



Tickblaze

The Complete Guide To Creating, Optimizing, Backtesting, And Trading Tickblaze Strategies

Version 1.0 Jan 1 2026

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CHAPTER 1: INTRODUCTION TO THE TICKBLAZE STRATEGY DESKTOP

Welcome to Tickblaze. Consider this guide your complete roadmap for creating, testing, and deploying automated trading strategies. We've designed this resource to be a practical and accessible guide for traders like you. It'll cover everything from your initial setup to advanced optimization and live deployment.

1.1 WHAT IS THE STRATEGY DESKTOP?

You should think of the Strategy Desktop as your command center for algorithmic trading in Tickblaze. It's a powerful tool that allows you to perform several critical functions.

- **Build Trading Strategies:** You can create and customize the specific rules for when to buy and sell.
- **Backtest Your Ideas:** Simulate exactly how your strategy would've performed using historical market data.
- **Optimize Your Strategies:** Systematically find the absolute best settings to improve your strategy's performance.
- **Go Live:** You can deploy your tested and validated strategies to trade in the live market.

A key feature of Tickblaze is its ability to test many strategies at once. You can test across different markets like stocks, futures, and cryptocurrencies. This is a significant advantage over other platforms that only test one at a time.

1.2 TWO TIERS OF POWER: BUILT-IN VS. ALGO ENGINE STRATEGY

In Tickblaze, you can work with two different kinds of automated strategies, which we call "algos." It's absolutely critical for you to understand the difference between them. Why? Because it affects the specific features that are available to you.

Built-in Strategies: These strategies come standard with your Tickblaze platform. They're fully functional and provide an excellent way to get started. Use them for automated trading, backtesting, and optimization.

Algo Engine Strategies: These are more advanced and specialized strategies that you can acquire separately. Examples might include the "One And Done Algo" or the "Close Flip Algo." The primary difference is that Algo Engine strategies unlock a powerful suite of advanced tools. We call this the Core Algo Engine. This includes sophisticated money management controls and a wide array of powerful signal filters. It also gives you more granular control over your trade execution.

First, this guide will walk you through setting up a standard Built-in Strategy. Then, it'll cover the advanced features and workflow specific to Algo Engine Strategies. Finally, we'll dive into the optimization and validation principles that apply to both.

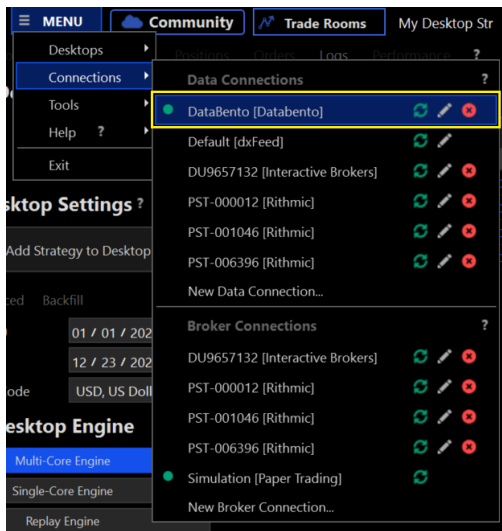
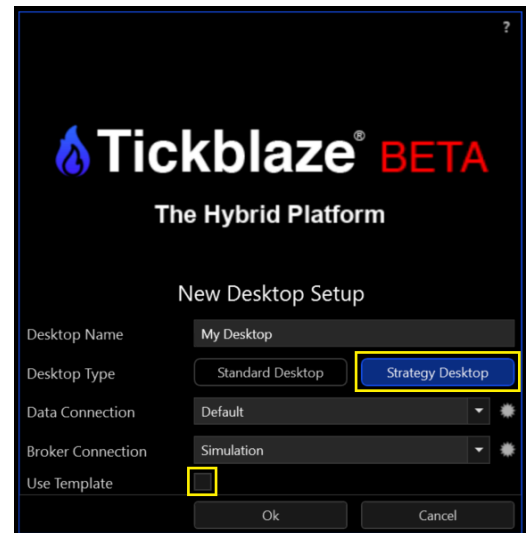
CHAPTER 2: WORKING WITH BUILT-IN ALGOS: YOUR FIRST STRATEGY

Let's begin with the fundamentals. This chapter will guide you through setting up and configuring a standard, built-in strategy.

2.1 SETTING UP YOUR WORKSPACE

You must start with a clean setup. This is essential for achieving clear and reliable results in your testing.

Create a New Desktop: When you first open Tickblaze, you need to create a new desktop. Be sure to uncheck any "template" options to avoid inheriting unwanted settings. This simple step ensures you can begin your work with a fresh workspace.



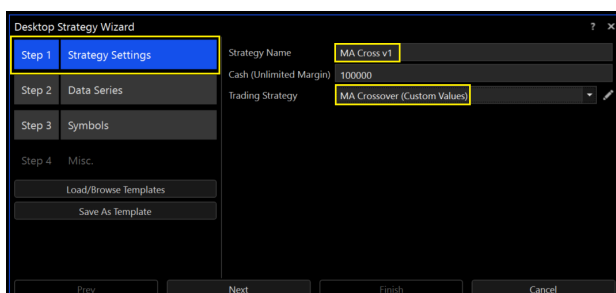
Establish a Data Connection: Accurate, real-time data is the foundation of reliable testing. Go to your data connection settings and connect to a provider. Databento, Rithmic, or IQ Feed are all great options. A solid data connection, like a non-delayed paid subscription, is crucial for good results. High-quality data providers such as DataBento can offer superior data accuracy. However, any reliable and fast connection is a great place to start. Remember, your backtesting and optimization results will be meaningless without a solid data connection.

2.2 BUILDING A STRATEGY WITH THE WIZARD

1. **Open the Wizard and Name Your Strategy:** In the main Tickblaze window, open the Desktop Strategy Wizard.



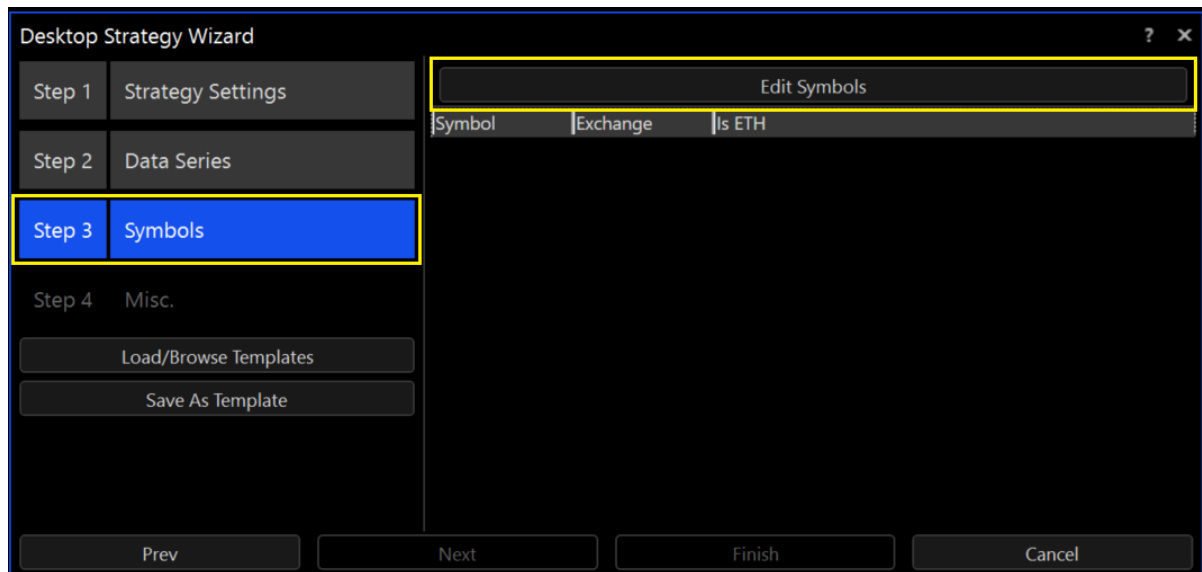
Remove	Is Active	#	Strategy Name	Trading Strategy	Cash	Symbols	Bar Settings	Bar Type	Bar Source
	<input type="checkbox"/>	0	Strategy 1 - EMA C...	MA Crossover	100,000	24	1	Day	Day
	<input type="checkbox"/>	1	Strategy 2 - EMA C...	MA Crossover	100,000	1	240	Minute	Minute
	<input type="checkbox"/>	2	Strategy 3 - EMA C...	MA Crossover	100,000	7	240	Minute	Minute
	<input type="checkbox"/>	3	Strategy 4 - EMA C...	MA Crossover	100,000	2	1	Week	Day



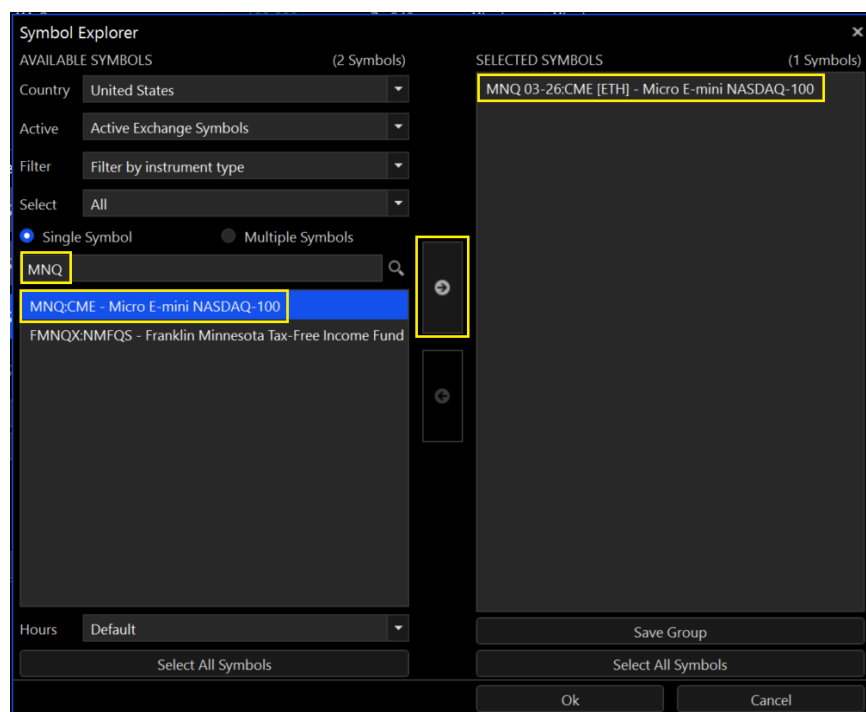
2. Give your strategy a unique and descriptive name like "MA Cross v1." Then, from the "Trading Strategy" dropdown, select a built-in strategy.

Add Symbols to Trade: Now, you need to tell your strategy which market or markets to trade. A "symbol" is just the ticker for an instrument, like NQ for Nasdaq 100 E-mini futures.

3. Click the "Edit Symbols" button, which you can find in the Symbols step.



4. Enter the Symbol you want to trade in the search box, for example, MNQ. You can add multiple symbols at the same time. This allows your strategy to trade across several different markets simultaneously.



5. In the Data Series step, set the Bar Type (like Minute, Tick, or Range) and the Bar Size. For a 5-minute chart, you'd enter 5. Click "OK."

The screenshot shows the 'Desktop Strategy Wizard' window, specifically Step 2: Data Series. The left sidebar shows four steps: Step 1 (Strategy Settings), Step 2 (Data Series), Step 3 (Symbols), and Step 4 (Misc.). Step 2 is highlighted with a blue background. Below the sidebar are buttons for 'Load/Browse Templates' and 'Save As Template'. The main area is titled 'Main Data Series' and contains four settings: 'Bar Type' set to 'Minute', 'Bar Size' set to '5', 'Bar Source' set to 'Minute', and 'Invoke Strategy' set to 'On Bar Close'. At the bottom are buttons for 'Prev', 'Next', 'Finish', and 'Cancel'.

Configure Your Strategy's Settings: This is where you'll define the actual logic for your strategy. For a built-in strategy, you'll typically see sections for defining your entry logic. This includes things like moving average periods, setting your stop-loss, and defining profit targets. Take some time to explore these settings to set the initial parameters for your first backtest.

The screenshot shows the 'Strategy Parameters' window for the 'MA Crossover' strategy. The left sidebar shows the 'Strategy Name' as 'MA Cross v1', 'Cash (Unlimited Margin)' as '100000', and 'Trading Strategy' as 'MA Crossover (Custom Values)'. The main area is titled 'Script Parameters - MA Crossover' and contains several sections: 'Parameter Values Template' with a 'Custom Values' dropdown, 'Enable Long' and 'Enable Short' both set to 'True', 'Fast Moving Average' with 'Source' as 'Close Prices', 'Period' as '12', and 'Type' as 'Simple', 'Slow Moving Average' with 'Source' as 'Close Prices', 'Period' as '26', and 'Type' as 'Simple', and 'Risk Management' with 'Stop Loss Type' as '\$', 'Stop Loss' as '0', and 'Take Profit Type' as '\$'. At the bottom are 'Ok' and 'Cancel' buttons.

CHAPTER 3: THE ANATOMY OF AN ALGO ENGINE STRATEGY

If you're using Algo Engine add-ons, your strategies are made of two distinct parts. These parts provide a much higher level of customization and control over your trading. These "add-ons" are custom, user-imported zip files. You'll typically import them by using the Tickblaze Import Resources feature.

3.1 THE TWO-PART SYSTEM: SIGNAL GENERATOR + CORE ENGINE

The Signal Generator: Think of this as the unique, proprietary core of each Algo Engine strategy. Its entire purpose is to identify potential trade opportunities for you. For example, the "Close Flip Algo" specifically looks for a two-bar pattern to generate an entry signal. The settings you see in the main "Strategy" tab are specific to this signal generator.

The Core Algo Engine: This is a powerful set of tools common across all Algo Engine strategies. It provides the advanced framework for everything that happens after a signal is generated.

3.2 CORE ALGO ENGINE COMPONENTS: YOUR ADVANCED TOOLKIT

These standardized components provide the essential framework for your Algo Engine strategies. They handle execution, risk management, and filtering.

Script Parameters - Close Flip Algo

Parameter Values Template

Custom Values

Strategy

Entries

Entry Direction	Long & Short
Position Sizing Strategy	Static
Quantity 1 (Static)	1
Quantity 2 (Static)	0
Quantity 3 (Static)	0
Enable Compounding	False
Entry Order Type	Market
Action On Opposite Signal	None
Limit Pre-Order Gap Bars	False
Allow Entries on Exit Bars	False
Auto Disarm	False

Stop Loss

Ok Cancel

- **Entries Section:** This section controls how and when your trades are actually entered into the market. You can define the Entry Direction as Long, Short, Both, or None. You can also set your Sizing Method, which determines how many contracts or shares to trade. Examples include Fixed Lotsize or a specific Dollar Risk. Define up to 3 profit Targets to allocate your trade quantity. Finally, choose your Order Type, such as Market or Limit orders. These have options for offsets and time limits.

Script Parameters - Close Flip Algo

Parameter Values Template

Custom Values

Money Management

Reset PnL On Time Slot: False

DayMaxGoal \$: 0

DayMaxLoss \$: 0

High Water Mark: Off

Misc. Filters

Moving Averages Filter

Trend Slope Filter

Market Structure Filter

Momentum Filter

Misc. Visuals

Strategy Visuals

PnL

Ok Cancel

- Money Management:** These are crucial controls for managing your daily profit and loss. The DayMaxGoal \$ is a daily profit target that, when reached, halts all trading for the day. The DayMaxLoss \$ is a maximum daily loss limit that stops trading to prevent further losses. The High Water Mark % (HWM) is a dynamic control that protects your accumulated daily profits. Once your daily PnL reaches a certain level, the HWM activates. It'll halt trading if your PnL drops by a specified percentage from its highest point.

- Signal Filters:** These are powerful rules that can prevent your strategy from taking a trade. This happens even if the Signal Generator produces a valid signal. This is a key feature for refining the performance of your strategy. Some common filters include:
 - Time Controls:** Only permit trading during specific hours, like from 9:30 AM to 11:30 AM.
 - Moving Average Filter:** Prevent long trades if the price is below a key moving average, or vice-versa.
 - Momentum Filter:** Use an indicator like the MACD to confirm market momentum before you enter a trade.

Script Parameters - Close Flip Algo

Parameter Values Template

Custom Values

Entries

Stop Loss

Targets

Time Controls

Money Management

Misc. Filters

Moving Averages Filter

Trend Slope Filter

Market Structure Filter

Momentum Filter

Misc. Visuals

Strategy Visuals

PnL

Ok Cancel

CHAPTER 4: ADVANCED WORKFLOW: BUILDING A PROFESSIONAL-GRADE STRATEGY

Once you're comfortable with the Strategy Desktop basics, you can embrace a more advanced and robust workflow for your strategy development. These techniques are designed to save you a significant amount of time, improve the quality of your results, and dramatically reduce the risk of creating an overfit strategy that will fail.

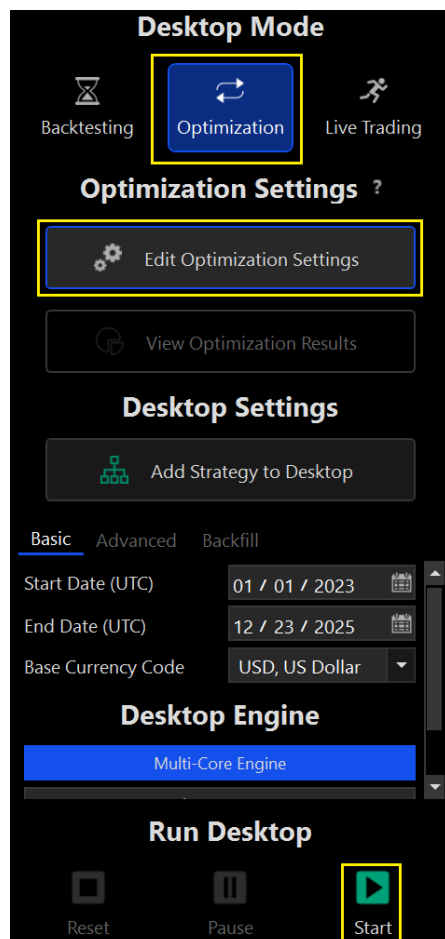
4.1 THE STAGED OPTIMIZATION METHOD: A PROFESSIONAL APPROACH

You'll be faced with dozens of optimizable parameters in an Algo Engine strategy. A common mistake traders make, is trying to optimize everything all at once. This "brute-force everything" approach is a trap that often leads to curve-fitting and results that are completely meaningless.

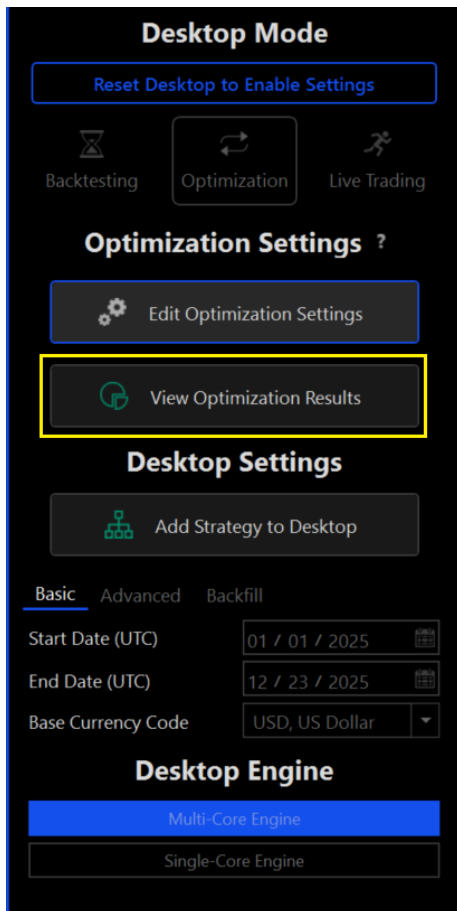
A more effective method is called Staged Optimization. The philosophy behind it is simple. Prove your core idea has merit, then define how you'll manage the risk. Only afterwards should you begin refining it with filters.

Stage 1: Validate the Core Signal

Before anything else, you must determine if the strategy's signal generator has a real, statistical edge. If the raw signals are no better than a coin flip, no amount of filtering will help. You'll never create a consistently profitable system from a flawed signal.



- **Goal:** Prove the raw signal has potential. You must do this without any help from filters or complex exit strategies.
- **How to Set Up the Test:**
 1. **Isolate the Signal:** Edit your Algo Engine strategy settings and disable all filters. This includes Time Controls, the Moving Averages Filter, Market Structure Filter, and the Momentum Filter.
 2. **Use a "Dumb" Exit:** The goal right now isn't to be profitable. You simply want to capture as many trades as possible to analyze the signal quality. To do this, set very loose exit parameters.
 3. **Stop Loss:** Use a very wide, fixed-tick stop that's unlikely to be hit often.
 4. **Profit Target:** Use a small, placeholder target for now. A Target Type of RR (Risk/Reward) with a value of 0.5 is a great starting point.
 5. **Optimize the Signal ONLY:** Edit the Optimization Settings. Select only the core parameters from the main Strategy section. For the "Close Flip Algo," this would be the EMA Period and the Entry Offset. For the "Double Cross Algo," it'd be the HTF MA Periods and Signal MA Periods, etc.
 6. **Run the Optimization**



- **How to Analyze the Results:** Look at your optimization results carefully. You're not looking for the highest Net Profit. Instead, you must look for parameter sets that show a Profit Factor greater than 1.0. They should also have a positive Expectancy. This proves that the raw signal has a slight positive edge all on its own. If you can't find any combination that meets this basic criterion, the idea is likely flawed. You shouldn't proceed with this market and timeframe.

The screenshot shows the 'Optimization Results' window. It contains a table with 13 items. The columns are: #, Param. Value, Score, Ending Equity, Profit Factor, Expectancy, Max. DD, Net Profit, CAGR, Avg. PnL, Position Count, and Win. The table lists 13 optimization runs. The 'Profit Factor' and 'Expectancy' columns are highlighted in yellow. Below the table, there's a section for 'Strategy/Shared Script Name' (CF), 'Parameter' (EMA Period), 'GroupName' (Strategy), 'Result' (15), and 'Parameter Optimizations' (Low: 15 / High: 75 / Step: 5). At the bottom, there are buttons for 'Backtest Selected Optimization Run', 'Export', 'Refresh', and 'Cancel'.

#	Param. Value	Score	Ending Equity	Profit Factor	Expectancy	Max. DD	Net Profit	CAGR	Avg. PnL	Position Count	Win
0	15	0.904	\$97,991.25	0.9	\$-0.69	\$-2,603.75	\$-2,008.75	-2.05%	\$-0.69	2,904	0...
1	20	0.903	\$97,975	0.9	\$-0.69	\$-2,646.25	\$-2,025	-2.07%	\$-0.69	2,955	0...
12	75	0.899	\$97,900	0.9	\$-0.67	\$-2,618.75	\$-2,100	-2.15%	\$-0.67	3,150	0...
10	65	0.895	\$97,796.25	0.89	\$-0.7	\$-2,785	\$-2,203.75	-2.25%	\$-0.7	3,134	0...
2	25	0.894	\$97,802.5	0.89	\$-0.74	\$-2,806.25	\$-2,197.5	-2.25%	\$-0.74	2,973	0...
9	60	0.888	\$97,656.25	0.89	\$-0.75	\$-2,901.25	\$-2,343.75	-2.40%	\$-0.75	3,119	0...
8	55	0.884	\$97,541.25	0.88	\$-0.79	\$-3,005	\$-2,458.75	-2.51%	\$-0.79	3,117	0...
7	50	0.883	\$97,546.25	0.88	\$-0.79	\$-2,988.75	\$-2,453.75	-2.51%	\$-0.79	3,090	0...
11	70	0.882	\$97,516.25	0.88	\$-0.79	\$-3,027.5	\$-2,483.75	-2.54%	\$-0.79	3,137	0...

Stage 2: Define the Trade Plan (Stops & Targets)

Once you've identified a promising core signal from Stage 1, you can move on. Now it's time to test again so that you can define the trade management rules.

- **Goal:** Find the optimal stop-loss and profit target methodology for your validated signal.
- **How to Set Up the Test:**
 1. **Lock In Your Signal:** In the strategy settings, apply the best-performing signal parameters you discovered in Stage 1. It's critical that you don't optimize them further in this stage.
 2. **Optimize Exits ONLY:** In the Optimization Settings, deselect the signal parameters. Optimize only the parameters in the Stop Loss and Targets sections.
 3. **Explore Your Options:** This is where you test different trade management ideas. For example, optimize the Stop Loss Offset or the Profit Target 1 (RR) multiple. Feel free to test both positive and negative values for the offset.
 4. **Run the Optimization.**
- **How to Analyze the Results:** Find the combination of stops and targets that produces the best risk-adjusted return. This might be the highest Profit Factor or Sharpe Ratio. You must do this while maintaining an acceptable Max Drawdown. This combination now forms your complete "core trade engine."

Stage 3: Refine with Filters (One by One)

Only now should you begin to apply filters. You must have a validated signal and a defined trade plan first. The key here is to add them sequentially, one at a time. This is the only way to understand the exact impact of each one.

- **Goal:** Your goal is to use filters to eliminate more bad trades than good ones. This will improve your consistency and reduce your overall drawdown.
- **Example Workflow:**
 1. **Analyze and Apply Time Controls:** First, run a backtest of your core trade engine from Stage 2. Go to the Performance tab and view the Period Breakdown by "Half-hour of Day." Identify the most consistently profitable hours. Then, apply them using the Time Controls filter.
 2. **Apply and Optimize a Trend Filter:** With the Time Controls now locked in, add a Moving Average Filter. Optimize its parameters, like the MA Period, to find the best setting. This should help keep you on the right side of the trend.
 3. **Apply and Optimize a Momentum Filter:** Now, lock in the trend filter settings. Add the Momentum Filter and optimize its core settings. This helps ensure you only take trades when the market has sufficient momentum.

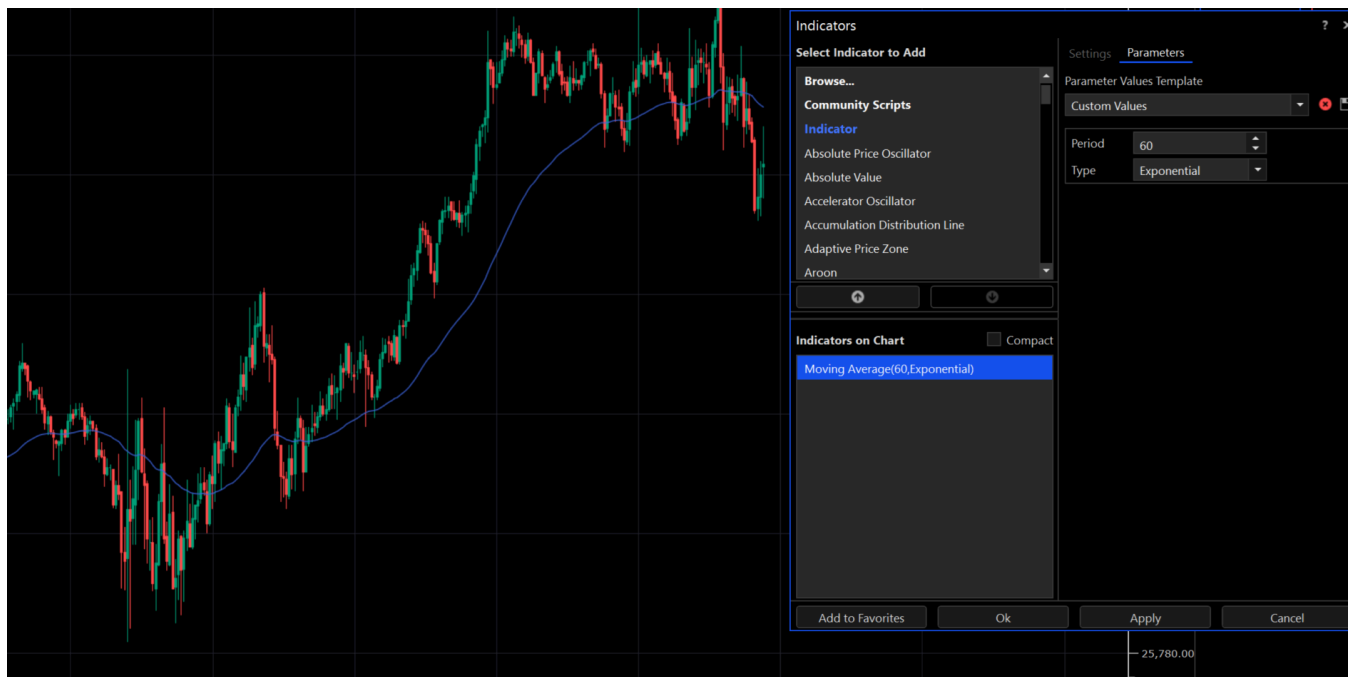
By adding filters methodically, you build the strategy piece by piece. Each stage validates the step that came before it, creating a robust final product.

4.2 PRO-TIP: USE STANDARD CHARTS TO FIND YOUR OPTIMIZATION RANGES

A major challenge when setting up an optimization is knowing what parameter ranges to test. Should you test a moving average from 10 to 50, or from 100 to 500? Testing illogical ranges wastes hours of your valuable time.

The solution is to use Tickblaze's standard charting feature as a visual laboratory.

- **The Process:**
 1. **Open a Standard Desktop:** Go to the main Tickblaze menu. Open a new Desktop, not a Strategy Desktop.
 2. **Create a Chart:** Add the same instrument and chart timeframe that you plan to use in your strategy. For example, this could be MNQ 1-Minute.
 3. **Add the Indicator:** Add the indicator that corresponds to the filter you want to optimize. For example, if you want to optimize the Moving Average Filter, add an EMA to your chart. If you plan to optimize the Momentum Filter, add the VMLean indicator instead.
 4. **Experiment Visually:** Double-click the indicator on your chart to change its settings. As you adjust the parameters, watch how it interacts with the price action. For example, change the EMA period from 20 to 50 to 200. Does this setting look too sensitive and noisy? Is this other setting too slow and lagging behind? What range of values seems to reasonably capture the market behavior you want?



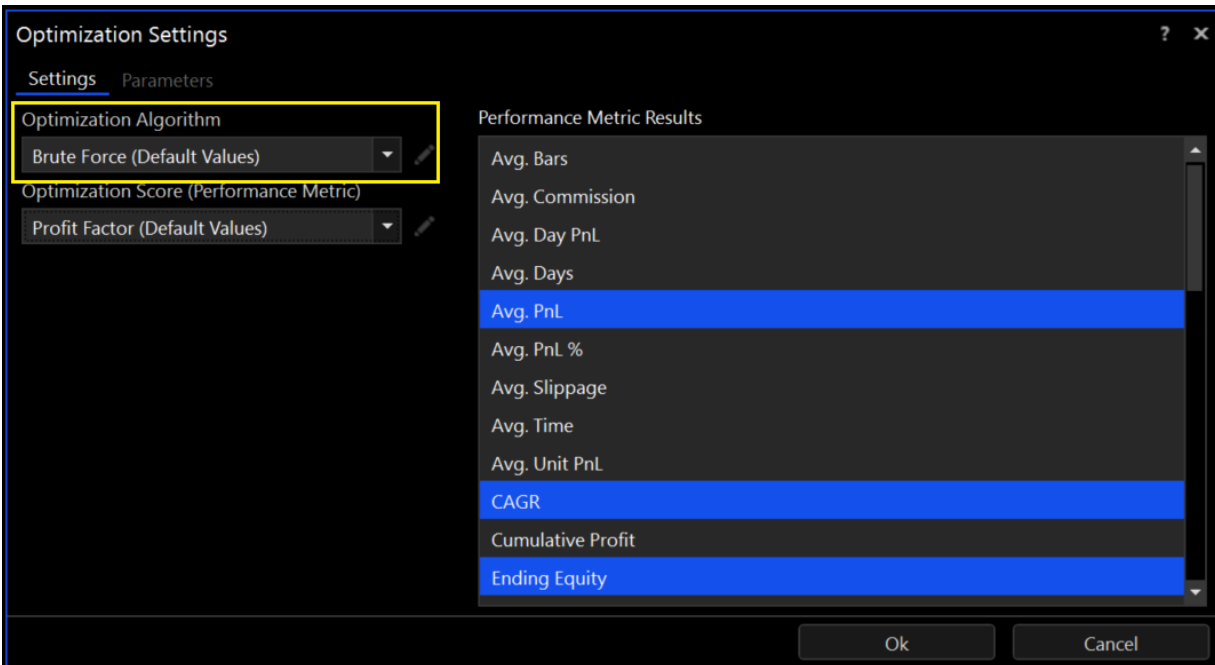
By spending just a few minutes experimenting visually, you can quickly identify a sensible range. You'll find a logical Low and High value for your optimization. This intelligence-gathering step ensures your automated optimization focuses only on logical parameters. It makes the entire process faster and much more effective.

CHAPTER 5: BRUTE-FORCE VS. GENETIC ALGORITHMS

Choosing the right optimization method is key. It's critical to efficiently developing a robust trading strategy.

5.1 BRUTE-FORCE OPTIMIZATION: THE EXHAUSTIVE SEARCH

How does Brute-Force optimization work? Think of it as trying every single key on a keychain until you find the one that works. It exhaustively tests every possible combination of your strategy's parameters within the ranges you define.

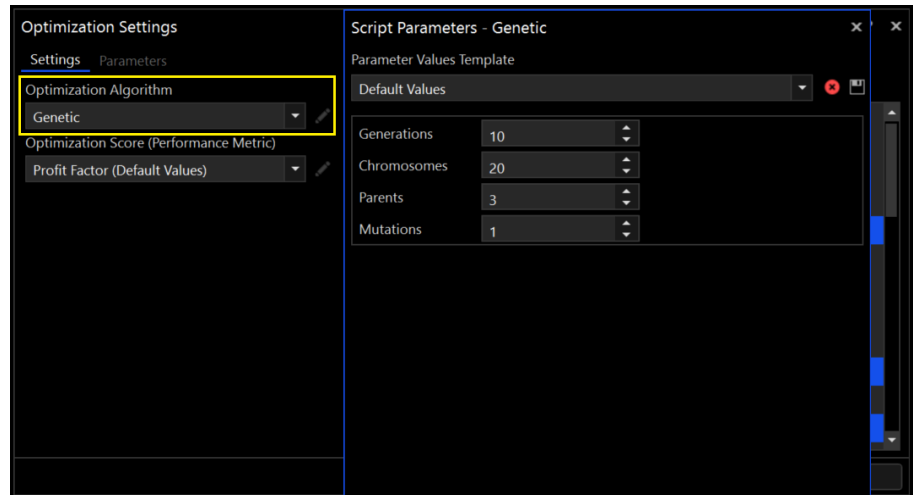


- **How it Works:** You define a start, end, and step value for each parameter you want to test. The system then methodically tests every single one of those combinations.
- **Advantages:** It's absolutely guaranteed to find the best possible solution within the defined parameter space. The process itself is straightforward and very easy for you to understand.
- **Disadvantages:** The number of combinations grows exponentially with each new parameter you add. This makes it extremely slow and computationally expensive for complex strategies.
- **When to Use It:** Brute-Force is best for strategies with a small number of parameters being optimized. Use it when you have 1-4 parameters or are fine-tuning a narrow range of settings.

5.2 GENETIC ALGORITHMS: THE EVOLUTIONARY SEARCH

Genetic Algorithms (GAs) are inspired by the concept of natural selection. Instead of testing every possibility, they start with a population of random strategies. Then, they intelligently "evolve" them toward better solutions over many "generations."

- **How it Works:** The algorithm tests a "population" of strategies and selects the best-performing "parents." It then creates new "offspring" by combining (crossover) and randomly tweaking (mutation) their settings. This cycle repeats over and over, with each generation getting progressively better.
- **Advantages:** GAs are significantly faster and more efficient for complex strategies with many parameters. They're excellent at exploring vast parameter spaces to find highly effective solutions quickly.
- **Disadvantages:** Because of the random element of mutation, your results can vary slightly between runs. It's not guaranteed to find the absolute single best solution, but it typically finds very strong ones.
- **When to Use It:** Genetic Algorithms are the go-to choice for your more complex strategies. You should use them for strategies with 5 or more parameters or when you have a large parameter space to explore. They're also ideal when your time is a limiting factor.



Feature	Brute-Force Optimization	Genetic Algorithm (GA)
Method	Exhaustive search	Evolutionary search inspired by natural selection
Speed	Very slow	Much faster
Best For	1-4 parameters, small ranges	5+ parameters, large ranges
Result	Guaranteed best solution	Finds excellent, near-optimal solutions
Intelligence	None	Learns and adapts

CHAPTER 6: MASTERING GENETIC ALGORITHM SETTINGS

6.1 The Core Parameters

To use Genetic Algorithms effectively, you must understand how to configure their core settings. This involves balancing exploration (searching for new ideas) with exploitation (refining good solutions). Here's a detailed look at each core setting, explaining the "why" behind our recommendations.

- **Generations:** The number of cycles the algorithm runs. More generations allow more refinement but take longer. A typical range is 50–200. You can think of generations as the algorithm's "thinking time." Early generations often find broadly profitable areas, while later ones make smaller, focused improvements. How do you know if you've run enough? Check whether the best solution's performance has started to plateau. If results are still improving significantly in the final generations, you may need to increase the count. However, running too many generations on limited data can increase the risk of curve-fitting, so balance is key.
- **Chromosomes (Population Size):** The number of individual strategies tested in each generation. A larger population increases diversity but slows the process. A good starting point is 100–200. Population size balances the breadth and depth of your search. Larger populations provide a wider "gene pool," which is crucial when optimizing many parameters and helps prevent converging on a merely "good" solution too early. Smaller populations are faster and can work for simpler strategies but risk missing more diverse, robust solutions.
- **Parents:** The number of top-performing strategies selected from the current generation to "reproduce" the next. Setting this to ~20% of your population size (Chromosomes) is common practice and controls selection pressure. A low parent count is highly elitist, leading to fast convergence but increasing the risk of getting stuck. A high parent count is less selective, maintains diversity, and allows mediocre solutions to contribute, but can slow refinement. The 20% guideline balances improvement with a healthy gene pool.
- **Mutation:** The number of random tweaks introduced each generation. Mutation is critical for introducing new ideas and avoiding stagnation. A rule of thumb is to set mutation to half the number of parameters being optimized. Think of mutation as the algorithm's defense against a lack of imagination. Without it, the optimizer can only recombine traits from initial strategies. Mutation injects fresh "DNA," enabling exploration of entirely new combinations. Balance is crucial: too little mutation can stall progress, while too much turns the search into a random guess-fest and prevents effective refinement of top solutions.

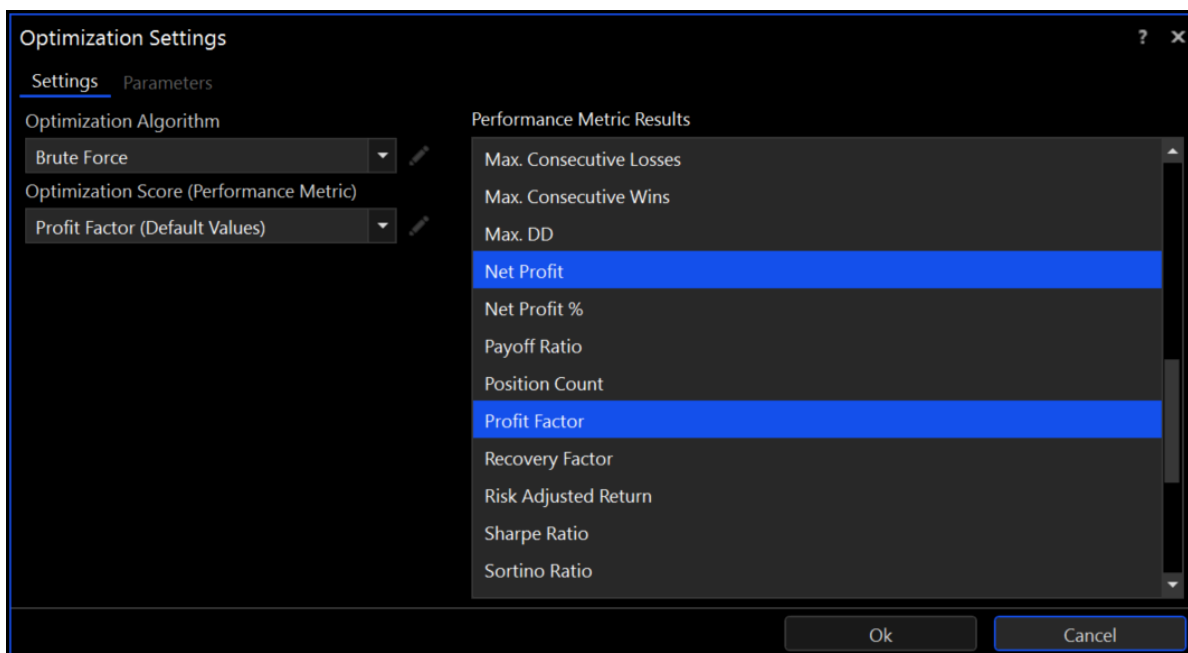
Script Parameters - Genetic		
Parameter Values Template		
Default Values		
Generations	10	▲▼
Chromosomes	20	▲▼
Parents	3	▲▼
Mutations	1	▲▼

6.2 Choosing Your Target: What Are You Actually Optimizing For?

This is probably the single most important decision you'll make before you click "Run." The setting you choose to optimize for is the one single goal the Genetic Algorithm will focus on. It's the "fitness function," called the "Performance Metric" in Tickblaze. This score determines which optimizations are considered "parents" and which ones get thrown out. If you don't get this right, the algorithm will happily create a perfectly designed failure.

Here are two common choices and what you need to watch out for:

- **Target #1: Net Profit (The Obvious Trap)** At first glance, this seems like the only thing that could possibly matter. Why wouldn't you want to solve for the most amount of money possible? The danger is that optimizing purely for the highest profit is the fastest way to create a reckless strategy. The algorithm will often find a solution that made a fortune by taking on a terrifying amount of risk. You'll see a beautiful, soaring profit in the backtest. But you'll also see a massive drawdown that would've wiped you out in live trading. The algorithm doesn't care about your risk tolerance; it only cares about the goal you gave it.
- **Target #2: Profit Factor (A Much Smarter Choice)** What is Profit Factor? It's the ratio of your total profits to your total losses. A Profit Factor of 2 means you made twice as much on winning trades as you lost on losing ones. Why is it better? This metric is naturally balanced. To achieve a high Profit Factor, a strategy can't just have a few huge winning trades. It must also control its losses. It forces the algorithm to find a solution that is both profitable and consistent. It's a much better measure of a strategy's quality and efficiency, not just its raw horsepower. For many traders, this is the best all-around target to aim for.



The bottom line is this: The goal you choose directly shapes the "personality" of the final strategy. Optimizing for Net Profit will give you a gunslinger. Optimizing for Profit Factor will give you a smart and efficient business. There are many other choices as well, so do your homework. Find out what's best suited to your own risk tolerance and trading personality.

CHAPTER 7: THE GOLDEN RULES: ROBUST BACKTESTING AND VALIDATION

Finding "optimal" settings is the easy part. Proving they aren't just a fluke of historical data is much harder. A strategy that looks amazing on past data but fails in live trading is overfit. This is also commonly called "curve-fit." Another common term for this is "cherry-picking." You've simply picked the best-looking results from a particular historical period. The goal of validation is to ensure your strategy is robust and has a real, repeatable edge.

7.1 RULE #1: ALWAYS USE OUT-OF-SAMPLE (OOS) DATA

This is the most critical rule, so listen closely. You must never validate your strategy on the same data you used for optimization.

Why is this the case? Optimizing on a dataset is like giving the system the answer key to a test. When you use that same data to "validate" the results, you're not proving the strategy is good. You're just confirming that it can solve a problem it already knows the answer to. By using a separate, unseen dataset for validation, you're giving the strategy a new test. A good performance here is a true sign that the strategy's logic is sound.

- **The Process:**

1. **Split Your Data:** Divide your historical data into two separate periods.
2. **In-Sample (IS):** This should be the first 70-80% of your data. You must use this period only for optimization.
3. **Out-of-Sample (OOS):** This is the most recent 20-30% of your data. This data must remain untouched during the optimization process.
4. **Optimize:** Run a Brute-Force or Genetic optimization on the in-sample data only.
5. **Validate:** Take the best parameter set found in the IS period. Then, run a single backtest on the out-of-sample data.

If the strategy performs well on the OOS data, it's a strong sign that it's robust. A significant drop-off in performance indicates that your strategy is likely overfit.

7.2 RULE #2: IMPLEMENT WALK-FORWARD ANALYSIS (WFA)

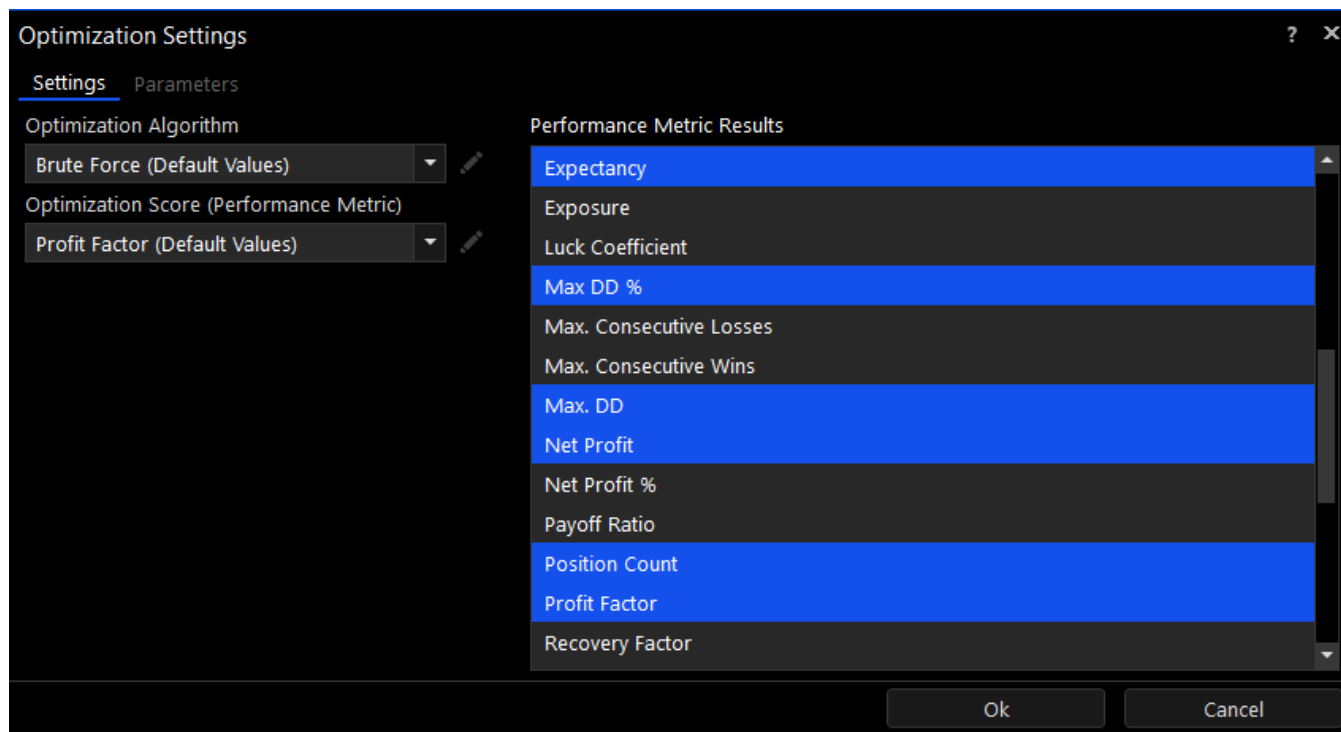
WFA is a more advanced form of OOS testing. It simulates how you'd actually trade by periodically re-optimizing as market conditions change.

- **The Process:**

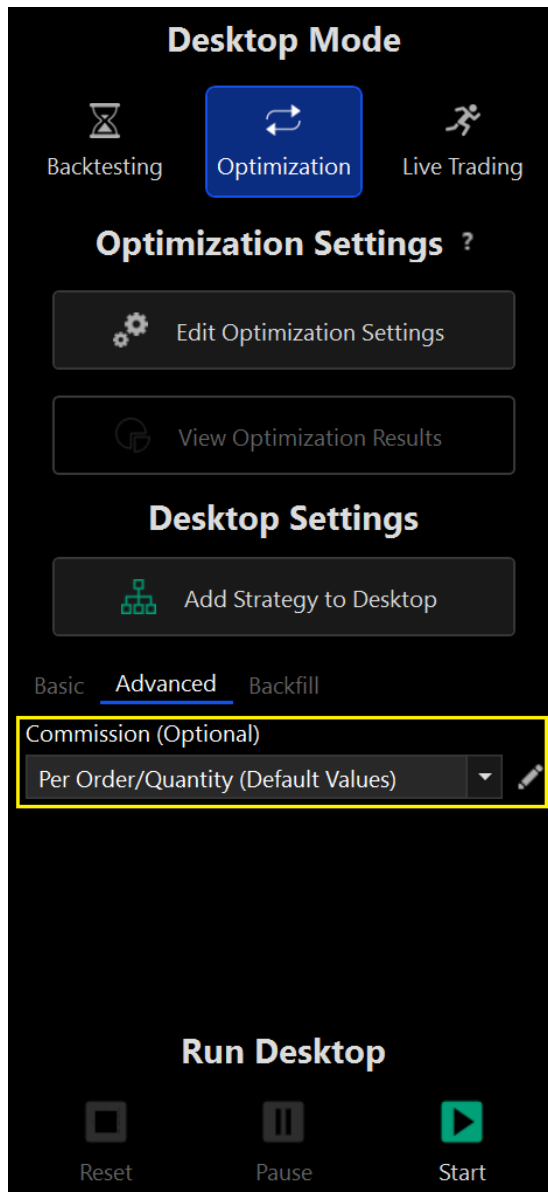
1. Divide your data into several chunks, for example, 12 chunks of 1 month each.
2. Optimize the first chunk (Month 1) and test the resulting parameters on the next chunk (Month 2).
3. Next, you'll optimize on Month 2 and test the results on Month 3.
4. Repeat this process, "walking forward" through your entire dataset. This provides a more realistic estimate of performance and confirms that your strategy is adaptable.

7.3 RULE #3: ANALYZE MULTIPLE PERFORMANCE METRICS

Don't focus solely on Net Profit. A truly robust strategy performs well across a whole range of different metrics. When you run an optimization, you must choose a Performance Metric to act as your scorecard. While Net Profit is desirable, it's often not the best choice because it completely ignores risk. For more robust strategies, you must prioritize risk-adjusted metrics like these:



- **Profit Factor:** This is your Gross Profit divided by Gross Loss. It's an excellent metric that balances profitability with loss control. A value of 1.5 or higher is generally considered to be desirable.
- **Sharpe Ratio / Sortino Ratio:** These measure your return relative to the volatility or risk you took to achieve it. They reward smooth and consistent equity curves.
- **Expectancy:** This is the average profit or loss you can expect per trade. A consistently positive expectancy is fundamental for long-term success.
- **Max Drawdown:** This is the largest peak-to-valley drop in your account equity. This number tells you how much capital you need to survive a losing streak. It's a critical measure of your overall risk.

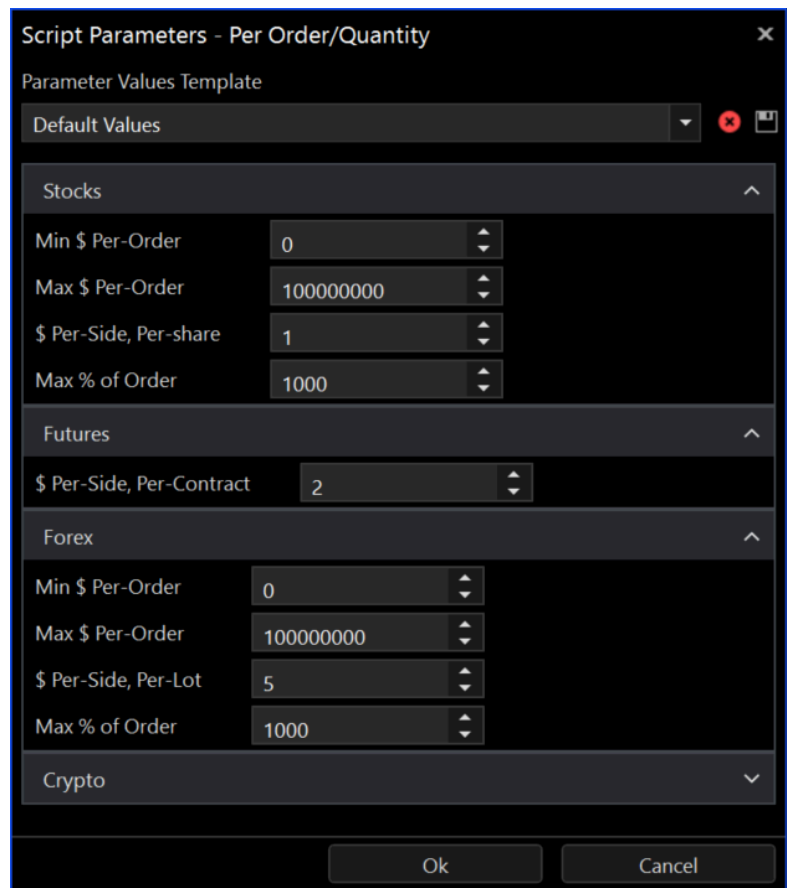


7.4 RULE #4: INCLUDE REALISTIC COSTS

Your backtests must account for the realities of trading:

- **Commissions:** This is the fee you pay for each trade.
- **Slippage:** This is the difference between your expected fill price and the actual fill price. Even a few ticks of slippage can turn a profitable short-term strategy into a loser.

Remember that Tickblaze allows you to set custom commissions. You can do this when running optimizations, backtests, and even in live trading.



CHAPTER 8: BEYOND THE NUMBERS: INTERPRETING YOUR RESULTS

When you analyze a backtest or optimization report, you must look beyond the bottom line.

8.1 THE FOUR MOST IMPORTANT METRICS

- **Net Profit:** The total profit or loss. This is the ultimate outcome of the strategy.
- **Maximum Drawdown (%):** The largest peak-to-valley decline in your account equity. This is your primary measure of risk. It tells you how much capital you need to survive the worst losing streak.
- **Profit Factor:** Gross profits divided by gross losses. A value above 1.5 is generally considered good. It measures how much you make for every single dollar you lose.
- **Sharpe Ratio:** A measure of your risk-adjusted return. It tells you how much return you're getting for the amount of risk you take on. A value above 1.0 is considered good.

8.2 OTHER KEY METRICS TO WATCH

- **Win Rate:** The percentage of your winning trades.
- **Average Win vs. Average Loss:** This shows your risk/reward profile per trade.
- **Expectancy:** The average profit or loss you can expect on each trade. This must be a positive number.
- **Max Consecutive Losses:** The longest losing streak. This number is crucial for your psychological preparation.

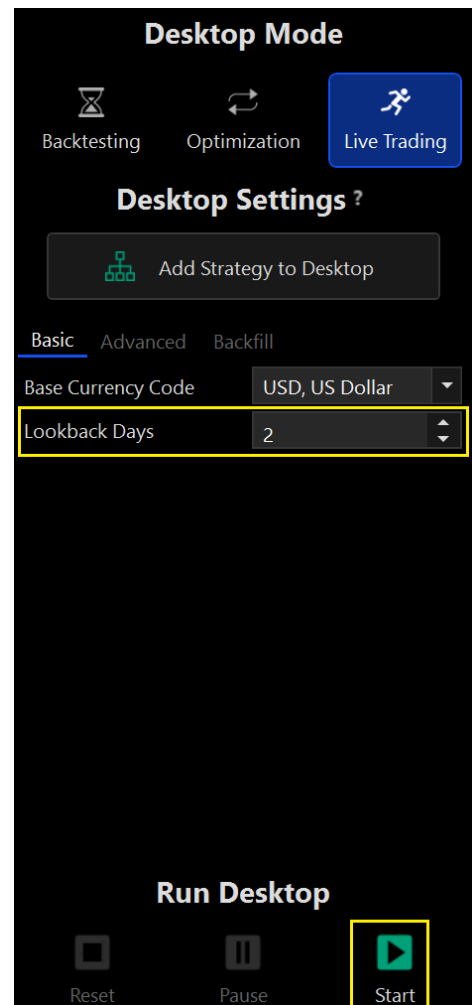
CHAPTER 9: FROM TEST TO LIVE: DEPLOYMENT AND RISK MANAGEMENT

After your strategy has been rigorously optimized and validated, you're ready for the next step. It's time to prepare it for live trading. This final step requires careful configuration in the user interface.

9.1 ACTIVATING YOUR STRATEGY FOR LIVE TRADING

Follow these exact steps to deploy your finalized strategy for live trading.

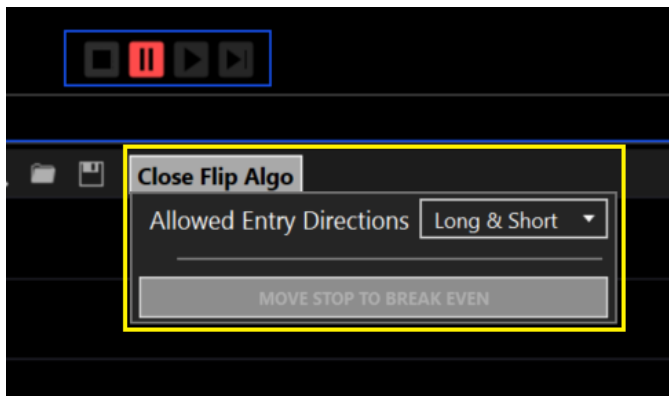
1. **Select Live Trading Mode:** In the main Settings tab of the Strategy Desktop, go to Desktop Mode. Click on Live Trading.
2. **Finalize Configuration:** Ensure the strategy you want to deploy has its final, optimized parameters loaded. You can't change parameters once the strategy is live without resetting the entire session.
3. **Activate the Strategy:** In the Desktop Strategies list, check the Is Active box. Do this for the single strategy you intend to run. It's critical to uncheck all other strategies to prevent them from running simultaneously.
4. **Set Lookback Period:** In the Desktop Settings panel on the left, set the Lookback Days. This determines how much historical data will load onto your live chart. This data is necessary for your indicators to calculate correctly. A value of 2-3 days is common for most intraday strategies.
5. **Go Live!** Click the green Start button at the bottom of the Run Desktop panel. A live chart will now open in your Workspaces tab. Your strategy is now active. It'll execute trades through your connected broker according to its logic.



9.2 MANAGING YOUR LIVE STRATEGY

Once your strategy is live, you have several tools to monitor and manage it. You can do this without needing to perform a full reset of the system.

- **On-the-Fly Adjustments (Algo Engine feature):** For Algo Engine strategies, a toolbar will appear on your live chart. This toolbar contains a dropdown menu that allows for manual override of the strategy's directional bias. You can change the Allowed Entry Directions between Long & Short, Long Only, Short Only, or None. This allows you to intervene without stopping the algo.



- **Monitoring Performance:** You can freely switch to the Performance, Positions, and Orders tabs. This lets you monitor the live session's activity in real-time without interrupting the strategy.

- **Stopping the Strategy:** To temporarily stop the strategy from taking new trades, go to the Settings tab and click Pause. The strategy will remain active and can be resumed by clicking Start again. To permanently stop the session, you must click Reset.

- **Warning:** This will end the live session.

All session-specific statistics will be lost unless you export them first. **This action will NOT close any open positions currently managed by the algo.**

9.3 IMPLEMENT RISK CONTROLS

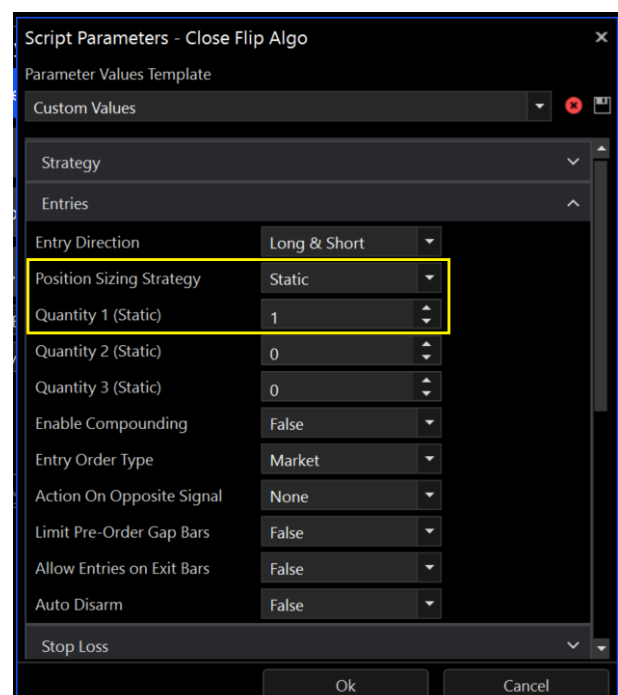
Before going live, it's absolutely essential that you implement risk controls. For users with Algo Engine strategies, the Money Management component provides a powerful suite of tools. These automated circuit breakers are there to protect your capital.

- Set your DayMaxLoss \$ to a level you're comfortable losing in a single day.
- Set your DayMaxGoal \$ to lock in profits and prevent you from giving them back.
- Use the High Water Mark % to protect profits once you've had a good day.

These Algo Engine controls ensure disciplined trading. They do this by automatically halting the strategy when your predefined limits are met.

9.4 A FINAL WORD OF CAUTION: START SMALL

When you first deploy a strategy, you must trade it with the smallest possible size. This could be just 1 micro contract. Monitor its live performance closely and compare it to your backtested expectations. Only after you've confirmed it's behaving as expected should you gradually increase your size.



CHAPTER 10: KEEPING YOUR EDGE: THE ART OF RE-OPTIMIZATION

There's a very common misconception among traders. They believe an automated strategy is a "set it and forget it" money printer. This is an incredibly dangerous assumption that you must avoid. Markets are dynamic. A strategy optimized on historical data is only prepared for a past that will never repeat itself exactly. The future will always be different.

To maintain a strategy's effectiveness, you must periodically re-optimize it. This allows it to adapt to changing market conditions. This process keeps your strategy aligned with the most recent market behavior. This increases its probability of performing well in the immediate future. The question then becomes: "How often should I re-optimize?" While there's no single correct answer, a structured process can provide a robust framework.

10.1 A Weekly Re-Optimization Workflow

The following workflow is based on a simple principle. Market behavior, while not identical, tends to exhibit short-term persistence. A strategy that performed well this week is unlikely to fail catastrophically next week. This process is designed for you to perform each weekend to prepare for the upcoming trading week.

- **Step 1: Optimize on the Most Recent Week** Using the techniques described in this guide, perform a thorough optimization of your strategy. Use only the data from the most recent trading week (e.g., this past Monday through Friday). Your goal is to find a robust set of parameters that performed well in the very latest market environment.
- **Step 2: Validate on the Prior Week (Recent OOS)** Take the best parameter set you found in Step 1. Run a single backtest on the week prior to your optimization week. This serves two critical purposes. First, it uses Out-of-Sample (OOS) data, which is a core principle of robust validation. Second, it uses recent OOS data. This period is close enough to be relevant to current market conditions. It avoids the trap of simply "getting lucky" on a continuation move from one week to the next. By testing on the week that came before, you validate the strategy's logic in a similar environment.
- **Step 3: Analyze the Validation Results** The goal of the validation test in Step 2 isn't necessarily to see a massive profit. What are you looking for? You're looking for resilience. A small loss, a break-even result, or a modest gain are all acceptable outcomes. The key is to confirm that the parameters didn't completely fall apart in a closely related environment. If the strategy survives this test, you can have a higher degree of confidence in its stability.
- **Step 4: Deploy for the Coming Week** With your parameters now validated, you're ready to deploy the strategy for the upcoming week. At the end of that week, you'll repeat this entire process. You'll use the week that just ended as your new optimization period. This creates a continuous cycle of adaptation and validation for your strategy.

CHAPTER 11: AI AS YOUR TRADING ASSISTANT

You'll make countless decisions when developing a trading strategy. This includes choosing parameter ranges and interpreting complex performance reports. Large Language Models (LLMs) like Google Gemini, ChatGPT, or Claude can be powerful assistants. They can save you time and provide insights you might otherwise miss. An AI can act as a knowledgeable partner who understands the principles of algorithmic trading. However, you must communicate effectively to get the most out of this partnership. Here are four tips for working with an AI trading assistant.

11.1 Provide Specific Context

The AI knows everything about trading in general. But it knows nothing about your specific tools or your goals. You must provide it with the necessary context to help you.

- **Tell it your platform:** Start by saying, "I'm using the Tickblaze trading platform."
- **Explain the strategy:** Describe your strategy, such as, "I'm running the 'Close Flip Algo,' which is an Algo Engine strategy." "It looks for a two-bar reversal pattern."
- **Detail the available parameters:** You should list the specific filters, settings, and indicators you have available for optimization. This includes things like the Moving Average Filter, Momentum Filter, or money management controls.
- **Upload screenshots of settings and features:** Providing screenshots of your specific platform or algo settings can be very effective. The AI should be able to read and understand what tools are available to you.

Without this specific information, the AI will make incorrect assumptions. It may even suggest features that don't exist in your platform.

11.2 Use Raw Data Over Screenshots

While an AI can often read text in an image, it's far more reliable to provide raw data. You should export your optimization results or backtest reports as a CSV file. Then, upload that file directly. This ensures the AI has the exact numerical data. It can then analyze it without making any interpretation errors. That said, you should always double-check any mathematical calculations the AI performs.

Tickblaze

MENU

Community

Trade Rooms

My Desktop Str

SettingsWorkspacesStrategiesPositionsOrdersLogsPerformance

Accounts / StrategiesSelect AllUnselect AllSelect SymbolsStart DateEnd DateMonte CarloCompare

SummaryPeriod BreakdownSymbol BreakdownProfit DistributionMAE DistributionMFE DistributionGraphs

Ulcer Index1,125.33Entry Efficiency (Win)62.10%65.00%58.29%

Van Tharp SQN-1.33Exit Efficiency (Win)100.00%100.00%100.00%

Win / Loss Ratio0.94Max. Consecutive Wins556

Custom Performance MetricsLosing Positions

SettingsHeadingValueLongShort

HeadingValue

Export Results

Total Losses1588573

Total Loss PnL\$-5,745.75\$-2,728.75\$-3,017

Max. Loss PnL\$-261.5\$-152.75\$-261.5

Avg. Loss PnL\$-36.37\$-32.1\$-41.33

Avg. Loss Time22.7 / m21.15 / m24.49 / m

Total Efficiency (Loss)-71.78%-70.23%-73.52%

Entry Efficiency (Loss)25.86%25.33%26.46%

Exit Efficiency (Loss)2.36%4.44%0.03%

Max. Consecutive Loss...997

11.3 Ask Open-Ended Questions

You must avoid telling the AI what you want it to find. For example, don't ask, "Doesn't this high Net Profit prove my strategy is good?" Instead, ask an open-ended question that encourages objective analysis. For example, you could say:

"I've attached a CSV of my latest optimization run. My goal was to optimize for the highest Profit Factor. Based on these results, what patterns, trade-offs, or potential weaknesses do you observe?"

This approach allows the AI to detect subtleties in the data that you might have overlooked. It might see a high drawdown that accompanies the highest profit factor, for instance.

11.4 Use AI to Overcome Blocks

If you ever feel stuck or uncertain about what to test next, describe your situation to the AI. Explain your goal, what you've tried so far, and where you're feeling confused. The process of articulating the problem can be very helpful. This, combined with the AI's ability to reflect your situation back to you, can often unlock your next idea. It can provide a clear path forward for your research.

CHAPTER 12: FINAL TIPS FOR SUCCESS

- **Start Simple:** Don't begin with a strategy that has dozens of rules and filters. Instead, you should start with a core concept and test it thoroughly. Then, you can slowly add complexity one filter at a time.
- **Keep Good Records:** When you find a promising set of parameters, save it as a template. You should take screenshots of your settings and document your validation process carefully.
- **Keep Learning:** The markets are always evolving. A strategy that works for you today may not work tomorrow. You must continuously monitor your strategies and be prepared to re-optimize and adapt.

Tickblaze thanks you for your business and use of our software. Should you need assistance or support please send an email to support@tickblaze.com.