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Risk Disclosure Futures trading contains substantial risk and is not for every investor. An investor could potentially lose all or more than the initial investment. Risk capital is money that can be lost without jeopardizing ones' financial security or lifestyle. Only risk capital should be used for trading and only those with sufficient risk capital should consider trading. Past performance is not necessarily indicative of future results.

The Bet SMA CrossOver Auto Strategy, Specs & Requirements for NinjaTrader 8

The SMA CrossOver Strategy is one of the simplest, for ease of use and understanding. This simple strategy has been amped-up to include current day price Highs and Lows, Traps, Consolidation, Long Bar and dynamic Bullish and Bearish trend algorithms for precision filtering to find the perfect entry.

With advanced software it has become easier to develop utilities that enhances a SMA crossover strategy. Using these utilities with a simple moving average crossover becomes obvious and easy. We this advancement we are able reduce potential negative entries while managing risk.

Through the use of NinjaTrader® 8 and a high-speed internet connection we have developed utilities that may locate a SMA crossover point. The system looks for the fast SMA to crossover the slow SMA then the system tags the entry with an arrow in the direction of the entry. Then the strategy calculates the filters below:

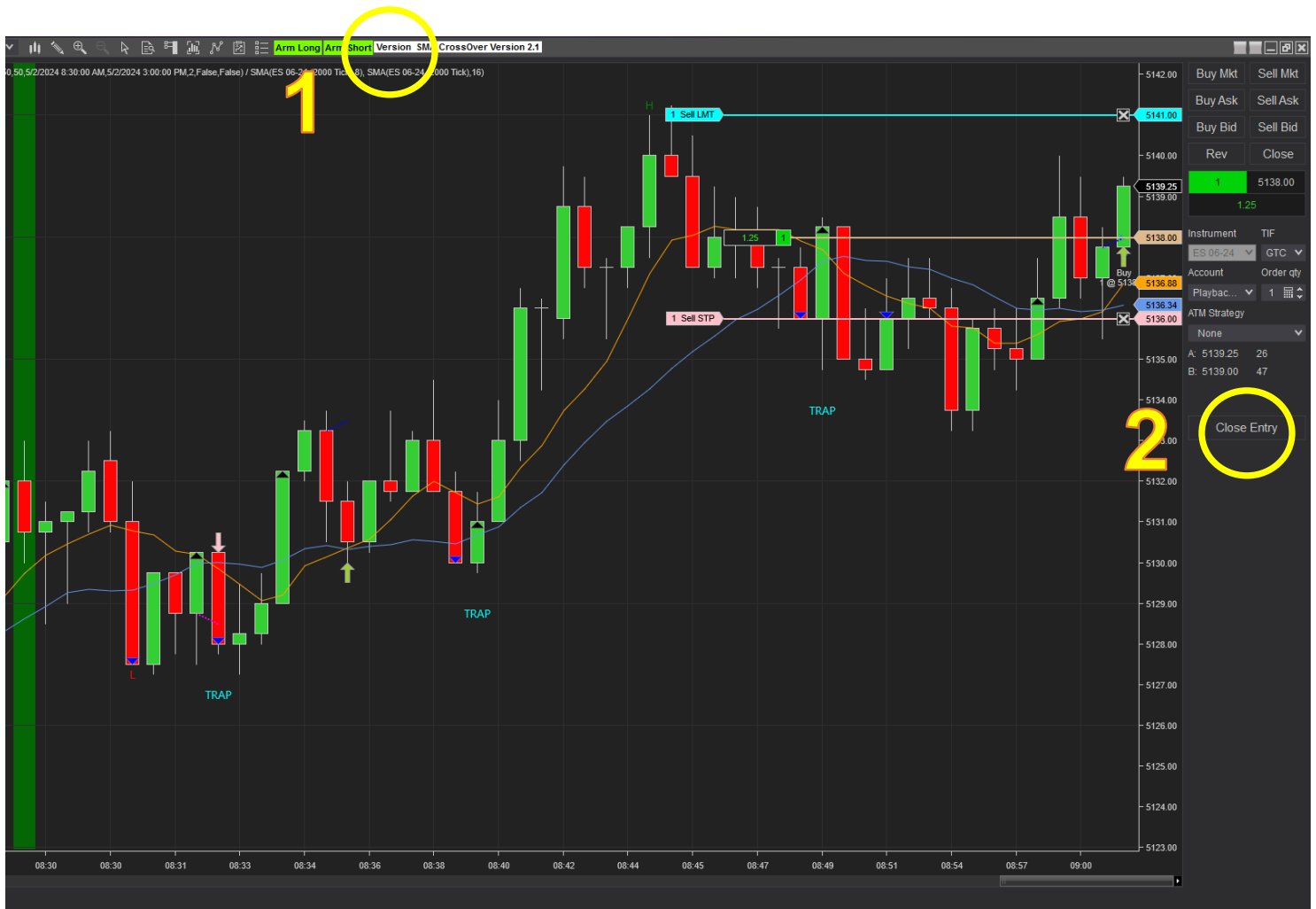
- Bullish and Bearish trend filter, (entries based on trend direction have a greater probability success)
- Traps filter, (if the Bullish or Bearish signal reverses, the entry is canceled)
- Consolidation filter, (if the SMA's are too close together (differential) prior to the entry signal, the entry is canceled)
- Long Bars filter, (if the bar is too long "fishing or trap" the entry is canceled)
- High and Low daily price filter, (if the entry is too far away from the daily highs or low price, this may indicate a reversal and the entry is canceled)

The system will use this data and other filter settings to determine an entry.

Specifications and Minimum Requirements;

- NinjaTrader® 8 desktop
- High Speed Internet Connection
- Broker Account
- Developed and Tested for Futures Traders
- ES, MES, NQ, MNQ, RTY, M2K, YM, MYM, M2K & OTHERS
- *We have not tested for FOREX or Stocks*
- ***Tick replay must be enabled.***
- ***The SMA CrossOver Strategy uses Strategy Entries and NOT ATM***
- ***The SMA CrossOver Strategy maybe used as an Indicator***

Overview of BET SMA CrossOver Auto Strategy 2.4




1. Tool Bar Buttons

- a. **Arm Long**; Clicking this button will arm the strategy for a long entry and start calculating lower line length.
- b. **Arm Short**; Clicking this button will arm the strategy for a short entry and start calculating upper line length.
- c. **Version Strategy Name**; this area will display the current version and if the indicator mode is on.

2. **Chart Button, Close Entry**; Clicking this button will close the current entry that has entered into the market without stopping and closing the strategy. Using the "system" close button will disable the strategy and close all positions.

Chart Icon display and Legend



-  1. **Blue down triangle** = Bearish trend
-  2. **Black up triangle** = Bullish trend
-  3. **Grey square** = Bar is too far from daily High (ticks away from daily high), based on filter settings
-  4. **Blue square** = Bar is too far from daily Low (ticks away from daily low), based on filter settings.
- TRAP** 5. **TRAP** = Bullish and Bearish trends have changed within a bar.



1. **Green Line**; Start Time Line, this line will be displayed whenever the start time has begun based on the start time property. Only when the start time begins does the strategy begin to look for entries.



2. **Short Entry Down Arrow**; this arrow will be displayed whenever a short entry is made.



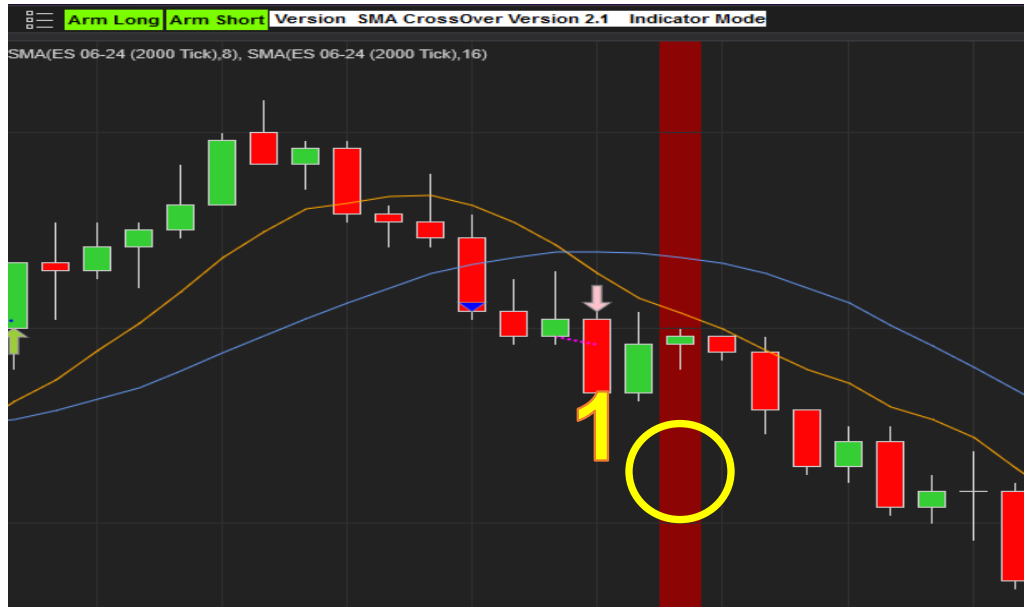
3. **Three Boxes Consolidation**, these bars show where consolidation is based on the distance between SMA lines.



4. **Long Entry Up Arrow**; this arrow will be displayed whenever a long entry is made.

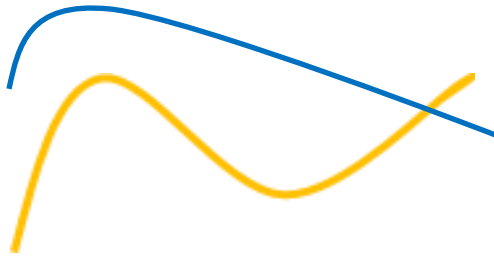


- ◆ 1. **Diamond**; Long Bar, if the bar is too long based on the filter settings no entry will be made.
- - - 2. **Dashed Line**, Bounce line for entry either long or short, this is set in the parameter settings.



1. **Red Line;** Stop Time Line, this line will be displayed whenever the stop time has begun based on the stop time property. Only when the stop time ends will the strategy end and then wait for the start time to run again.

So How Does It Work?



When the **fast** SMA crosses above the **slow** SMA this triggers an entry Long, at this point the strategy calculates bullish or bearish trend, consolidation, the bar price compared to the high and low daily price and if the previous bar was a long bar, Then the strategy looks at the bounce line to determine if the bar truly is moving in the right direction. If all this is correct then an entry Long is made.

When the fast SMA crosses below the slow SMA this triggers an entry Short, and at this point the strategy looks at all the filters as above to determine if an entry Short should be made.

Arm Long

Arm Short

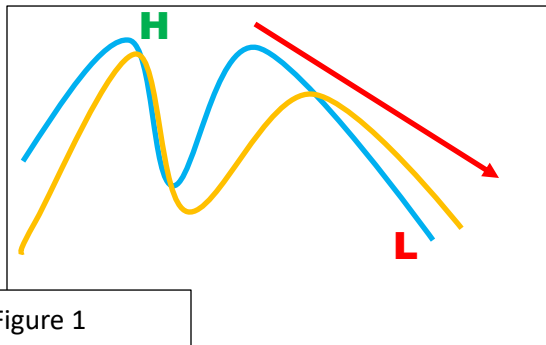


Figure 1

Arm Long

Arm Short

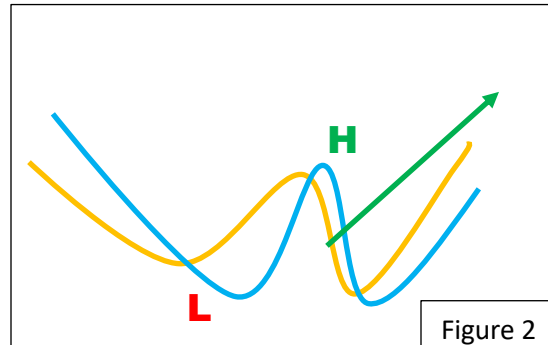


Figure 2

How do we use this strategy?

We will start the intra-day with both Arm Long and Arm Short buttons set on "green".

As the day continues and we see the SMAs continue to go down and the High of the day "Figure 1" does not change from the beginning of the day, we will disarm the Arm Long button. We do not want to go into a market Long that continues to go low without a change in the market High.

If the SMAs continue to go up and the Low of the day "Figure 2" does not change from the beginning of the day, then we will disarm the Arm Short button. We do not want to go into a market Short if it continues to rise without any change in the daily Low

BET SMA CrossOver Properties, Presets for ES 3/24

Properties	
▼ SMA Parameters	
SMA_Period 1 Fast	8
SMA_Period 2 Slow	16
▼ BackTest Parameters	
BackTest Only, Enable Strategy for BackTest	<input type="checkbox"/>
▼ Entry Parameters	
ProfitTarget	12
StopLoss	8
OrderQty	1
▼ Filters	
Max Bars Entry Wait	3
Max Bars Entry Reset	2
TRAP Reset	2
SMA Differential Filter	30
Long Bar size Filter Ticks	10
Short Bar size Filter Ticks	10
Bounce Line Length Upper Ticks	1
Bounce Line Length Lower Ticks	1
Bar Distance from Low Bar Ticks	50
Bar Distance from High Bar Ticks	50
▼ System Parameters	
Time Start	🕒 08:30 AM
Time Stop	🕒 03:00 PM
Max Profit \$	500
Max Loss \$	-500
Indicator Only, Use Strategy as Indicator	<input type="checkbox"/>

1. SMA Parameters,

- a. **SMA Fast Period;**(1-100) this sets the period for the SMA Fast line.
- b. **SMA Slow Period;**(1-100) this sets the period for the SMA Slow line.

2. Back-Test parameters,

- a. **Back-Test Only,** Checkbox, pre-set Unchecked, checking this box will setup the Automatic Strategy to run on the **System Analyzer** only. The analyzer will bypass Arm Long or Short buttons, Time Start and Stop, Max Profit and Loss and requires historical tick data that is less accurate than the Real Market Data. The program will not allow the box to be checked if a Chart window is opened.

3. Entry Parameters

- a. **Profit Target** in Ticks, this is where you would set your profit target for the strategy.
- b. **Stop Loss Target** in Ticks, this is where you set your stop loss target for the strategy.
- c. **Order Qty**, (1- 32000) The total number of orders to be placed in the market.

4. Filters

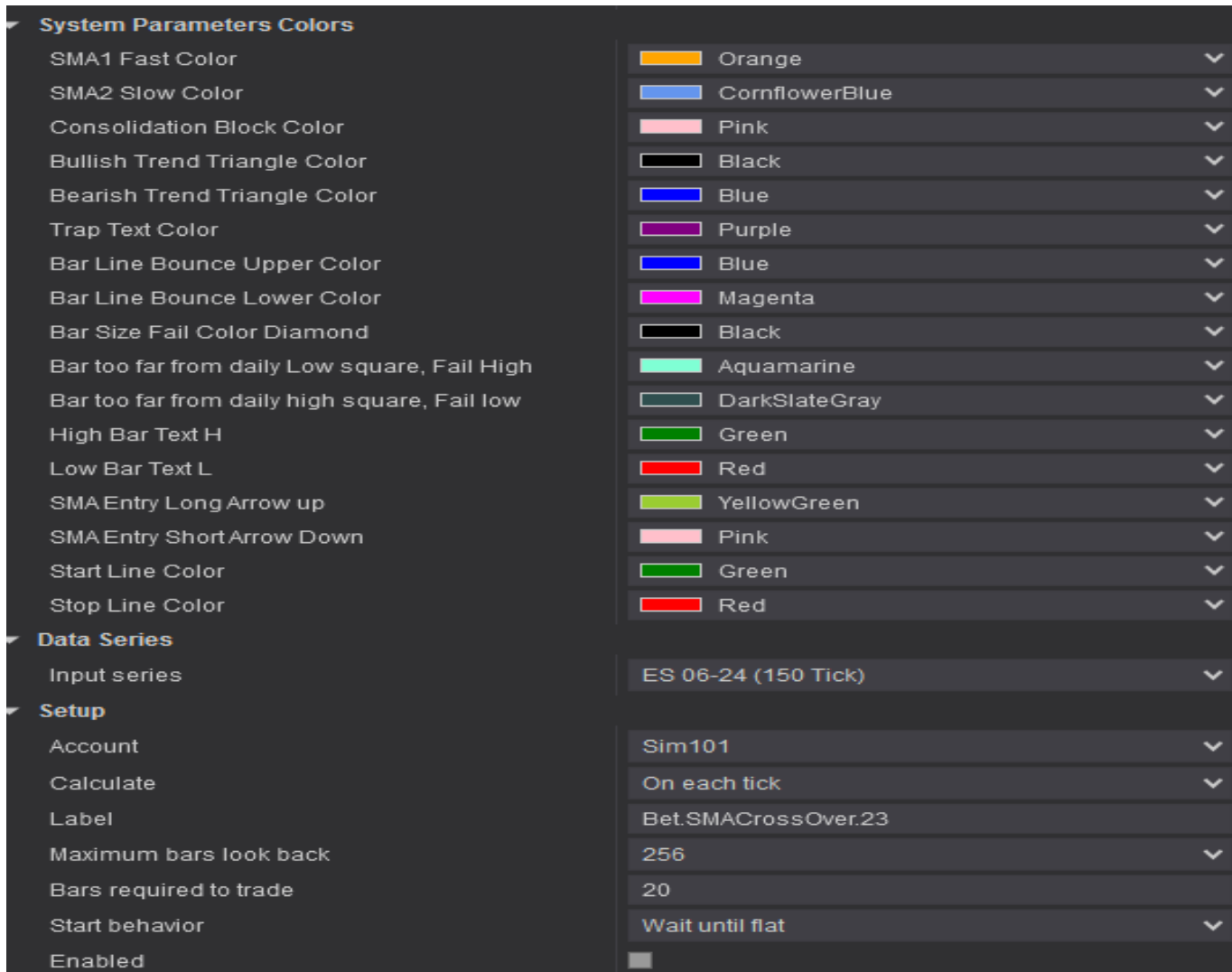
- a. **Max Bars Entry Wait**, (0-10) the maximum number of bars to wait for the strategy to allow an entry determined by all filter settings, e.g. If the crossover has happened but bounce has not passed the preset then wait another bar or bars for the bounce or other filters to pass or fail and reset.
- b. **Max Bars Entry Reset**, (0-10) the maximum number of bars to wait before attempting to enter the market again.
- c. **TRAP Reset**, (0-10) After a TRAP event occurs the total number of bars to wait to reset and try to enter the market again.
- d. **SMA Differential Filter**, (0-500 ticks) The difference calculated in whole numbers between the SMA fast line and the SMA slow on bar 3 prior to an entry signal. If the calculated number is smaller than the SMA filter number then we are consolidating "congested" and the entry is canceled. Then the strategy waits for the TRAP reset bar count to clear to reset and try again. **NOTE; setting this to the MAX will disarm this filter.**
- e. **Long Bar Size Filter**, (0-500 ticks) If the prior bar to the entry bar Long is greater than this number then the entry is ignored and a black diamond is displayed on the bar.
- f. **Short Bar Size Filter**, (0-500 ticks) If the prior bar to the entry bar Short is greater than this number then the entry is ignored and a black diamond is displayed on the bar. **NOTE: setting either of these filter numbers to the MAX will disarm this filter.**
- g. **Bounce Line Length Upper in Ticks** (0-100) preset 1, this line is part of the entry calculations for the current bar. The current bar must be equal (=) or greater (>) than the bar line in order for an entry long. Setting this lower can make a faster entry but may also cause a false entry. Setting this to zero (0) will bypass this filter.
- h. **Bounce Line Length Lower in Ticks** (0-100) preset 1, this line is part of the entry calculations for the current bar. The current bar must be equal (=) or greater (>) than the bar line in order for an entry short. Setting this lower can make a faster entry but may also cause a false entry. Setting this to zero (0) will bypass this filter.
- i. **Bar Distance from the low daily price.** (0-500 ticks) This filter determines if a long entry is valid due to its proximity to the dynamic daily low price. If the calculated long entry is too far away from the daily

low price, then a reversal or bounce may happen. **NOTE; setting this to the max will disarm this filter.**

- j. **Bar Distance from the high daily price.** (0-500 ticks) This filter determines if a short entry is valid due to its proximity to the dynamic daily high price. If the calculated short entry is too far away from the daily high price, then a reversal or bounce may happen. **NOTE; setting this to the max will disarm this filter.**

5. System Parameters,

- a. **Time Start**, preset 8:30 AM, this time setting is based on your time settings in Tools/General/Time Zone and is required for the strategy. When the start time has begun a vertical line is drawn on the chart as an indicator.
- b. **Time Stop**, preset 3:00 PM, this time setting is based on your time settings in Tools/General/Time Zone and is required for the strategy. When the stop time has begun a vertical line is drawn on the chart as an indicator.
- c. **Max Profit**, (raw market income) preset \$500, when the maximum profit has been reached or exceeded the strategy will stop all entries. When this happens a green text box will appear in the middle of the chart. You can reset this by disabling the strategy then re-enabling the strategy.
- d. **Max Loss**, (raw market loss) preset -\$500, when the maximum loss has been reached or exceeded the strategy will stop all entries. When this happens a red text box will appear in the middle of the chart. You can reset this by disabling the strategy then re-enabling the strategy. **Note; Calculated Total P/L is raw market income/loss and may not include commissions and broker fees**
- e. **Indicator Only**, Use Strategy as indicator Check Box, Unchecked, if you check this box the strategy will run but it will not make market entries. If you make manual market entries and need to cancel the entries you must use the Close button which will also disable the strategy.



6. System Parameters Colors,

- a. **SMA1 Fast Color**, Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- b. **SMA2 Slow Color**, Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- c. **Consolidation Block Color**, Changes to color of the block. **TIP:** Set this to Transparent to remove the block from the chart.
- d. **Bullish Trend Triangle Color**, Changes to color of the triangle. **TIP:** Set this to Transparent to remove the triangle from the chart.
- e. **Bearish Trend Triangle Color**, Changes to color of the triangle. **TIP:** Set this to Transparent to remove the triangle from the chart.

- f. **Trap Text Color**, Changes to color of the text. **TIP:** Set this to Transparent to remove the text from the chart.
- g. **Bar Line Bounce Upper color**, Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- h. **Bar Line Bounce Lower color**, Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- i. **Bar size fail color diamond**, Changes to color of the diamond. **TIP:** Set this to Transparent to remove the diamond from the chart.
- j. **Bar to far from daily low-price square**, Changes to color of the square. **TIP:** Set this to Transparent to remove the square from the chart.
- k. **Bar to far from daily high-price square**, Changes to color of the square. **TIP:** Set this to Transparent to remove the square from the chart.
- l. **High bar text H**, Changes to color of the text. **TIP:** Set this to Transparent to remove the text from the chart.
- m. **Low bar text L**, Changes to color of the text. **TIP:** Set this to Transparent to remove the text from the chart.
- n. **SMA Entry Long Arrow up**, Changes to color of the arrow up. **TIP:** Set this to Transparent to remove the arrow up from the chart.
- o. **SMA Entry Short Arrow Down**, Changes to color of the arrow down. **TIP:** Set this to Transparent to remove the arrow down from the chart.
- p. **Start Line Color** Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- q. **Stop Line Color**, Changes to color of the line. **TIP:** Set this to Transparent to remove the line from the chart.
- r.

7. System Parameters

1. Data Series, this is the instrument that has been picked for the chart and that the system will use for all entries and calculations.
2. Account, Simulated or Live accounts are picked here
3. **Calculate, preset **On Each Tick**, the system needs to be on each tick or it will not function correctly.**
4. Label, preset is the strategy name, and may be erased or changed. This will remove or change the text on the upper right-hand corner of the chart.
5. Maximum bars to look back, preset 256, Changing this will affect the way the system loads and how long it takes to update.
6. Bars required to trade, preset 20, 20 is a good number and there is not any reason that it should be changed.

7. Start behavior, preset Wait till Flat, it benefits the system to wait for all market entries to be done prior to running the automated strategy.
8. **Enable check box**, preset Unchecked, check this box and apply to start the strategy and run.

The screenshot displays the configuration interface for the Bars Edge Trader. It is organized into three main sections:

- Historical fill processing:**
 - Order fill resolution: Standard (Fastest)
 - Fill limit orders on touch:
 - Slippage: 0
- Order handling:**
 - Entries per direction: 1
 - Entry handling: All entries
 - Exit on session close:
 - Exit on session close seconds: 30
 - Stop & target submission: Per entry execution
- Order properties:**
 - Set order quantity: Strategy
 - Time in force: GTC

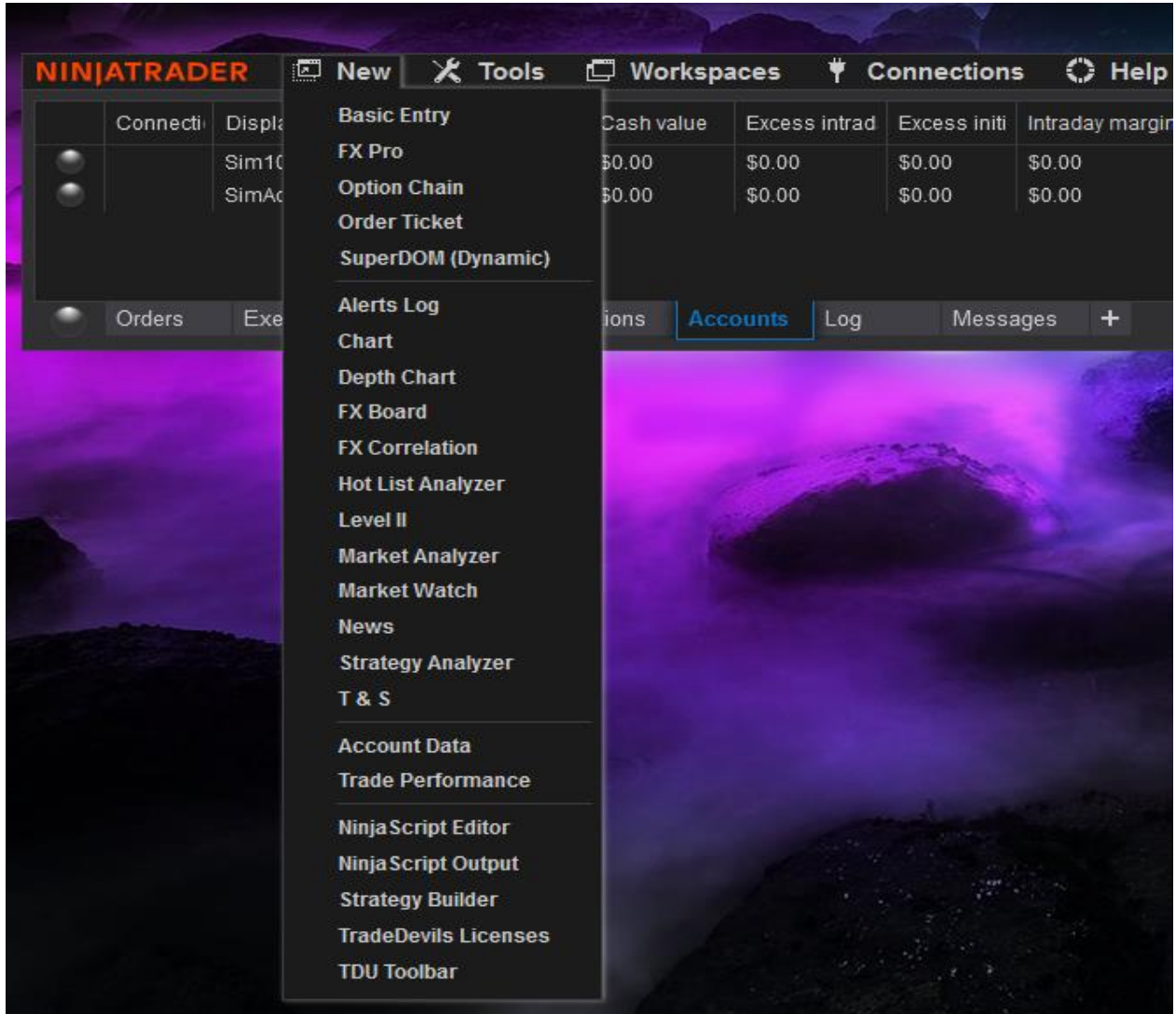
The word "template" is visible in the bottom right corner of the settings panel.

Order Properties

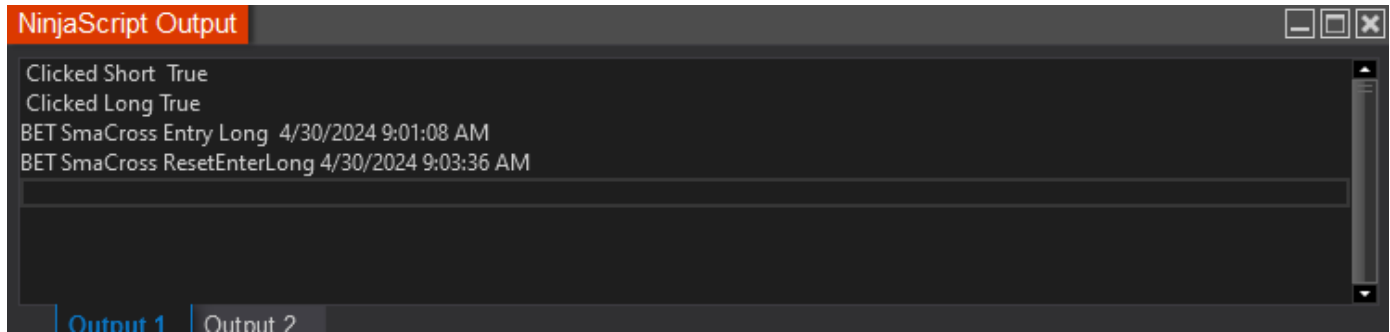
1. Set order quantity, preset Strategy, the quantity is part of the ATM system and should not be changed here.
2. Time in force, preset to Day, this is set internally, but you may change it to fit your needs, **don't forget to save your setting as a template.**

Monitor the System with NinjaScript Output

You can monitor the automated system functions and errors using the NinjaTrader 8 NinjaScript Output window.



On the NinjaTrader 8 main screen, go to New, then Ninja Script Output, select and click, this will open up the NinjaScript Output window.



Above is the NinjaScript Output window after the BET SMA CrossOver has loaded.

Information that maybe displayed; all with time date stamp

BET SMA Cross Entry Long, when long button is armed

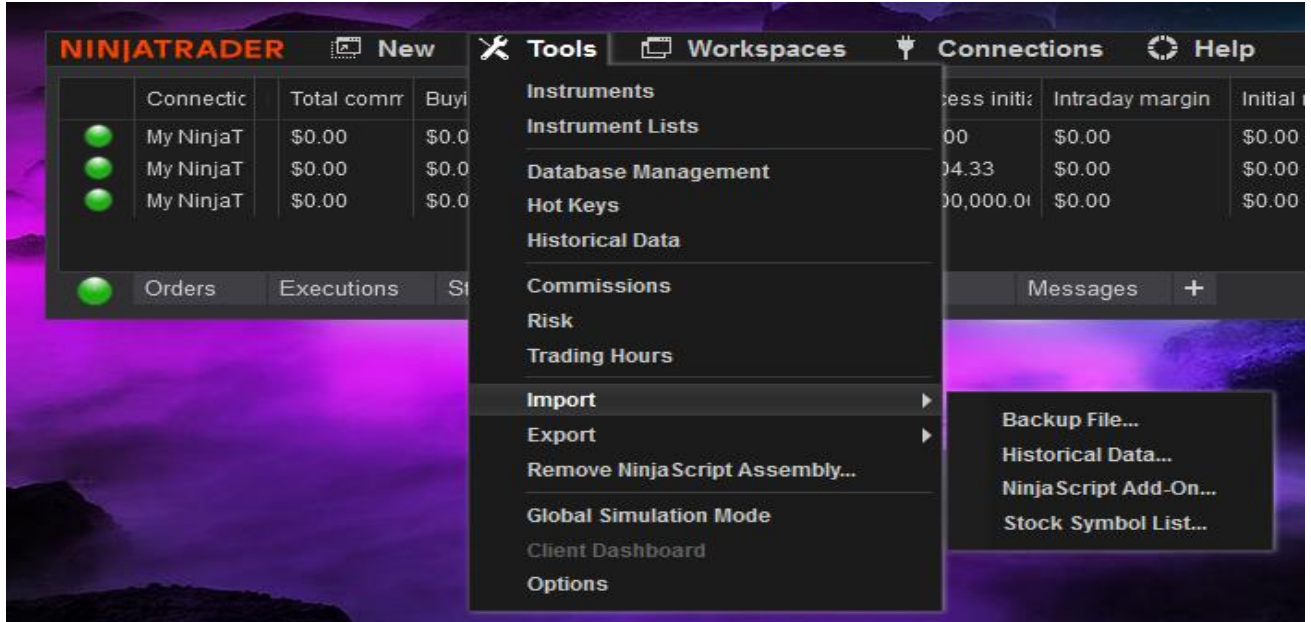
BET SMA Cross Entry Short, when short button is armed

BET SMA Cross Entry Long and Short Reset

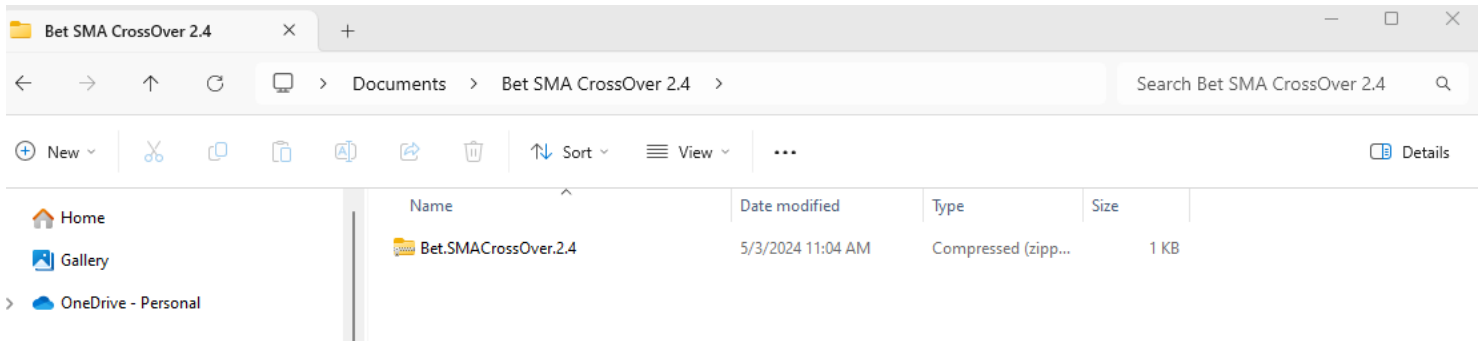
BET SMA Cross type errors

TIP: Right click on the window and set "Always On Top" this will keep the window from being minimized.

Installation of Bet SMA CrossOver 2.4 Strategy



On the main window, Click Tools, go to Import, then click on Ninja Script Add-On



Next go to the file area where you downloaded the Bet SMA CrossOver 2.4 Strategy.

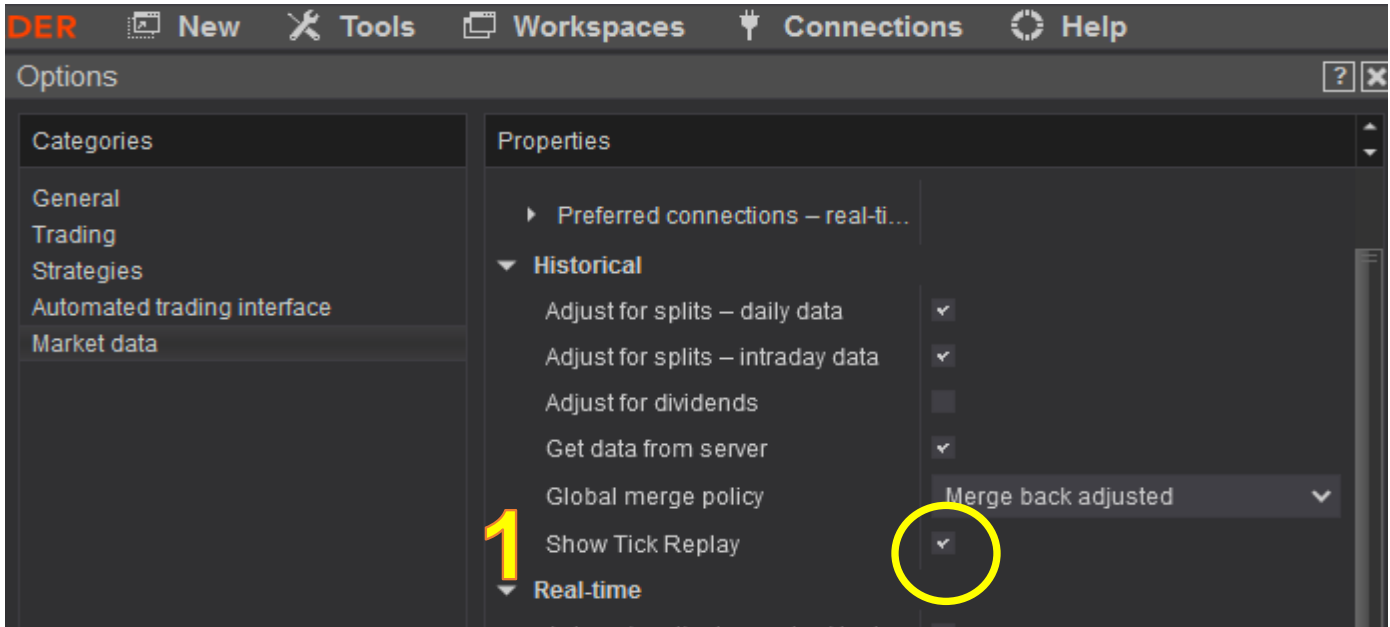
Then Click on the file name, this will open up the file to display a ZIP file. Next double click the zip file and this will start the installation process.

For more information on installing add-on; go to link below

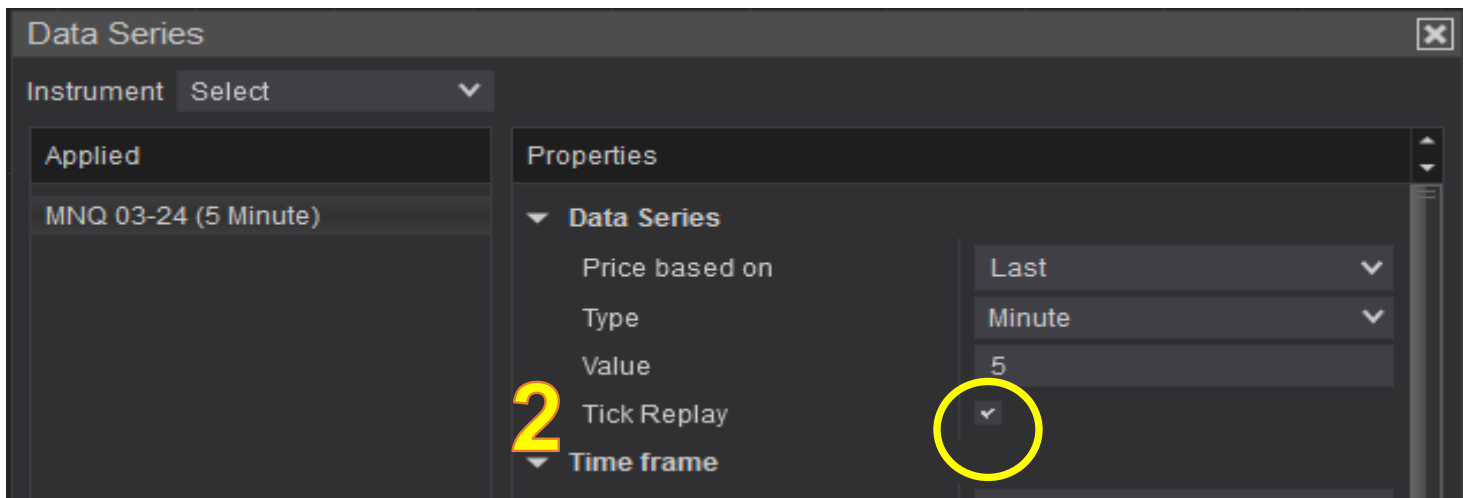
https://ninjatrader.com/support/helpGuides/nt8/NT%20HelpGuide%20English.html?using_3rd_party_add-ons.htm

Setting up Tick Replay

1. Main Menu Tools, Go to Options, Go to Market Data, Click on Show Tick Replay



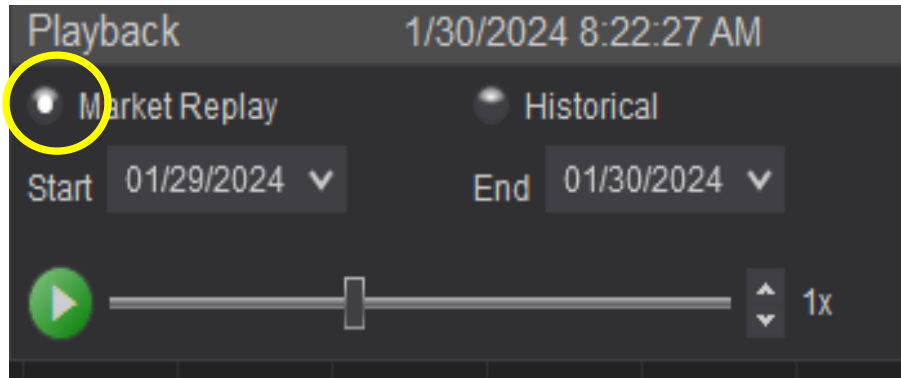
2. Go to New, Chart, Data Series, select Instrument, then Check Tick Replay



NinjaTrader® Tick Replay Support

<https://ninjatrader.com/support/helpGuides/nt8/NT%20HelpGuide%20English.html?tick-replay.htm>

Using Play Back



It is a requirement that when you use Playback you must use Market Replay with Tick Replay set. If not, the data may not populate and no entries will be taken. The program requires tick by tick data to calculate its' entries and exits, without this data the program will not know how to respond.

Using Strategy Analyzer

The screenshot shows the 'Settings' window for the Strategy Analyzer. The settings are organized into several sections:

- General**
 - Backtest type: Backtest
 - Strategy: Bet.SMACrossOver.21
- SMA Parameters**
 - SMA_Period 1 Fast: 8
 - SMA_Period 2 Slow: 16
- BackTest Parameters** (Annotation 1)
 - BackTest Only, Enable Strategy I...:
- Entry Parameters** (Annotation 2)
 - ProfitTarget: 12
 - StopLoss: 8
 - OrderQty: 1
- Filters** (Annotation 3)
 - Max Bars Entry Wait: 3
 - Max Bars Entry Reset: 2
 - TRAP Reset: 2
 - SMA Differential Filter: 30
 - Long Bar size Filter Ticks: 10
 - Short Bar size Filter Ticks: 10
 - Bounce Line Length Upper Ticks: 1
 - Bounce Line Length Lower Ticks: 1
 - Bar Distance from Low Bar Ticks: 50
 - Bar Distance from High Bar Ticks: 50
- System Parameters**
 - Time Start: 08:30 AM
 - Time Stop: 03:00 PM
 - Max Profit \$: 500
 - Max Loss \$: -500
 - Indicator Only, Use Strategy as I...:
- System Parameters Colors**
 - SMA1 Fast Color: Orange
 - SMA2 Slow Color: CornflowerBlue

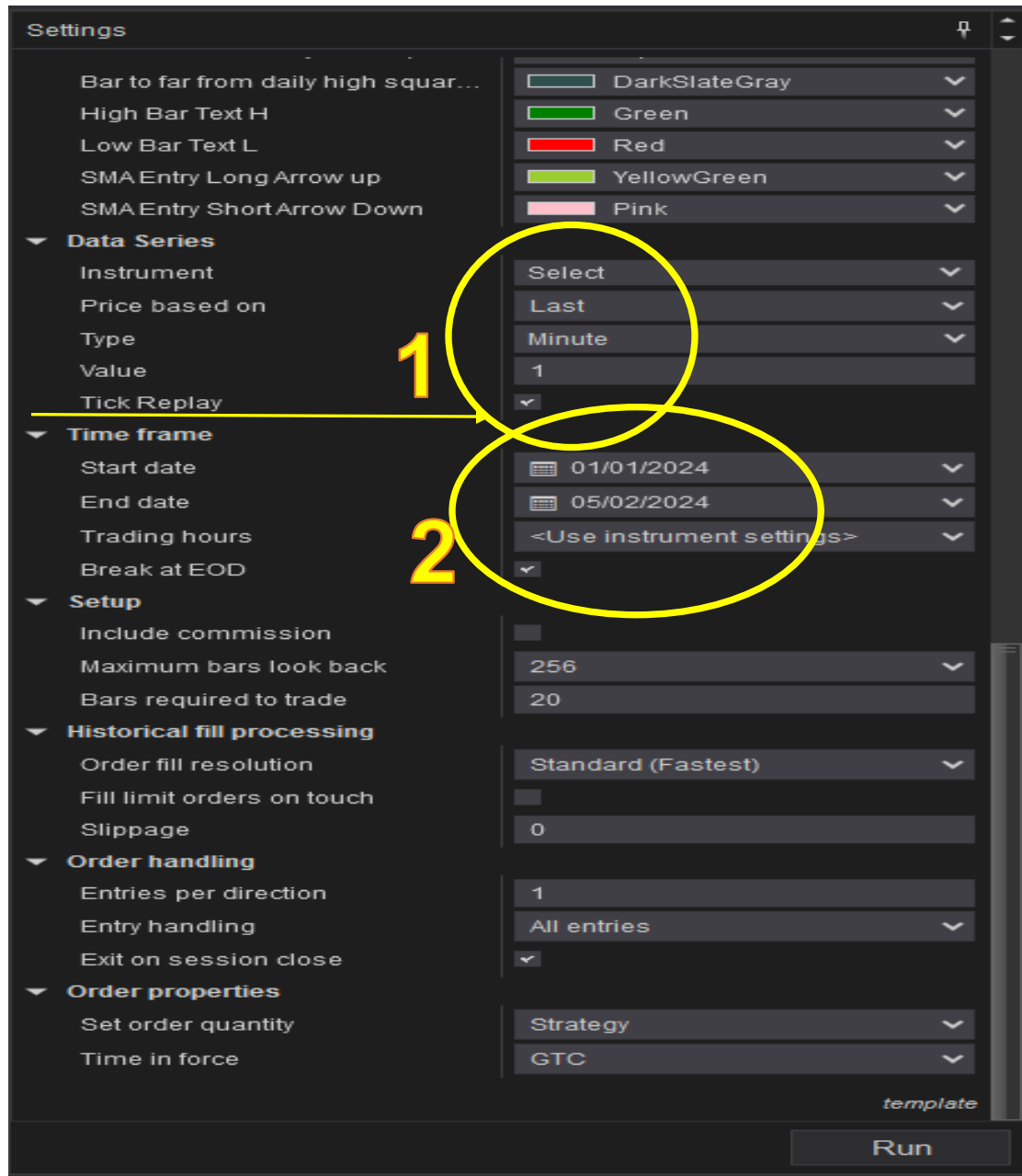
At the bottom right, there is a 'Run' button and the text 'template'.

1. Use the pull-down menu to find the strategy you want to test
"Bet.SMA.CrossOver.2.4"
2. Check the Back Test Only Box, and set your Profit Target and Stop Loss Target.

For help using the Strategy Analyzer use the below link;

https://ninjatrader.com/support/helpGuides/nt8/NT%20HelpGuide%20English.html?backtest_a_strategy.htm

3. You can make whatever adjustments to these parameters and the analyzer will respond. If you are unsure what to do review the properties configuration settings for the basics.



1. Select the instrument you want to test and **type**; you must use **Tick Replay** or it will not work correctly.
2. Start and end dates, the larger the span the longer it will take to process.
TIP; if you open Ninja Script Output window you will be able to see trade resets happening with long, short, time and dates of the trades. If you do not see anything you will need to change your configuration. This can take several minutes.

Properties configuration settings for Futures Markets, MNQ, NQ, MES, ES, RTY, M2K, MYM & YM

The attached configuration settings are some we have used and are available for your reference. We wanted to give you a starting point for a few of the futures instruments so you may experiment and develop a configuration that best suits your needs and experience. **By no means do we guarantee the results of these settings.**

TIP: If you are not seeing the performance you were hoping for, try changing the Data Series Value of the chart "Time, Ticks or Volume" slightly e.g. (from 10 minutes to 9 minutes) this will change the frequency may help the SMA CrossOver strategy find better entries. *We test this weekly!*

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Bet SMA CrossOver 2.4 2023 2024 Basic Properties Configuration for testing									4/2/2024
Instrument		MNQ	NQ	MES	ES	RTY	M2K	MYM	YM
Data Series	Last								
Type	Minute								
Value		2000 ticks	2000 ticks	2000 ticks	2000 ticks	500 ticks	150 ticks	1 min	500 ticks
Profit Target		80 ticks	75 ticks	16 ticks	16 ticks	25 ticks	30 ticks	10 ticks	18 ticks
Stoploss		60 ticks	50 ticks	8 ticks	12 ticks	16 ticks	20 ticks	8 ticks	12 ticks
Arm Long	User	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Arm Short	User	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SMA Fast Period		8	8	8	8	8	8	9	9
SMA Slow Period		16	16	16	16	16	16	21	21
Max Bars Entry Wait		3	3	3	3	3	3	3	3
Max Bars Entry Reset		1	1	1	1	2	2	2	2
Trap Reset		1	1	1	1	2	1	2	2
SMA Differential Filter		40	60	30	40	30	50	33	50
Long Bar size Filter in Ticks		120	120	10	12	16	22	100	100
Short Bar size Filter in Ticks		120	120	10	12	16	22	100	100
Bounce Line Length upper in Ticks		2	6	1	1	2	2	10	8
Bounce Line Length lower in Ticks		2	4	1	1	1	1	5	8
Bar Distance from low bar in ticks		150	150	50	100	50	50	300	400
Bar Distance from high bar in ticks		150	150	50	100	50	50	300	400
Time Start	User								
Time Stop	User								
Max Profit	User								
Max Loss	User								
Average Total Entries per Day		8	2	4	5	4	6	3	2
Colors	User								
Calculate On each Tick		On Each Tick							