, no orders will be initiated at exactly the start time. You can start the strategy earlier than you want it to start trading, and put it in pause mode, and only engage it when you want to trade.

Session	
44: Session #1 Begin Time	09:45:00
45: Session #1 End Time	16:00:00
46: Close all at EOD	True
47: Close all at News Time	True
48: Pause #1 Begin Time	00:00:00
49: Pause #1 End Time	00:00:00
50: Pause #2 Begin Time	00:00:00
51: Pause #2 End Time	00:00:00
52: Pause #3 Begin Time	00:00:00
53: Pause #3 End Time	00:00:00
54: Backtest	False

Use of the news timeout feature can also be used to only trade at certain times of the day. Here we see a strategy that does extremely good at the beginning and end of the day.



So if we want to only trade during these times the parameters would look like the following. What is important here is that the Close All at News Time is set to False so that any trades that occur in the 1000 hour are allowed to exit normally.

Session	
42: Session #1 Begin Time	09:45:00
43: Session #1 End Time	15:59:00
44: Close all at EOD	True
45: Close all at News Time	False
46: Pause #1 Begin Time	10:30:00
47: Pause #1 End Time	15:00:00
48: Pause #2 Begin Time	00:00:00
49: Pause #2 End Time	00:00:00
50: Backtest	False

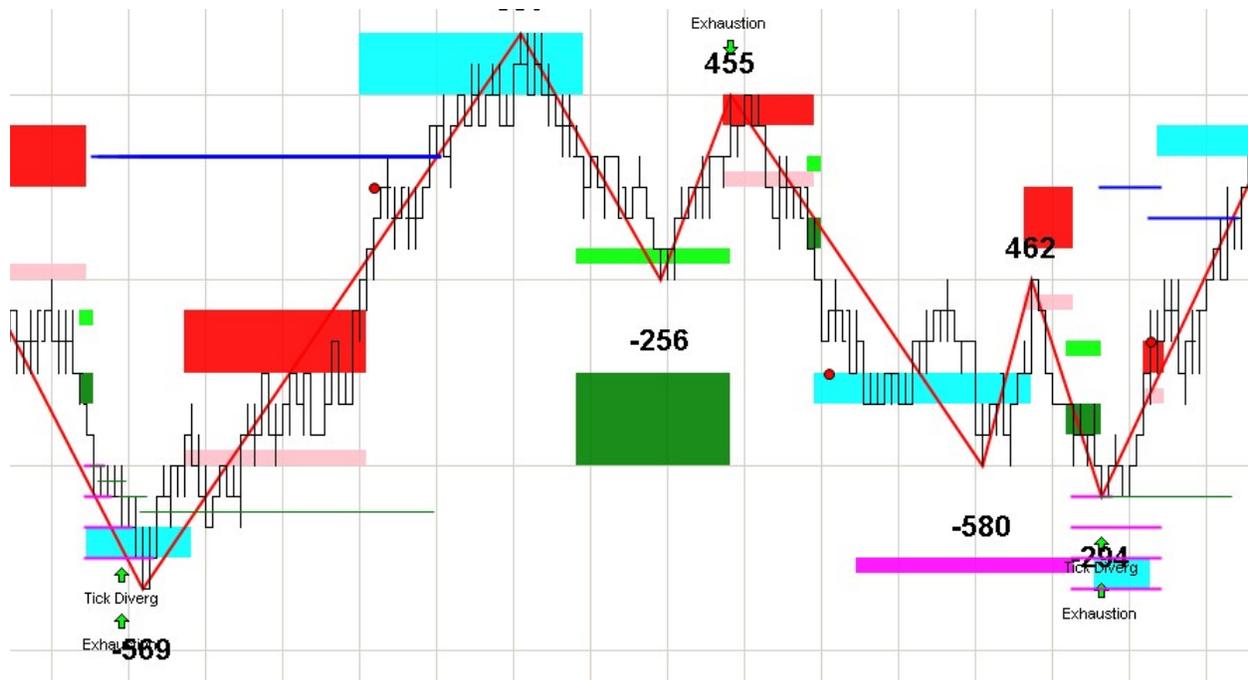
# Tick Divergence



The tick divergence section is only for use on an ES chart. Having any of the settings set to true on a ZN or other chart WILL CAUSE unexpected behaviors because of \$TICK. All of these settings should be False on a ZN chart.

69: Backtest	False
<input checked="" type="checkbox"/> Tick Divergence	
47: Use Tick Divergence	True
48: Auto Exit on Red Dot	False
49: Auto Exit with limit order	False
50: Override Original Target To Intermediate	False
51: Non-Divergent tick target (Ticks)	12
<input checked="" type="checkbox"/> Trade Management	

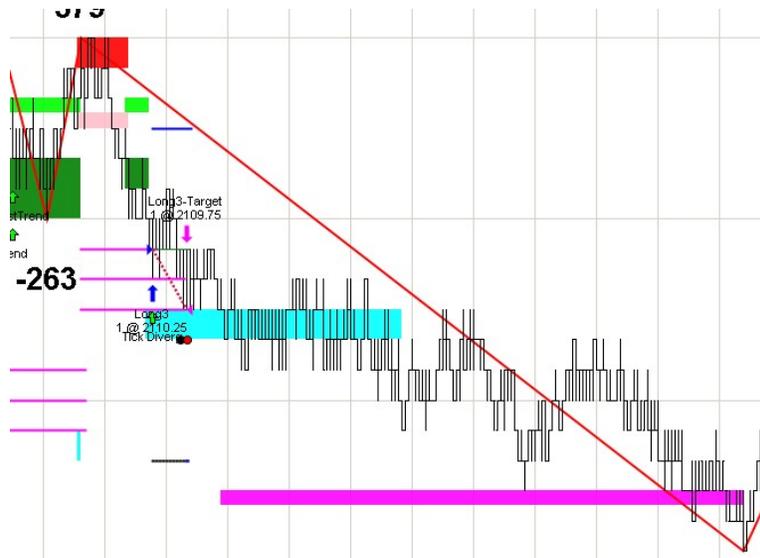
Tick Divergence when set to true turns on the logic to begin to look for all Tick Divergence trades on an ES chart at the countertrend blue zone. It must be set to true to use the settings in the section. In these examples, the target is being controlled from the Move Target section, Target Offset from Opposite Blue setting. In the example the setting is a 2, and the target is automatically set at 2 ticks short of the opposite counter trend blue zone. The 2 trades in this example were all non-divergent and were also exhaustion patterns.



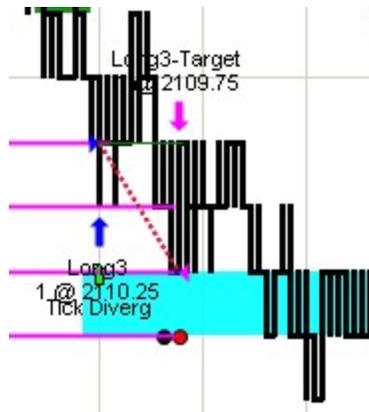
Tick Divergence	
47: Use Tick Divergence	True
48: Auto Exit on Red Dot	True
49: Auto Exit with limit order	False
50: Override Original Target To Intermediat	False
51: Non-Divergent tick target (Ticks)	12

Auto Exit on Red Dot will exit a position if the \$TICK filter red dot is triggered. The \$TICK filter red dot occurs when the \$TICK has been exceeded by at least 100 on the current move. A black dot on the chart signifies the \$TICK is no longer divergent, but less than 100. If Auto Exit on Red Dot is True, then you have the option to exit the trade at a limit or market order. Auto Exit with Limit Order by default is set to false, which means the strategy will generate a market order to take you out of the trade. With Auto Exit with Limit Order set to True, a limit order will be set, however it will not chase the price.

In the picture below one contract was entered at the -2 level, and the \$TICK became non-divergent before the second order had filled at the -1 level. On the following bar \$TICK exceeded 100 and a market order was filled for a two tick loss on a single contract, which prevented a full loss.



In this situation a market order would also have been filled at a better price. If you use market order you need to closely monitor the position to prevent a full loss if the order doesn't fill.

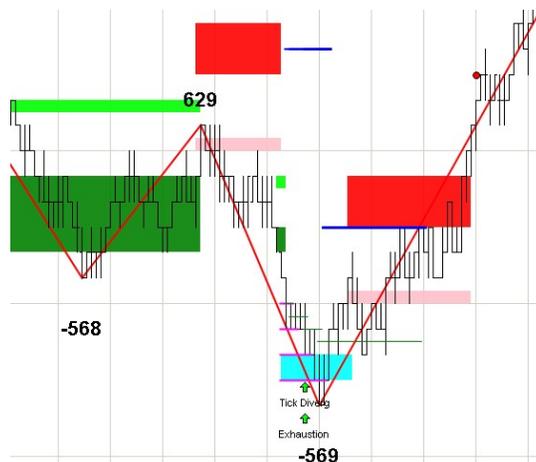


If contracts have been filled, and \$TICK becomes non-divergent, you have several options to override the profit target or exit the trade.

Tick Divergence	
47: Use Tick Divergence	<b>True</b>
48: Auto Exit on Red Dot	<b>False</b>
49: Auto Exit with limit order	<b>False</b>
50: Override Original Target To Intermediate	<b>True</b>
51: Non-Divergent tick target (Ticks)	<b>12</b>
Trade Management	

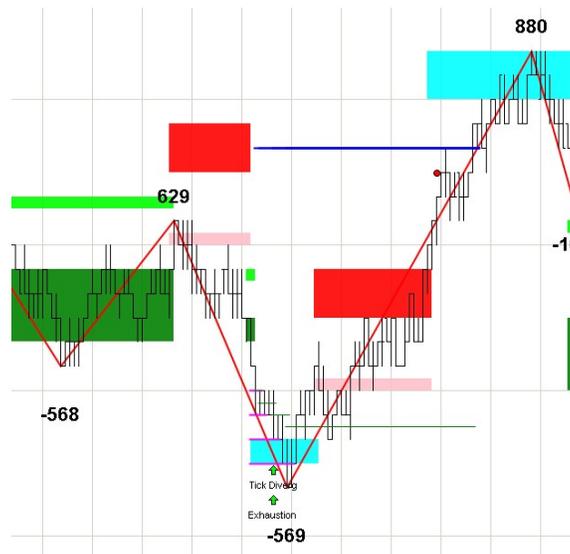
With Override Original Target to Intermediate set to true, and when the tick becomes non-divergent between 1 and 100 the target is moved to the intermediate zone, or the value found in parameter Non-Divergent Tick Target. When the \$TICK has become non-divergent and it is less than 100 this is now considered a standard countertrend trade and the expectation would be for a retracement to the intermediate zone. A black dot will appear on the chart to signify the \$TICK is now non-divergent but less than 100.

In this example the contracts are filled, then the \$TICK is exceeded by 1 tick. When this happens it moves the target from the original target to the intermediate zone. The target is signified by the blue line on the chart.



Instead of using the intermediate target, you can specify a certain number of ticks. So using the same trade example, the target is now 12 ticks when the \$Tick becomes non-divergent.

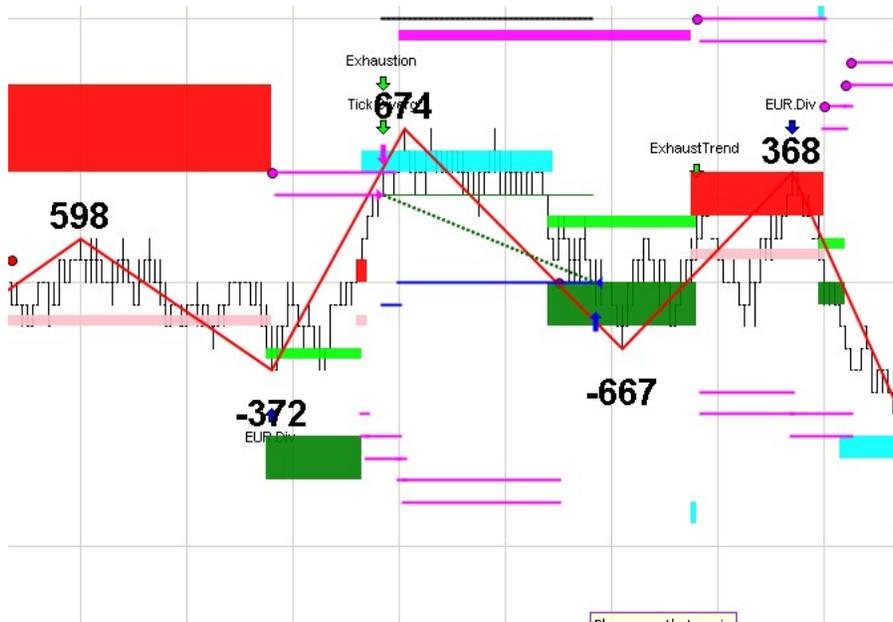
<input checked="" type="checkbox"/> <b>Tick Divergence</b>	
47: Use Tick Divergence	<b>True</b>
48: Auto Exit on Red Dot	<b>False</b>
49: Auto Exit with limit order	<b>False</b>
50: Override Original Target To Intermediate	<b>False</b>
51: Non-Divergent tick target (Ticks)	<b>12</b>
<input checked="" type="checkbox"/> <b>Trade Management</b>	



On the chart you will see a black dot paint on the bar where the \$Tick has gone non-divergent.



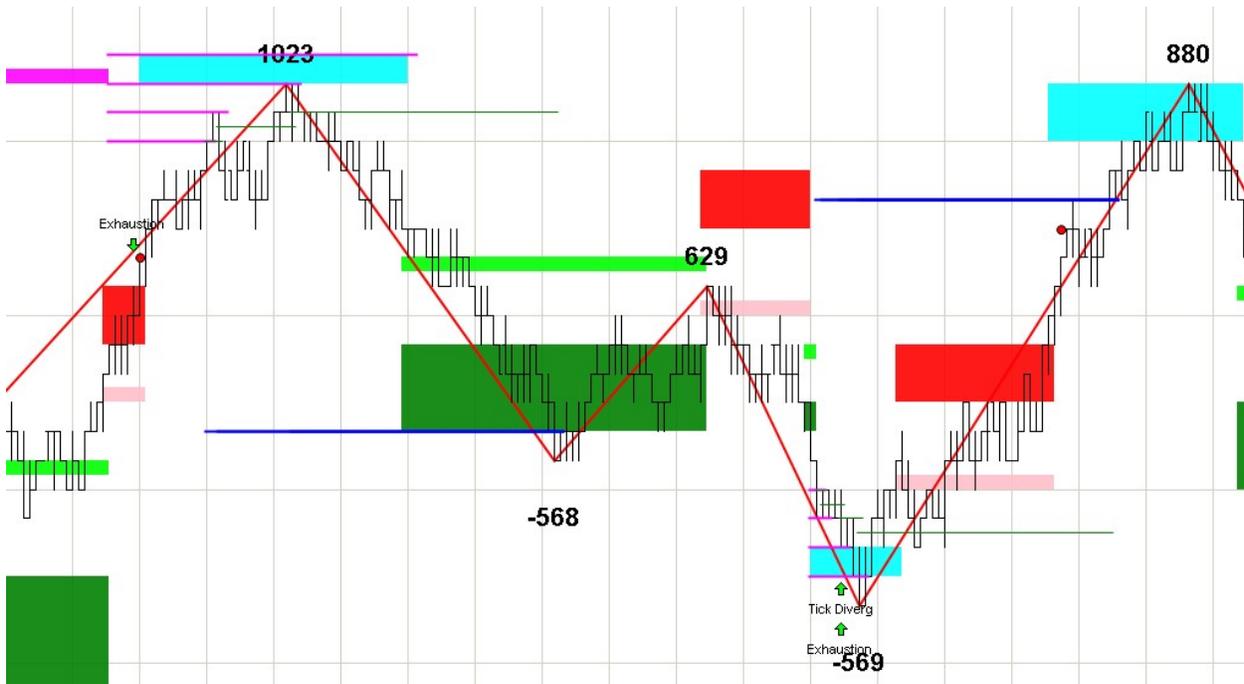
A black dot **will not appear** if \$TICK becomes non-divergent **after** the price touched the blue zone as in the example below. However the profit target which had been set to six was overridden and placed at five.



# Exhaustion Pattern

The software will also filter for the exhaustion pattern trade. When this has been set to true, you will be filtering for only exhaustion trades. However, with Tick Divergence set to True, you can further filter for Exhaustion trades that are also Tick Divergent.

16: Trading Directions	Both
<input checked="" type="checkbox"/> Exhaustion	
46: Trade only Exhaustion	True
<input checked="" type="checkbox"/> General	



Here we have two exhaustion trades, first calling the high, then calling the low with a Tick Divergence.

# Red Bar

Red Bar	
46: Red Bar	False
47: Volume Size	2400
48: Width Of Bar	6
49: Auto Exit with Market Order	False
50: Cancel Unfilled Orders	False

The Red Bar settings is another way to look for illiquidity that can lead to losing trades. The setup involves the size of the bar you are creating and the width of the bar needed to trigger the condition. If the condition is true, you can choose to exit any existing position with a market order and to cancel any unfilled orders.

If you are a ZoneTraderPro customer and would like the red bar indicator, shown in the next chart, just send a request.

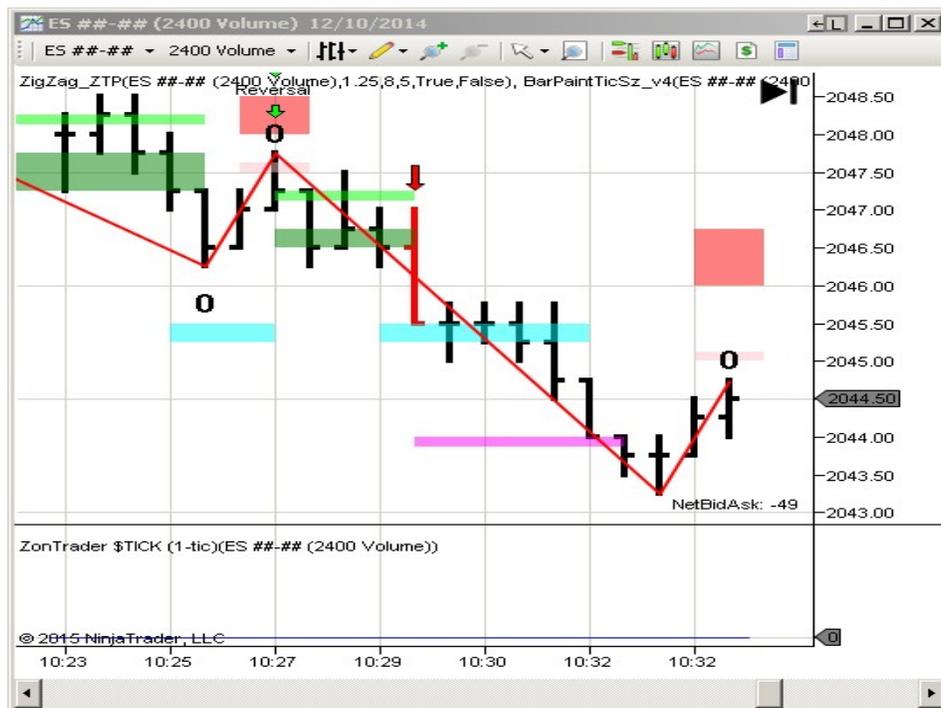
The volume size and width of the bar is how define the setup. What you are doing is setting a chart based on volume, in this case 2400V. The chart is hidden and you do not see it. If you did it would something like this. The red bar (where the red arrow is at) is a bar that is 6 ticks wide.





Here is the same chart and losing trade being avoided due to the red bar condition.

You can also use the setting to exit a position **on a market order** if the red bar occurs after you have entered a trade to avoid a potential full loss.





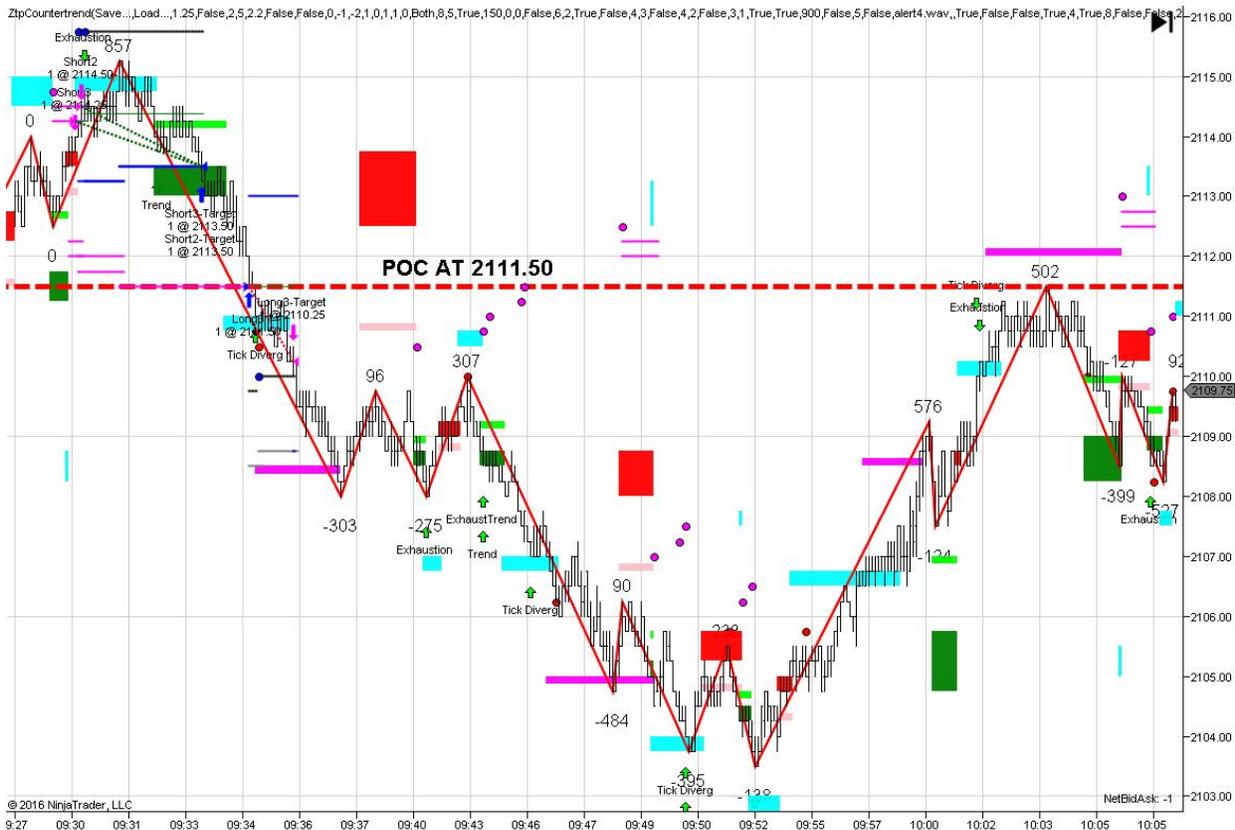
# Point of Control

The Point of Control setting stops all trading below the number that is input by the user at the beginning of the day based on the initial point of control and value area.

The purpose of the Point of Control is to stop taking trades if there is a market sell off after the open. For example, ZoneTraderPro has developed the concept of a green, yellow and red trading day. So what happens if the market opens in a yellow or green day, and a sudden sell off takes us into red territory? Using the Point of Control will stop the trades, both long and short, at the level you set.

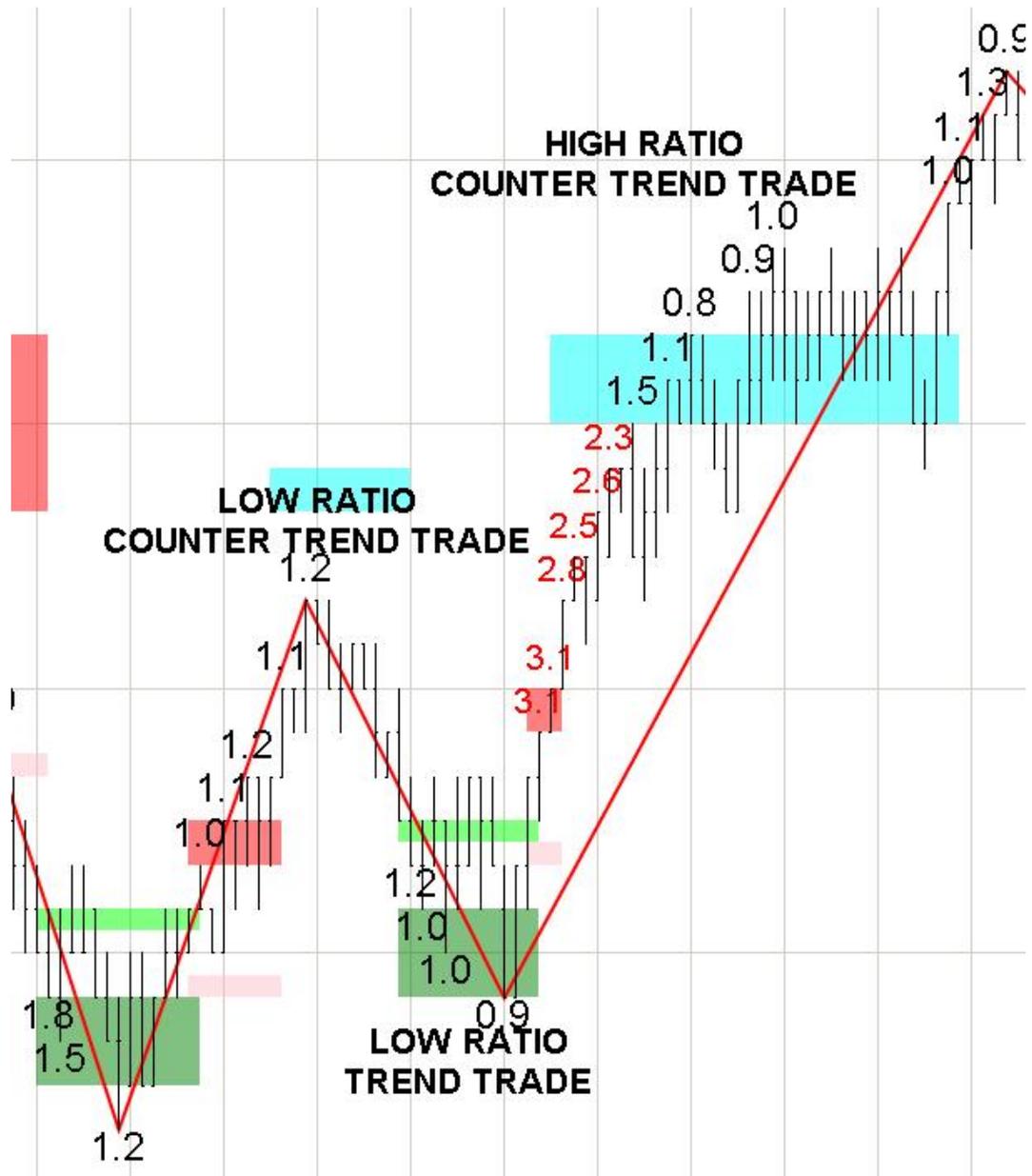
There are only two settings for the POC Control. In this example the price of 2111.50 is the Point of Control line. This will take trades at 2111.50 but not below that amount. In the chart below the long trade was filled at 2111.50 but not at 2111.25 even though we wanted to buy 1 contract at the -1 entry position. All trades, long and short, were not entered below 2111.50.

Point Of Control	
57: Enabled	True
58: POC Value	2111.5
Red Bar	



## Zig Zag Bid Ask Ratio

The ZigZagBidAskRatio is an indicator and it is built into the strategy. The purpose of the indicator is to show the ratio of market orders as price approaches a trading zone. In the chart below we see three examples of how the ratios work. First we see a counter trend trade with a low ratio. A low ratio indicates there is supply coming to meet the demand into the short trade. Next we see a long trend trade with similar conditions. Finally, after the trend trade we have a high ratio going into a losing counter trend trade. The high ratio indicates a lack of sellers and high demand at the trading zone.



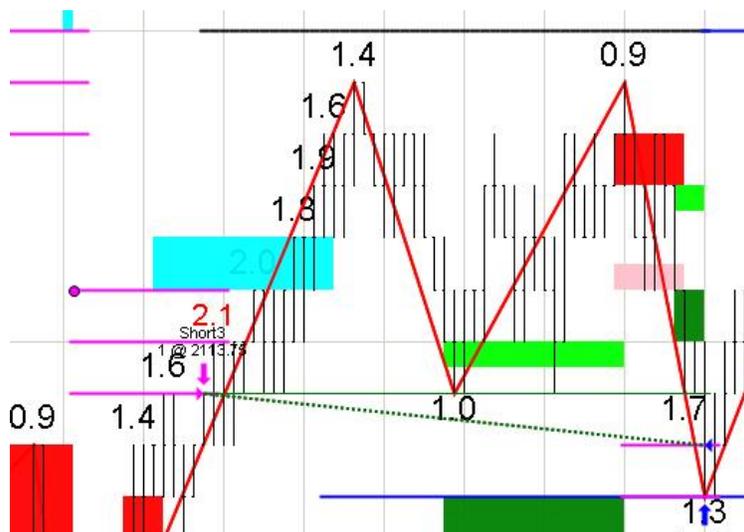
ZigZag BidAskRatio	
02: Use ZigZag BidAskRatio	True
03: Ticks From Primary	2
04: Ratio Levels	5
05: High Ratio	1.8
06: Exit	False
07: Exit with Market Order (false = use Limit)	False
General	

With ZigZag BidAsk Ratio set to True, the strategy will look to cancel orders when the value that is set in the High Ratio is exceeded. In this instance the value is set to 1.8. The input value Ticks From Primary is where the logic will start to work. The parameter Ratio Levels is the number of levels in the SuperDom the indicator will look at.

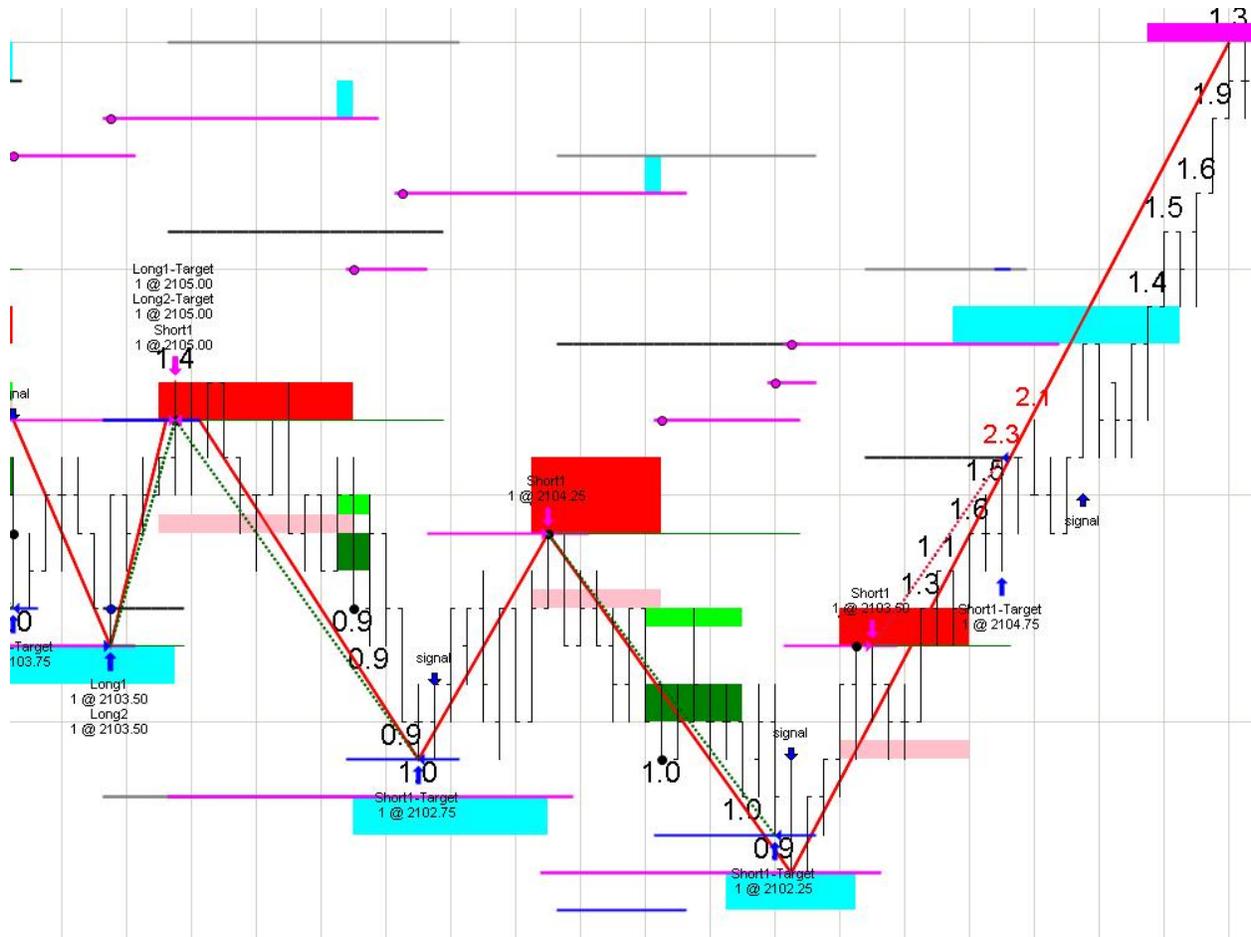
Entry	
08: Primary Entry Offset (Ticks)	0
09: Secondary Entry Offset (Ticks)	-1
10: Third Entry Offset (Ticks)	-2
11: Fourth Entry Offset (Ticks)	1
12: Primary Entry Quantity	1
13: Secondary Entry Quantity	1
14: Third Entry Quantity	1
15: Fourth Entry Quantity	0
16: Trading Directions	Both
General	

With the entry settings we have above, we are trading at -2, -1, and 0 entry levels. This is why it is so important that Primary Entry Offset be set to 0. **If it was something other than 0, the ratios would not cancel at the proper levels.** With the Ticks From Primary set at 2, that means we will look to cancel an order when the market is trading at our -2 entry.

**By setting the Ticks From Primary value at 2, and entering at -2, you may not get the order cancelled in time if the ratio is exceeded. In the following example, the -2 contract was filled and only the -1 and 0 contracts were cancelled.**

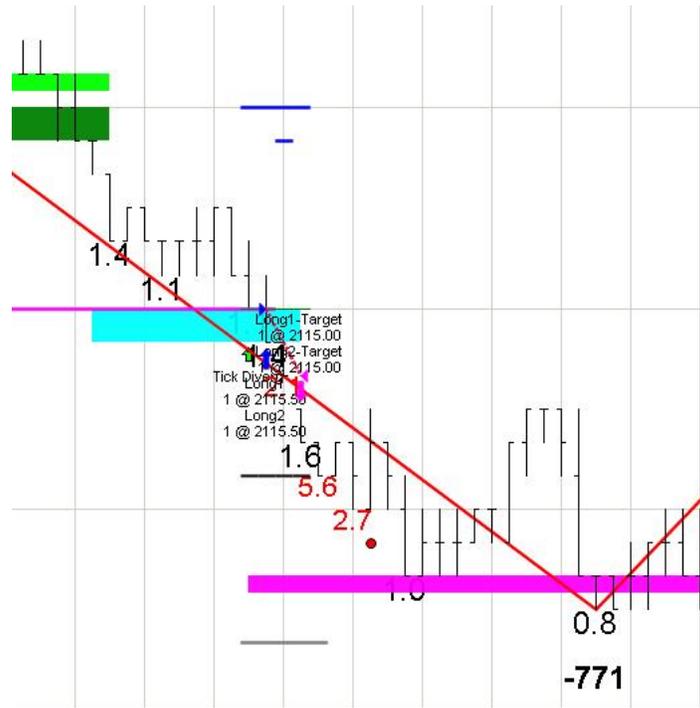


In this example we see successful long counter trend and short trend trades that had low ratios until the last short trend trade that failed. We were able to cancel the short counter trend trade and avoid a loss there.

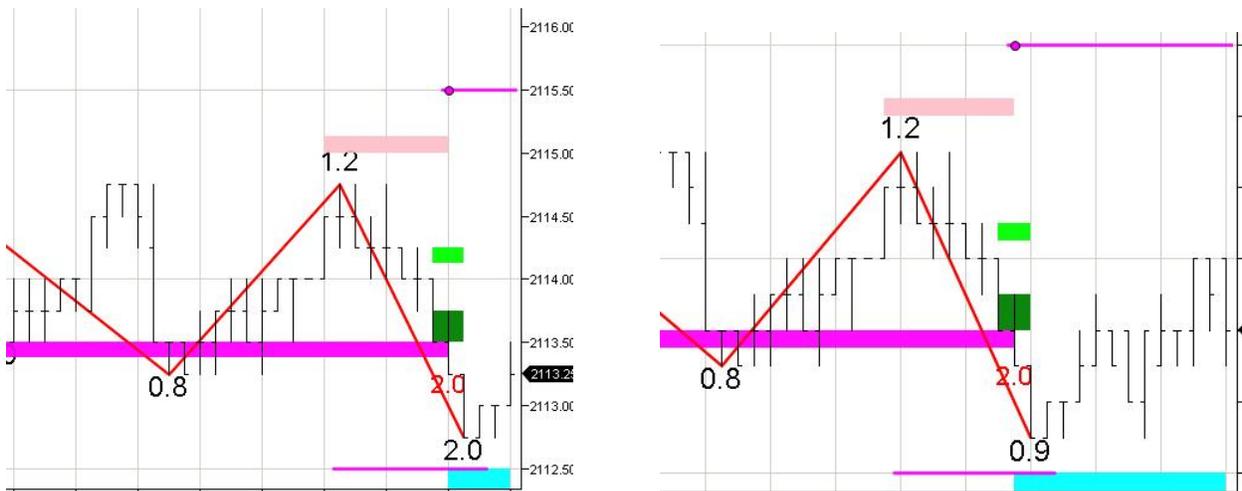


You can also use the strategy to exit a trade if the ratio is exceeded after you have entered the trade. When the parameter Exit is set to true and Exit with Market Order is set to True, if the ratio is exceeded, an attempt will be made to cancel unfilled orders and any position that has been entered will be exit at a market order. You can also exit with a limit order, if the Exit with Market Order is set to false, however there is always the possibility that order will not get filled.

In this example we took a 2 tick loss instead of a full loss when the ratio became very high.



There is one important feature that you need to understand. When the ratio makes a new low tick or high tick, the current ratio is accurately reflected in the number (left picture). However if the market reverses at the point, the ratio continues to update (right picture).



So when the price traded at the blue counter trend zone, the ratio was a 2. However when the market reverses and price trades higher due market orders to buy, the ratio changes to reflect the buying. The number stops updating when a new zig zag is created. **So the number you see at an apex is not the number that originally printed.**

## General Settings

General	
Account	Sim104
Calculate on bar close	False
Enabled	False
Input series	ES 06-15 (150 Tick)
Label	ZoneTraderStrategy
Maximum bars look back	TwoHundredFiftySix
Min. bars required	20

Under the General settings tab this will contain the two most important settings you can make. Under the account tab you have the ability to switch from a simulator account, your live trading account, and replay account.

After all of the other settings have been made the last setting is to enable the strategy itself to start working on the chart. **It is suggested that you then click the apply button and then use the close button to exit out of the window.**

## Chart Controls



At the top of the chart you will see six buttons. The Trade Enabled button tells you that the strategy is working. If you click this button your pending orders will be canceled and you will see “Paused” written on the chart. The purpose of this button is to allow the user to pause the strategy if you hear a news event is about to take place. For example, the chairman of the Federal Reserve is set to release comments at 11 a.m. and you only became aware of this at 1045 a.m.



The green buttons, Target Intermediate and Target Minor, will move a profit target to the beginning of that zone. You can increase the profit target by pressing the green Profit +1 and decrease the profit target by pressing the red Target -1. When you use any of these buttons, the Use Intermediate Zones settings will be overridden for the trade you currently in. This will not apply to the next trade.

The pink Close All, will close all open orders and open positions at a market order and will place the strategy in a Paused mode.

Here is an example of what would happen if you took control after one contract had filled, and then the market trades and a second contract is filled. If you pressed +1 or -1, both targets would move in tandem (two ticks apart), similar to how they look here. But if you pressed Target Intermediate, they would both combine and move to the intermediate zone. Then you could use the +1 and -1 and both contracts would move together.

The screenshot shows a trading software window titled "Replay101". It features a price table with columns for "HOLD", "BUY", "PRICE", and "SELL". The table lists various price levels from 2098.50 down to 2091.50. Several rows are highlighted in cyan, indicating Limit Market (LMT) orders. A row at price 2095.00 is highlighted in yellow, showing a quantity of 262. Below the table, there are buttons for "REV" (highlighted in green) and "CLOSE" (highlighted in pink). The interface also includes fields for "Instrument" (ES ###-##), "Account" (Replay101), "Order qty" (1), "TIF" (Day), and "ATM Strategy" (<None>). At the bottom, there are controls for "ATM Strategy parameters (ticks)", including radio buttons for "1 Target", "2 Target", and "3 Target", and input fields for "Qty", "Stop loss", "Profit target", and "Stop strategy".

HOLD	BUY	PRICE	SELL
		2098.50	
		2098.25	
		2098.00	
		2097.75	
		2097.50	LMT
		2097.25	LMT
		2097.00	
		2096.75	
		2096.50	LMT
		2096.25	2240
		2096.00	LMT 621
		2095.75	505
		2095.50	469
		2095.25	383
		2095.00	262
274	(1) 2094.75		
439	2094.50		
522	2094.25		
541	2094.00		
797	2093.75		
2573	2093.50		
		2093.25	
		2093.00	
		2092.75	
		2092.50	
		2092.25	
		2092.00	
		2091.75	
		2091.50	SLM
MARKET	\$-14.20	MARKET	

## Trend Trade Strategy Entry Section

<b>Entry</b>	
03: Primary Entry Offset (Ticks)	0
04: Secondary Entry Offset (Ticks)	-1
05: Primary Entry Quantity	1
06: Secondary Entry Quantity	1
07: Trading Directions	Both
<b>General</b>	

The entry section only has two trading levels and has both trading directions.

## Illiquidity Section and Deviation Points Section

<b>Illiquidity trigger</b>	
27: Enabled	True
28: Trigger Volume	900
29: Exit Entire Position	False
30: Timeout (minutes)	5
31: Enable Alert	False
32: Alert Sound File Name	alert4.wav
33: Alert email address	
<b>Indicators</b>	
01: Deviation Points	1.25

There are no differences in this section.

## Move Stop Loss and Move Target Sections

<b>Move Stoploss</b>	
14: Breakeven on 1st Target Level	False
15: Breakeven trigger level (Ticks)	5
16: Breakeven offset (Ticks, from entry)	1
17: Use Breakeven	False
18: Move in Minor Touch	False
19: Move Ticks from Minor	4
20: Adverse Ticks to Activate Minor	3
<b>Move Target</b>	
21: Move Profit Target	False
22: Adverse Ticks From Primary	6
23: Target offset (Ticks, from entry)	0
24: Move Profit Target to Minor Support	False
25: Adverse Ticks From Primary	4
26: Target offset from opposite blue	1
<b>Parameters</b>	

The only difference is that the Move Stop on Red Dot is not in this section.

## Red Bar and Sessions Sections

Session	
44: Session #1 Begin Time	09:45:00
45: Session #1 End Time	16:00:00
46: Close all at EOD	True
47: Close all at News Time	True
48: Pause #1 Begin Time	00:00:00
49: Pause #1 End Time	00:00:00
50: Pause #2 Begin Time	00:00:00
51: Pause #2 End Time	00:00:00
52: Pause #3 Begin Time	00:00:00
53: Pause #3 End Time	00:00:00
54: Backtest	False
Trade Management	

There are no differences in this section.

## Trade Management and General Sections

Trade Management	
08: Primary Target (Ticks)	8
09: Primary Stoploss (Ticks)	5
10: Simulated Stop Orders	True
11: Simulated Stop Orders Size	150
12: Long Maximum Daily Loss (USD)	300
13: Short Maximum Daily Loss (USD)	300
General	
Account	Replay101
Calculate on bar close	False
Enabled	False

There are no differences in this section.

## ES Tick Settings Section



The ES Tick Settings section is only for use on an ES chart. Having any of the settings set to true on a ZN or other chart **WILL CAUSE** unexpected behaviors because of \$TICK. All of these settings should be False on a ZN chart.

ES Tick Settings	
33: Use Tick Settings	True
34: Auto Exit on Red Dot	False
35: Auto Exit with limit order	False
36: Move Stop on Red Dot	False
37: Move Stop Offset on Red Dot (T	2
38: Tick Filter	500

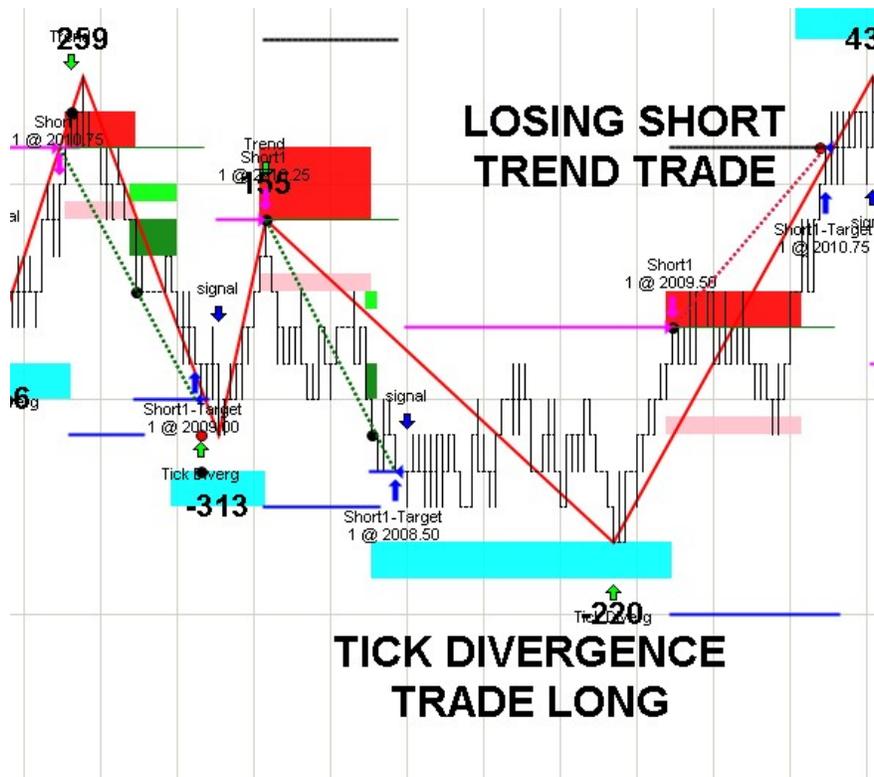
General

Use Tick Settings when set to true turns on the logic to begin to look for all Trend trades on an ES chart. There are no differences in the Auto Exit on Red Dot and Auto Exit with Limit Order parameters. There are no differences in the Move Stop on Red Dot and Move Stop Offset on Red Dot (Ticks).

The Tick Filter is used to filter out unwanted trend trades. With a 0 (zero) setting, you are saying the in the case of a long trade, you only want trades that have a higher high at the blue counter trend zone and a higher low at the intermediate zone where you are entering the trade.



With any setting, other than a 0, you would be taking a trend trade after TICK Divergence. The software does not filter out trend trades after an exhaustion trade.

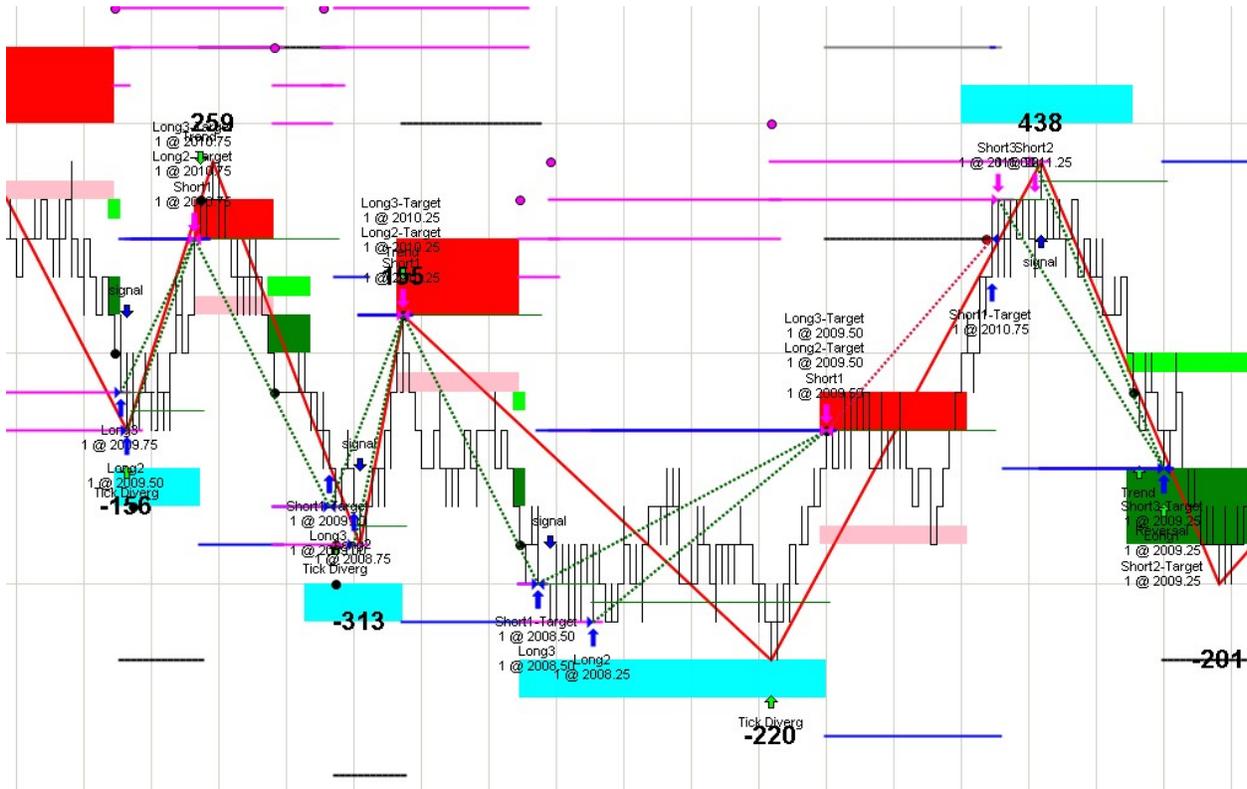


### Taking Full Advantage of Both the Trend and Counter Trend Strategy

The chart above had the Target Offset from Opposite Blue set to a 2.

Move Target	
20: Move Profit Target	False
21: Adverse Ticks From Primary	6
22: Target offset (Ticks, from entry)	0
23: Move Profit Target to Minor Supp	False
24: Adverse Ticks From Primary	4
25: Target offset from opposite blue	2
Parameters	

This becomes necessary when also using the Counter Trend Strategy to take full advantage of both strategies. This is the same chart with the Counter Trend strategy working.

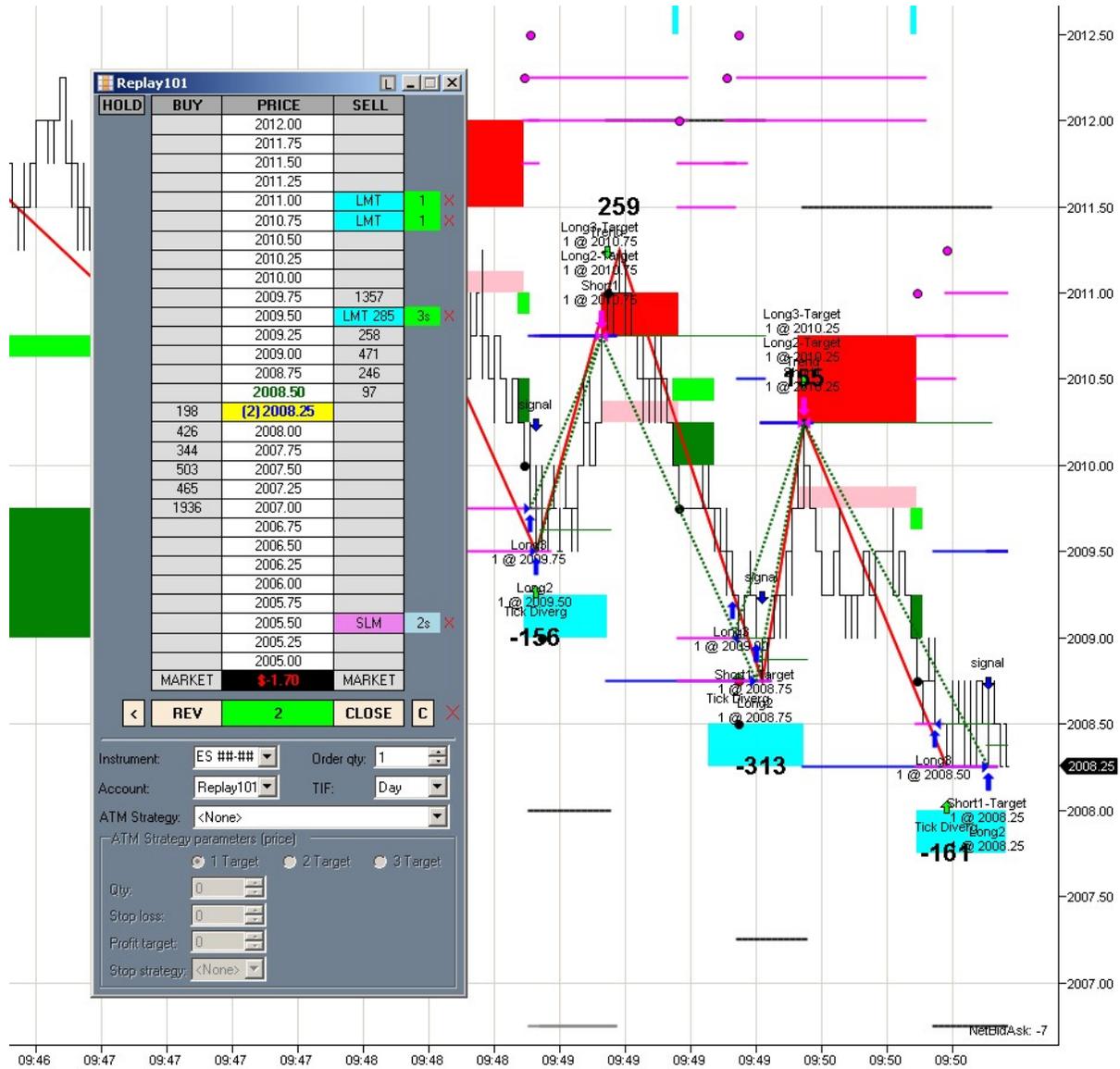


We are getting long in the Counter trend Strategy at the -2 and -1 level and are telling the Trend strategy to take profit in the Trend trade two ticks away from the Counter Trend zone. If this setting was at 1, we have an increased risk of an orphaned contract. An orphaned contract can still occur with a two setting, but it is less likely. **An orphaned contract is one that has no stop or target. An orphan contract requires the user to manually handle the situation.**

An orphan contract occurs because the order to initiate a new trade is in the order queue before the order to cover the open trade. If not enough contracts trade we can see an orphan contract. We can also see a flat position, but orders for a stop and target, when only 1 contract is filled.

This is not common, but will occur more often with the Target Offset from Opposite Blue set to a 1. This is an example of why you need to practice with Market Replay and not Live using real money.

Here is the same setup with a 1 setting for Target Offset from Opposite Blue. Note that we are long 2 contracts, but we would be selling 3 contracts at 2009.50, creating a -1 short position, with no target and no stop.



This can be re-created in Market Replay. The day was January 30, 2015.

## Tips and Tricks

### Tick charts

Use a small tick setting for the charts. An example for the ES would be 75 ticks. It is a good idea to make this number small because everything that happens to trigger an event, happens when a bar closes. Because of this, we want the bars to close faster. We also do not want two parameter events occurring on the same bar, so that they do not execute in the wrong order.

### NinjaTrader Database

You are going to run market replays to understand how the system works and develop a trading plan. That means you are going to flood the NinjaTrader database file with data, and it will eventually corrupt and go bad. If this file is important to you, make a copy of it before you start doing replays and use the copy when you are done with replays.

To do this, go to MyDocuments/NinjaTrader7/db folder and you will see a file called NinjaTrader.sdf. Make a copy of it and leave it there.

When (not if) the file becomes corrupted and you do not have an extra file, just delete it, and NinjaTrader will recreate a new file when you restart the application.

### Default Settings

**The default parameter settings are not a trading strategy.** If you would like to change a parameter and make it default, right click the box and the menu will allow you to make it the default.

### Team Viewer

You can use Team Viewer to view and control NinjaTrader from your phone if you are not behind the computer. Make sure Team Viewer is running in the system tray before you leave and you have setup unattended access, and practiced using your phone to stop the strategy.

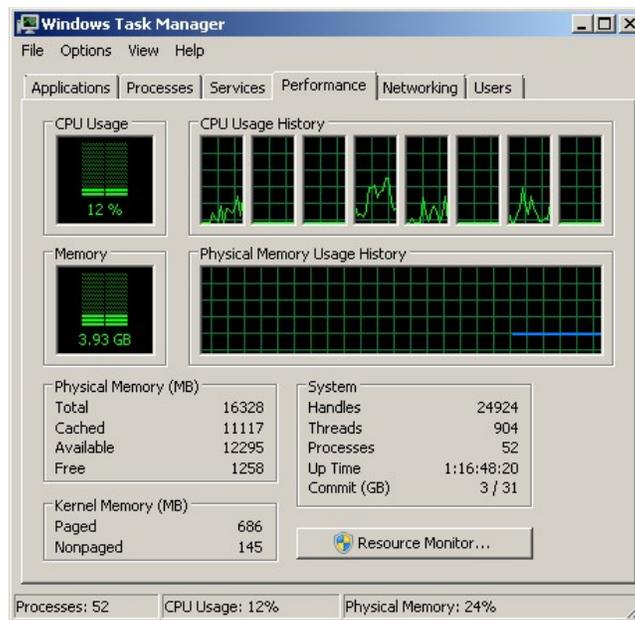
### Minimize the Chart When Running a Replay

NinjaTrader will run a replay faster if the chart is minimized when running a replay.

## Shutting Down

When you are done running a replay, disable the strategy and disconnect the data feed, just like you would do in real trading. Your practice should be exactly the same as a live trade. You will probably also help your database file out also.

Shut down NinjaTrader after a replay session. NinjaTrader uses memory when it does a replay. The only way to release this memory is to restart the program. When your computer runs out of RAM memory, your computer uses the hard drive, which is significantly slower than RAM. You should also check the Performance tab under Windows Task Manager regularly. This is because RAM is used by NinjaTrader but even when you shut down NinjaTrader, the System RAM is not released. It requires a computer restart to reset the RAM.



## Data Analysis

ZoneTraderPro has accumulated a large reference library of parameters that have been tested and the results. These results provide in detail information that you cannot get from NinjaTrader Account Performance. Any customer can run a replay and send the Trades List to ZoneTraderPro and the analysis will be performed on their test. Here are just a few of the data points being analyzed. These worksheets are available to any customer upon request.

These analyses are broken down by all data from the trading period, and then further broken down to the specific type of day. So there will be a separate worksheet for green, red and yellow days.

Trade-#	Instrument	Account	Strategy	Market pos.	Quantity	Entry price	Exit price	Entry time	Exit time	Entry name	Exit name	Profit	Cum. profit	Commission	My
Entry Postn	Cum Prof	Trade Cnt	Win %	\$/Trade	Long Prof	Long Cnt	Long Win %			Short Prof	Short Cnt	Short Win %			
Postn1	0	0			0	0				0	0				
Postn2	18533.1	3391	58.1	5.47	10017.5	1675	58.4		8515.6	1716	57.7				
Postn3	16527.9	3819	63.9	4.33	9605.9	1899	64.5		6922	1920	63.4				
Postn4	0	0			0	0			0	0					
Total	35061														
Trade Entry Times												Month	Month Prof	Cum Month Prof	
9:45-9:59	3347.7	497	63	2085.3	1262.4								15-Jan	4577.3	4577.3
10:00-10:29	10736	835	67.1	7680.2	3055.8								15-Feb	6568.8	11227
10:30-10:59	5.6	741	58.3	329.5	-323.9								15-Mar	1639.5	12944.9
11:00-11:29	1801.3	643	60.3	-116.5	1917.8								15-Apr	6341.3	19364.6
11:30-11:59	5692.4	539	65.7	2605.9	3086.5								15-May	1660.9	20978.9
12:00-12:29	2979.9	414	64	1104.3	1875.6								15-Jun	3365.2	24297.5
12:30-12:59	1406.2	432	60.4	-353.7	1759.9								15-Jul	2280.3	26656.2
13:00-13:29	-606.3	432	56.9	1026.8	-1633.1								15-Aug	4042.3	30789.4
13:30-13:59	4174.4	434	65	1778	2396.4								15-Sep	4595.4	35313.2
14:00-14:29	-1508.3	462	56.3	375.8	-1884.1										
14:30-14:59	1405.4	469	59.3	708.9	696.5										
15:00-15:29	7992.8	583	67.6	2929.9	5062.9										
15:30-15:59	-2659.3	727	51.6	-577.6	-2061.7										
15:30-15:44	-2075.1														
15:45-15:59	-584.2														
9:45-9:59 10:00-10:29 11:00-11:29 12:30-12:59 13:00-13:29 13:30-13:59 14:00-14:29 14:30-14:59 15:00-15:29															
Mon	7605.7	-1479.9	1671.8	5439.9	2025.8										
Tues	4153.4	1147.7	1825.8	-2195.1	3150.2										
Wed	6583.8	2140.8	2232.4	3530.8	1649										
Thur	5300.8	-923	1294.6	3864.3	441.7										
Fri	11417.3	2462.1	3711.4	4808	726.1										
>VAH L&S															
Mon	3960.4	109.3	717.4	384	1081.4	606	89	433	759.2	-91.9					
Tues	558.6	620.8	240.3	484	-121.3	-672	266	-372	-584.9	1030					
Wed	2852.1	761.6	745.9	-167	567.3	355	359	322	-33.9	350.4					
Thur	6087.7	178.7	1476.7	729	1940	-723	1246	142	1014	257.1					
Fri	4468.6	768.4	1868.6	-125	1452.1	-93	214	-55	-28.1	-506.4					
>VAH L															
Mon	2105.7	233	417.2	576	104.9	428	296	402	118.2	-345.4					
Tues	3736.6	477.5	687.8	406	710.9	-10	41	281	92.1	961.6					
Wed	364.7	512.6	295.7	-387	-250.4	73	454	243	-205.6	-440.7					
Thur	4231.9	194.4	780.9	773	1390.6	32	688	392	386.5	-222.6					
Fri	2749.5	468.3	1420.7	-117	300.4	339	127	66	88.8	-248.6					

How important is it to know that over a period of 9 months, we don't make any money trading long at 1100, 1230, and after 1530 into the close? We also lose money trading short at 1030, 1300, and 1400. But is that the answer? The problem with the above information is that it is for every trading day.

Trade-#	Instrument	Account	Strategy	Market pos.	Quantity	Entry price	Exit price	Entry time	Exit time	Entry name	Exit name	Profit	Cum. profit	Commission	
Entry Postn	Cum Prof	Trade Cnt	Win %	\$/Trade	Long Prof	Long Cnt	Long Win %			Short Prof	Short Cnt	Short Win %			
Postn1	0	0			0	0				0	0				
Postn2	9506.3	1068	60.5	8.9	6625.1	511	63.2		2881.2	557	58				
Postn3	8421.1	1196	65.7	7.04	6563.3	588	68.4		1857.8	608	63.2				
Postn4	0	0			0	0			0	0					
Total	17927.4														
Trade Entry Times												Month	Month Prof	Cum Month Prof	
9:45-9:59	2438.8	143	70.6	1885.8	553								15-Jan	1347.2	1347.2
10:00-10:29	5048.9	254	73.2	3602.3	1446.6								15-Feb	2786	4074.1
10:30-10:59	1268	230	62.2	1232.8	35.2								15-Mar	1445.1	5610.1
11:00-11:29	290.4	194	59.3	-502.5	792.9								15-Apr	2384.1	8085.1
11:30-11:59	3820.8	163	73.6	2312.1	1508.7								15-May	1408.6	9447.1
12:00-12:29	1474.1	151	67.5	1059.8	414.3								15-Jun	216.4	9616.9
12:30-12:59	-665.8	137	54.7	-613	-52.8								15-Jul	2752.4	12447.7
13:00-13:29	-552.1	144	54.9	850.6	-1402.7								15-Aug	1690.7	14079.3
13:30-13:59	2152.4	139	66.9	1595	557.4								15-Sep	3896.9	17917.1
14:00-14:29	443.6	171	60.8	1372.3	-928.7										
14:30-14:59	1126.3	143	60.1	480	646.3										
15:00-15:29	1039.2	187	63.1	-295.7	1334.9										
15:30-15:59	42.8	208	52.9	208.9	-166.1										
15:30-15:44	396.4														
15:45-15:59	-353.6														

Here is that same strategy for just a green day. This allows us to customize a strategy that takes advantage of this information. How important is it to know that we make 2-3 times the money going long than short on a green day with this strategy. Or the hour and a half when we trade at over a 70% win rate? The information about the times not to trade long are still valid, but now we have more detailed information about when not to go short on a green day.

Date	Gap	OvernightF	OvernightV	15mRng	15mCndIB	30mCndIB	TTE Day	ValuePost	Long Prof	Trd Dates	LW Cnt	LW %	Short Prof	S Cnt	S W Cnt	SW %
2/2/2015	5.25	14	226015	-11.75	-6.75	-11	SSD	0	298	30	20	66.7	634.5	45	30	66.7
2/3/2015	7.75	21	242701	8.75	7.25	8.5	BD	22.5	1198.1	41	31	75.6	-232.6	39	21	53.8
2/4/2015	-7.75	-11.25	203442	4.75	1.5	3.75	SD	0	768.6	46	32	69.6	686.7	37	24	64.9
2/5/2015	13.5	27	280747	5	3.25	4.75	SSD	2.25	636.5	15	13	86.7	-255.5	20	10	50
2/6/2015	5.75	12.75	229405	-6.25	-2.75	-0.5	BD	3.25	209.3	23	13	56.5	257.1	31	19	61.3
2/9/2015	-10.75	-17.5	208600	7	3	6	SD	-2.25	134.3	23	14	60.9	840	25	19	76
2/10/2015	12.5	18.5	230557	-4.5	-3.5	-5.5	SSD	4.5	567.2	17	12	70.6	-437.3	22	10	45.5
2/11/2015	-2.5	-6.25	120160	4.25	1	2.75	BD	3.5	51.4	29	17	58.6	-273.6	29	15	51.7
2/12/2015	6.75	21	325360	-4.25	-1	3.25	SD	9.25	728.5	10	10	100	686.5	15	15	100
2/13/2015	3	8.25	141204	4.75	2.25	3.25	SSD	0.75	310.3	8	7	87.5	88.8	18	12	66.7
2/17/2015	-3	-14.25	271652	-5.25	-2.5	0.75	SD	0	119.4	9	6	66.7	-54.4	16	9	56.2
2/18/2015	-4	-8.5	128033	4.5	1.75	1	SSD	0	230.8	13	9	69.2	153.5	10	6	60
2/19/2015	-6.25	-12.25	173524	4.25	1.5	1.5	BD	-1.5	178.5	10	8	80	462.6	11	9	81.8
2/20/2015	-4.75	-10	184341	-9.25	-3.25	-6	SD	-2.5	380.8	13	11	84.6	-394.1	24	12	50
2/23/2015	-3.5	-6.75	103329	-3.75	-2.5	-2	SSD	0	172.8	8	6	75	58	5	3	60

Here is our daily profit and loss.

Stat Typ	LngProf	ShrtProf	TotProf	DTrdCnt	DWin %	LTrdCnt	LWin %	STrdCnt	SWin %							
Gap <=-8 & OvernightRng																
>0 <=2	0	0	0	0	0	0	0	0	0							
>2 <=4	0	0	0	0	0	0	0	0	0							
>4 <=6	0	0	0	0	0	0	0	0	0							
>6 <=8	0	0	0	0	0	0	0	0	0							
>8 <=10	0	0	0	0	0	0	0	0	0							
>10 <=12	0	0	0	0	0	0	0	0	0							
>12 <=14	-21.5	-119.2	-140.7	1	0	10	60	13	53.8			22-Jul				
>14 <=16	1477.4	-1377.3	100.1	5	40	139	64.7	122	51.6			Jan-05 Mar-19 Mar-31 Jun-15 Aug-19				
>16 <=18	280.1	1133.4	1413.5	2	100	61	62.3	49	73.5			Feb-09 Jun-04				
>18 <=20	186.8	584.5	771.3	2	50	48	60.4	45	66.7			Apr-17 Jul-27				
>20 <=22	-4.1	-259.8	-263.9	2	50	49	57.1	47	51.1			May-12 Aug-11				
>22	-6287.8	2571.3	-3716.5	19	42.1	592	50	593	60			Jan-14 Jan-27 Jan-30 Mar-10 Mar-26 Apr-06 Jun-29 Jul-14				
Gap, OpenCndl_15, OpenCndl_30>0	8536.5	1099.5	9636	29	79.3	515	68.7	570	60.4			Jan-07 Jan-08 Jan-13 Feb-03 Feb-05 Feb-13 Mar-09 Mar-10				
Gap, OpenCndl_15, OpenCndl_30<0	2012.9	-1745.2	267.7	38	50	794	59.4	778	55.9			Jan-05 Jan-23 Feb-20 Feb-23 Feb-25 Feb-27 Mar-03 Mar-10				
Gap & OpenCndl_15>0	9924.3	1050.9	10975.2	31	80.6	548	69.7	599	59.9			Jan-07 Jan-08 Jan-13 Feb-03 Feb-05 Feb-13 Mar-09 Mar-10				
Gap & OpenCndl_15<0	4034.1	-1809.4	2224.7	42	52.4	876	60.8	841	55.8			Jan-05 Jan-23 Feb-17 Feb-20 Feb-23 Feb-25 Feb-27 Mar-03 Mar-10				
Gap<0 & OpenCndl_15>0	-2018.4	6747.1	4728.7	50	58	976	56.7	931	62.2			Jan-14 Jan-21 Jan-27 Jan-30 Feb-04 Feb-09 Feb-11 Feb-13				
Gap>0 & OpenCndl_15<0	8002.5	6471.5	14474	46	80.4	1025	63.5	1115	62.1			Jan-06 Jan-09 Jan-12 Jan-15 Jan-20 Jan-22 Jan-26 Jan-27				
Gap & OpenCndl_15<0 and OpenCndl_30>0	2021.2	-64.2	1957	4	75	82	74.4	63	54			Feb-17 Mar-31 Jul-15 Aug-07				
Gap & OpenCndl_30>0	9003.8	2687.4	11691.2	38	76.3	668	67.1	739	61.7			Jan-07 Jan-08 Jan-13 Feb-03 Feb-05 Feb-12 Feb-13 Mar-03				
Gap & OpenCndl_30<0	-1484.5	-2386.8	-3871.3	52	46.2	1080	56.9	1077	56.4			Jan-05 Jan-23 Jan-27 Feb-20 Feb-23 Feb-25 Feb-26 Feb-27				

Lastly we analyze such things as the overnight range, gap, and the 15 and 30 minute opening candle bar. We can see that it is not generally a good idea to go long with a gap less than -8 and an overnight range greater than 22, and then you can go back and look at those specific days.

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Revisions

08/09/15 - Use Intermediate Zone Set to True

08/09/15 - Breakeven Trigger

10/13/15 - Trend Strategy

2/01/16 - Ratios and POC

11/16/16 – Exhaustion Pattern and Move Stop on Red Dot