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## BetReversals6 Strategy Manual for NinjaTrader 8

### Overview

**Strategy Name:** BetReversals6

**Version:** version 6.0 (last update noted: June 5, 2025)

**Developer:** Bars Edge Trader ([www.barsedgetrader.com](http://www.barsedgetrader.com))

### Description:

BetReversals6 is a heuristic trading strategy designed to predict and trade market reversals based on patterns, market cycles, and various technical indicators. It combines momentum, volatility, and volume analysis to identify potential reversal points. The strategy supports both long and short entries, uses timers for session segmentation, and includes profit/loss management, ATM (Auto Trade Management) integration, alerts, and visual displays. It is optimized for instruments like futures (e.g., ES, NQ) and works in real-time, playback, or Strategy Analyzer modes.

### Key Features:

**Reversal Prediction:** Uses EMA crossovers, ATR for volatility, Donchian Channels for range, Key Reversal patterns, Bar Patterns and OBV for volume confirmation.

**Probability Calculation:** Computes a reversal probability (0-1) based on weighted factors from ATR (Dynamic Calculated Sum), Donchian proximity (ATR Dynamic), Bar patterns, SMA crosses (ATR Dynamic), delta volume (ATR Dynamic), Key Reversal patterns, and cycle history.

**Timers:** Divides the trading day into up to 3 timed segments with customizable start/end times, brushes, and opacities.

**Profit/Loss Management:** Enforces max profit/loss limits, end-of-session exits, and ATM templates for advanced order management.

**Alerts and Displays:** Sound/email alerts, visual arrows/diamonds/lines, and on-chart data panels for probability and metrics.

**Vendor Licensing:** Includes a license check, Bars Edge Trader.

### Important Notes:

- This strategy is for educational and discretionary use. Back-test thoroughly before live trading.
- It requires sufficient historical bars (at least 20) and performs best on tick or minute charts.
- No internet access or external package installation is supported in the code interpreter environment.

### Tick Replay Data must be enabled

- The strategy does not install additional packages and relies on pre-installed libraries (e.g., NumPy, SciPy in Python environments, but primarily C# for NinjaScript).

**Log/Alert notification:** Audible sound signals are provided when the reversal probability is greater than the probability threshold and may NOT mean that an entry will take place, it is only a signal that the probability is high.

## Trading Notes for BetReversals6 Strategy

### Probability Calculation and Filters

The probability calculation in BetReversals6 is dynamic and requires minimal adjustments or support. The key filters that can be modified to fine-tune performance include:

- **Minimum ATR Threshold:** Adjusts the volatility requirement for entries.
- **Probability Threshold:** Sets the minimum reversal probability needed to trigger an entry (default: 0.50).
- **Range:** Controls the allowable span between support and resistance levels (lower values reduce the range; default: 0.30).
- **Instrument Timing:** For example, switching from a 5-minute to a 4-minute timeframe to optimize entry frequency.

The reversal probability is computed using current bar tick bar data, with a lookback to previous bars to forecast the likelihood of a future reversal. During periods of high volatility, the actual entry point may occur 2 to 5 bars ahead. To account for this, implement a trailing stop and set a sufficiently wide stop loss to capture the market reversal. In lower volatility conditions, reversals typically manifest within 1 to 3 bars.



## Recommended Chart Setup

For all futures markets, a 5-minute timeframe has proven effective across both high- and low-volatility environments. This setup balances responsiveness and reliability.

## Timers and Market Timing

The strategy includes three 24-hour timers, which can be configured based on prior market research to optimize entry times during intraday sessions. For example:

- Avoid trading during high-impact events like FOMC announcements (e.g., at 2:00 PM ET), U.S. administration press conferences, or economic releases such as PCE, CPI, or oil inventory reports by timing out of the market. Timers automatically reset at the start of each trading day. As traders, our primary control over the market is the timing of our entries—use these timers strategically to align with favorable conditions.

## ATM and Profit/Loss Management

Each of the three timers is associated with its own ATM (Auto Trade Management) template and profit/loss (P&L) settings. This allows customization for varying volatility levels throughout the day:

- Different times often exhibit distinct volatility profiles, so tailor ATM setups to secure profits or minimize losses accordingly.
- For instance, wider stops or aggressive profit targets can be applied during volatile periods, while tighter controls suit quieter sessions.

## Using Strategy Analyzer

When testing in NinjaTrader's Strategy Analyzer:

- Utilize tick data and trade volume delta for accuracy.
- Note limitations: Volume delta does not integrate well with Strategy Analyzer, and ATM-based entry/exit logic (the strategy's core mechanism) is incompatible, rendering full simulations unreliable.
- Instead, focus Strategy Analyzer tests on evaluating timeframe frequency (e.g., 4 minutes vs. 5 minutes) and profit/loss targets. It will not provide comprehensive correlated data beyond these aspects. For more robust testing, rely on Market Replay or live forward-testing.
- All Timers are Sequential 24 hour timers, all logged data including P&L data will reset on new trading day, So if you are using a timer to run 5 PM to 7 AM, all your calculation data will reset at 12:00:01 AM when the system gets a new New-Trading-Day reset from NinjaTrader.

## Notes

- The algorithm's dynamic nature simplifies the optimization process by automatically adjusting internal filters.
- Strategy is designed to operate at 2 mins to 15 mins, 1000 tics to 5000 tics and will NOT work on RENKO bars
- Regularly monitor performance to ensure alignment with market conditions.
- Emailing may not be processed depending on what else the system is doing.
- **Emailing Requires setup in NinjaTrader Share Services.**
- The Max Profit and Max Loss looks at unrealized profit + total profit during an entry and will clamp and stop trading if the unrealized profit + total profit are equal or greater than the settings.
- The total P and L used for the strategy will reset on the next Timer 1 start up.
- Data calculation uses TICK REPLAY, you must enable it.
- Enable End of Session is only used for canceling all entries if the Broker does not support TIF. If you need to use this set it several minutes prior to intraday market close. This will reset at 5:10 PM CME time.
- All timers use NinjaTrader's time setup, if you have chosen CME, it will use CME time.
- All timers are Sequential 24-hour timers, all logged data including P&L data will reset on Timer 1 start up, so if you are using a timer to run 5 PM to 7 AM, all your calculation data will reset again the next day when timer 1 starts again or if you disable and re enable strategy.
- Log/Alert audible sound occurs when a reversal potential is calculated on price action and does NOT mean an entry will take place, it is just a signal to the trader that a possible entry may occur. Please review the dynamic filters that make up the probability.



## Installation

### 1. Prerequisites:

- NinjaTrader 8 (version 8.0 or later).
- Ensure your NinjaTrader account has access to real-time data for the instrument.
- For ATM: Configure ATM templates in NinjaTrader via Tools > ATM Strategies.

### 2. Import the Strategy:

- Download file named `BetReversals6.zip`.

#### Import into NinjaTrader 8:

- o Open NinjaTrader 8.
- o Navigate to **Tools > Import > NinjaScript Add-On**.
- o Select the downloaded BetReversals6.zip file.
- o Follow the prompts to complete the import.

### 3. Add to Chart:

- Open a chart for your instrument (e.g., ES 09-25 on a 1-minute chart).
- Right-click > Strategies > Add > Select "BetReversals6".
- Configure parameters (see below) and enable.

### 4. Testing:

- Use Market Replay or \*\*Strategy Analyzer for back-testing.

#### How the Strategy Works

#### Indicators Used **NONE** are Adjustable (They are Dynamically controlled via ATR):

- Fast EMA (default: 7 periods) and Slow EMA (default: 14 periods) for trend.
- ATR (default: 14 periods) for volatility filter (min threshold: 2).
- Donchian Channel (default: 14 periods) for support/resistance.
- KeyReversalUp/Down (default: 1 period) for reversal patterns.
- OBV for volume confirmation.



### **- Entry Conditions (Long/Short):**

- Time within active timer(s).
- Market flat (no open position).
- $ATR \geq \text{Min Threshold}$ .
- Donchian span large enough ( $ATR / (\text{Upper} - \text{Lower}) \leq \text{Range parameter}$ , default 0.30).
- Strong buying/selling via OBV.
- Proximity to Donchian edges.
- Reversal probability  $\geq \text{Threshold}$  (default: 0.50).
- Draws arrows on entry (green for long, red for short).

### **Probability Calculation: **\*\***(All Dynamically Adjusted via ATR)**

- Weighted sum (normalized 0-1):
  - ATR contribution (15%): Higher volatility boosts weight.
  - **\*\***Donchian proximity (15%): Closer to edges increases probability.
  - **\*\***Key Reversal (20%): Up/Down patterns.
  - Bar Pattern Type (20%): Pin bar (1), Engulfing (2), Multi-bar (3).
  - **\*\*** EMA Cross (15%): Bullish/bearish cross.
  - Delta Volume (25%): Bid/Ask volume change (85%+ threshold).
  - Cycle History (10%): Balances bullish/bearish cycles.
- Displays diamond on high-probability bars.

### **- Exits:**

- Profit Target/Stop Loss (ticks, per timer).
- Max Profit/Loss clamps (exits all if hit).
- End-of-session close (optional).
- ATM handles advanced exits if enabled.



#### **- Timers:**

- Segments the day (e.g., Timer 1: 08:30-10:30 ET).
- Different ATM templates or PT/SL per timer.
- Visual rectangles on chart.

#### **- Profit/Loss Management:**

- Tracks realized/unrealized P&L.
- Emails on entries/P&L (optional).
- Stops strategy on max loss/profit.

#### **- Displays:**

- Support/Resistance lines “calculated on Donchian channels (blue/cornflower for in-range, red for out-of-range).
- On-chart text panels (bottom-right by default) showing probability, ATR, range, delta %, bar %.

#### **Execution Flow**

1. Check session reset and bar requirements.
2. Update timers and indicators.
3. Calculate probability and patterns.
4. Check entry conditions; enter long/short if met.
5. Manage P&L, ATM, and exits.
6. Draw visuals and send alerts.



## Parameters

Parameters are grouped in NinjaTrader's property grid..

### ATR Filters

-ATR Period (int, default: 14): Period for ATR indicator.

-ATR Plot Color (Brush, default: DarkCyan): Color for ATR plot.

-Minimum ATR Threshold (double, default: 2): Min ATR value for entries.

Enable ATR on Chart (bool, default: true): Show ATR on chart.

### System Alert Parameters

Enable Reversals Sound Alert (bool, default: false): Play sound on high-probability reversals. This alert does NOT mean that an entry will occur, it alerts to probability.

Alert Sound File (string, default: "\\sounds\\Alert1.wav"): Path to sound file.

### System Parameters Colors

Arrow Color Long (Brush, default: Green): Long entry arrow.

Arrow Color Short (Brush, default: Red): Short entry arrow.

Alert Background Color (Brush, default: Blue): Alert box background.

Alert Text Color (Brush, default: White): Alert text.

Support Line Color (Brush, default: Blue): In-range support line.

Resistance Line Color (Brush, default: CornflowerBlue): In-range resistance line.

Probability Diamond (Brush, default: Purple): High-prob diamond.

Support Line Color Out of Range (Brush, default: Red): Out-of-range support.

Resistance Line Color Out of Range (Brush, default: Red): Out-of-range resistance.





## System Parameters

Max Profit \$ (double, default: 500): Exit all and stop if profit  $\geq$  this.

Max Loss \$ (double, default: -500): Exit all and stop if loss  $\leq$  this.

End of Session Close All Entries (DateTime, default: 15:45): Time to close positions.

Enable End of Session Time (bool, default: false): Enable session close.” **Only needed if Broker does NOT support TIF**

Email Address (string, default: "customer@winners.com"): For entry/P&L emails.

Enable Email on Entries & P&L (bool, default: false): Send emails. **“NinjaTrader 8 SHARE must be configured to send emails”**

## System Profit Loss (if not using ATM or Testing on Strategy Analyzer)

ATM Template Name Time 1/2/3\*\* (string, default: "None"): ATM template per timer.

Enable ATM Profit & Loss\*\* (bool, default: true): Use ATM for orders.

Order\_Quantity Timer 1/2/3\*\* (int, default: 1): Contracts per timer.

Profit\_Target Timer 1/2/3\*\* (int, default: 50/55/60 ticks): Profit target.

Stop\_Loss\_Target Timer 1/2/3\*\* (int, default: 30/35/40 ticks): Stop loss.

## Timer 1/2/3

-Timer X Start/End\*\* (DateTime): Start/end times (e.g., Timer1: 08:30-10:30).

Enable Timer 2/3\*\* (bool, default: true): Enable additional timers.

Timer X Brush\*\* (Brush, default: DodgerBlue/ForestGreen/Crimson): Background color.

Timer X Brush Opacity\*\* (int, default: 10): Opacity (0-100).

## Dynamic Parameters

Probability Threshold (double, default: 0.50): Min probability for entry (0-1).

Range (double, default: 0.30): Max ATR/(Donchian Upper-Lower) for entries (0.01-0.5).



## Display Parameters

Display Probability Data Bottom/Top Right/Left (bool, one default: true for Bottom Right): Show data panel position.

## Usage Tips

Back testing: Use Strategy Analyzer with at least 256 bars lookback. Test on historical data, **"Tick Replay MUST be enabled"**

Live Trading Start with small quantities. Monitor for overlaps in timers (code auto-resets if detected).

ATM Integration: Ensure templates exist and match names exactly (case-sensitive).

Customization: Adjust thresholds for volatility (e.g., higher ATR min for choppy markets).

Performance: Disable unnecessary displays/alerts for faster execution.

Errors: Common issues: Timer overlaps (auto-fixed), invalid ATM names (popup alert), insufficient bars.

## Warnings and Risks

Risk of Loss: Trading involves substantial risk. This strategy does not guarantee profits.

No Financial Advice: Use at your own risk. Back-test and paper trade first.

Dependencies: Relies on accurate data; slippage/real-time errors may occur.

Bugs/Updates: Code includes error checks (e.g., timer overlaps, ATM failures). Review for updates.

License: Code has a commented vendor license; ensure compliance if required.

For support: Contact [support@barsedgetrader.com](mailto:support@barsedgetrader.com) or visit [www.barsedgetrader.com](http://www.barsedgetrader.com).



## Disclaimer

**Futures Trading Risk Warning:** The Bet Reversals6 is a tool for technical analysis and does not guarantee trading success. Trading futures, forex, stocks, or other financial instruments involves substantial risk of loss and is not suitable for all investors. Past performance is not indicative of future results. You may lose all or more of your initial investment. The strategy provides no assurance of profitable trades and should not be relied upon as the sole basis for trading decisions. Always conduct thorough testing, including back-testing and paper trading, and implement robust risk management strategies before using the indicator in live trading. Consult with a qualified financial advisor to ensure that trading, particularly in futures, aligns with your financial goals and risk tolerance. Bars Edge Trader and the developers of Bet Reversals6 are not responsible for any financial losses incurred while using this indicator.

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