

# Traders Dynamic Index Shift

Expert Advisor Documentation

| PLATFORM           | TYPE                                  | TIMEFRAME | WEBSITE                                                |
|--------------------|---------------------------------------|-----------|--------------------------------------------------------|
| MetaTrader 5 (MT5) | Momentum Shift (Oscillator Crossover) | M15 – H1  | <a href="http://www.algobot.live">www.algobot.live</a> |

**⚠ Important Disclaimer** This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

## Overview

**Traders Dynamic Index Shift** is a momentum-shift Expert Advisor built on the **Traders Dynamic Index (TDI)** — Dean Malone's compound oscillator. What makes this EA distinct from ordinary RSI systems is that *every* component is computed on the RSI *series itself*, never on price. The trade trigger is an RSI-of-RSI crossover and the regime filter is the volatility (standard deviation) of the RSI stream.

The strategy tracks four lines, all derived from a single RSI stream:

- **Green (fast signal)** —  $SMA(RSI, FastSignal)$ , the quick, reactive momentum line.
- **Red (slow signal)** —  $SMA(RSI, SlowSignal)$ , the smoothed confirmation line.
- **MBL (base line)** —  $SMA(RSI, BandPeriod)$ , RSI's own mean and regime anchor.
- **Bands (volatility)** —  $MBL \pm BandStdMult \times StdDev(RSI, BandPeriod)$ ; the bandwidth is  $2 \times BandStdMult \times StdDev(RSI, BandPeriod)$ .

A raw green/red RSI crossover fires constantly and gets chopped to death in flat markets. TDI's own volatility bands solve this: when the RSI stream is quiet the bands pinch shut (low bandwidth), signalling exactly the low-conviction chop the EA must sit out. A crossover is only taken when RSI volatility has expanded, the fast line is on the correct side of the midline, and the base line's slope agrees. Risk is ATR-based and self-scaling, so the logic works on any symbol or timeframe.

**Indicator-of-indicator.** In MQL5 this is expressed by passing the RSI handle as the *applied price* to `iMA` and `iStdDev`, so all three moving averages and the standard deviation are taken over the RSI buffer rather than over price.

## How It Works

The EA acts **once per newly-closed bar** on the chart's primary timeframe. Nothing is read from a second timeframe. On each new bar it evaluates the freshly-closed bar (shift 1) against the bar before it (shift 2) to detect the crossover and the base-line slope.

### Entry Logic

All four conditions must line up on the same closed bar. Requiring the crossover, the midline side, the base-line slope *and* band expansion to agree filters out the vast majority of the false flips that make lone oscillator crosses unprofitable.

#### LONG ENTRY

- **Crossover** — Green crosses **above** Red ( `greenPrev ≤ redPrev` and `greenNow > redNow` ).
- **Midline** — Green is **above** `SignalLevel` (default 50), confirming bullish momentum.
- **Regime slope** — The base line MBL is **rising** ( `mblNow ≥ mblPrev` ).
- **Volatility** — Bandwidth `≥ BandWidthMin` — a real RSI impulse is under way.

#### SHORT ENTRY

- **Crossover** — Green crosses **below** Red ( `greenPrev ≥ redPrev` and `greenNow < redNow` ).
- **Midline** — Green is **below** `SignalLevel`, confirming bearish momentum.
- **Regime slope** — The base line MBL is **falling** ( `mblNow ≤ mblPrev` ).
- **Volatility** — Bandwidth `≥ BandWidthMin`.

### Exit Logic — ATR Bracket

Every position is opened with a fixed protective bracket; there is no discretionary exit and no trailing. Risk is derived from the Average True Range of the just-closed bar so the distances self-scale to current volatility:

```
risk      = AtrMultSl × ATR(AtrPeriod)
Long  SL  = entry - risk      TP = entry + RewardRatio × risk
Short SL  = entry + risk      TP = entry - RewardRatio × risk
```

With the defaults ( `AtrMultSl = 1.5`, `RewardRatio = 1.8` ) the take-profit sits 1.8× the stop distance away, a positive reward-to-risk profile.

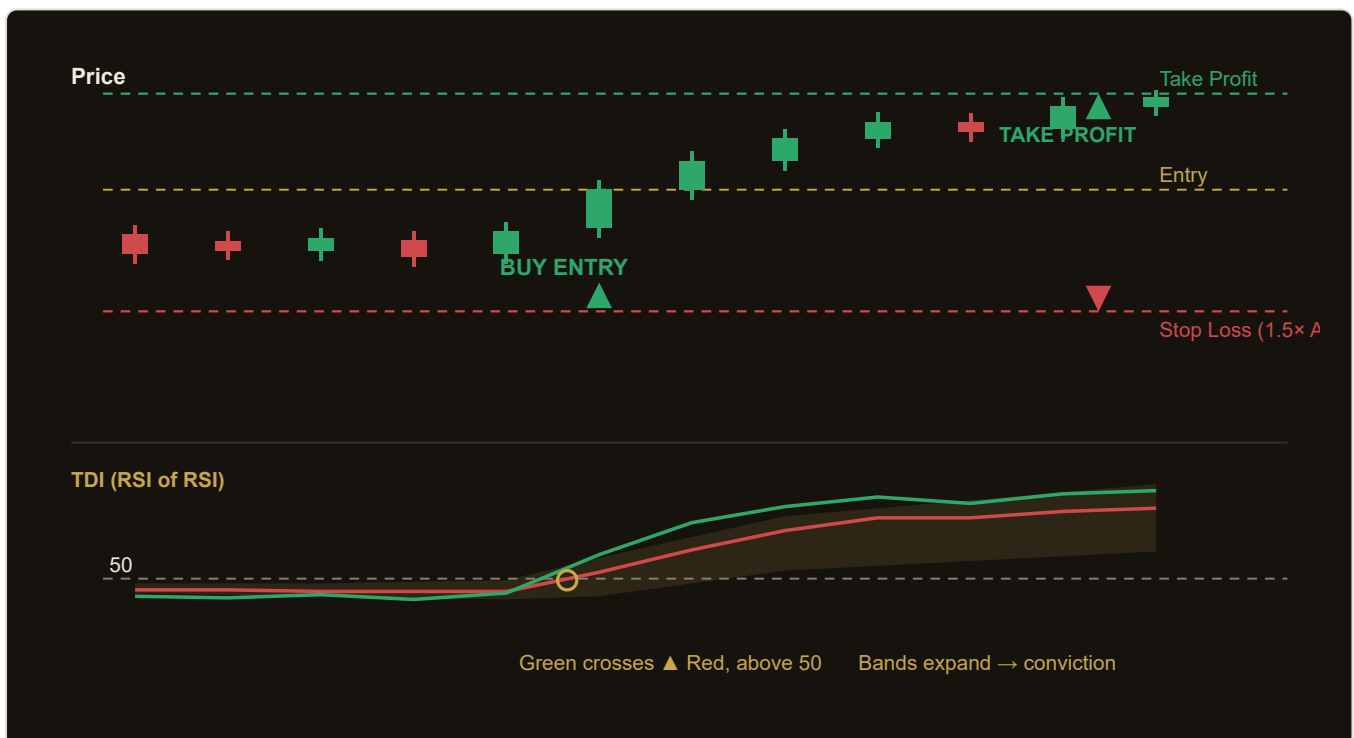
## Trade & Safety Filters

- **One position per magic** — the EA never stacks; while a bracket is live no new order is sent.
- **Spread gate** — signals are skipped when the current spread exceeds `MaxSpreadPoints`.
- **Fast < Slow enforced** — if `SlowSignal ≤ FastSignal` the slow period is bumped to `FastSignal + 1` so the crossover stays meaningful.
- **Warm start** — on init the EA seeds its RSI history from already-closed bars so signals are valid from the first live bar.

**Why band expansion matters.** The bandwidth is the width of the RSI volatility envelope. When RSI is oscillating tightly around its mean, bandwidth collapses toward zero and the `BandWidthMin` gate blocks entries — precisely the flat conditions where oscillator crosses whipsaw. Only when the RSI stream breaks out of its quiet range does the EA allow a trade.

## Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



*Illustrative example only. Actual market behaviour varies.*

## Parameters

| Parameter       | Default | Description                                                                                                        |
|-----------------|---------|--------------------------------------------------------------------------------------------------------------------|
| RsiPeriod       | 13      | Base RSI length that feeds every TDI line. Range 7–34, step 1.                                                     |
| FastSignal      | 2       | Fast RSI moving average — the green trigger line. Range 1–9, step 1.                                               |
| SlowSignal      | 7       | Slow RSI moving average — the red confirmation line. Range 3–21, step 1.                                           |
| BandPeriod      | 34      | Base-line / Bollinger length on the RSI series (the MBL and band midpoint). Range 14–60, step 2.                   |
| BandStdMult     | 1.6185  | Standard-deviation multiple for the RSI volatility bands. Range 1.0–2.5, step 0.05.                                |
| BandWidthMin    | 12.0    | Minimum RSI band width (in RSI points) required — screens out flat, low-conviction chop. Range 0.0–40.0, step 1.0. |
| SignalLevel     | 50.0    | Midline the green line must be beyond (bull above / bear below). Range 40.0–60.0, step 1.0.                        |
| AtrPeriod       | 14      | ATR length for stop sizing. Range 5–40, step 1.                                                                    |
| AtrMultSI       | 1.5     | Stop distance as a multiple of ATR. Range 0.5–4.0, step 0.1.                                                       |
| RewardRatio     | 1.8     | Take-profit distance as a multiple of the stop distance. Range 0.8–4.0, step 0.1.                                  |
| MaxSpreadPoints | 30      | Skip a signal when the current spread (points) exceeds this. Range 1–200, step 1.                                  |
| Lots            | 0.10    | Fixed lot size for each trade. Range 0.01–1.00, step 0.05.                                                         |
| Magic           | 5271    | Magic number identifying this EA's positions. Range 0–9,999,999, step 1.                                           |

## Recommended Settings

The EA ships tuned for a trending major on the intraday timeframes. Momentum-shift logic performs best where impulses are clean and directional.

- **Symbols** — trending majors such as **EURUSD** or **GBPUSD**.
- **Timeframe** — **M15 to H1**, a momentum trading style.
- **Account** — a low-spread account; keep `MaxSpreadPoints` aligned with your broker's typical spread.

### Example — tuning conviction

In a persistently choppy instrument, raise `BandWidthMin` (e.g. from 12 toward 18–20) to demand a larger RSI-volatility expansion before entering. This trades fewer, higher-conviction signals. Conversely, lowering it toward 0 removes the volatility filter entirely and reverts to a plain crossover — expect far more whipsaw.

**Tip.** Keep `FastSignal` clearly below `SlowSignal`. If the two periods are too close the green/red crossover becomes noisy; if they are set equal or inverted the EA automatically bumps the slow period up by one to preserve a meaningful cross.

**Optimise before live use.** The defaults are a sensible starting point, not a guarantee. Always backtest and forward-test on your own broker's data and symbol before committing real capital, and size `Lots` to your account risk.

## How to Install on MetaTrader 5

- 1 Copy `TradersDynamicIndexShift.ex5` to your MT5 `MQL5\Experts\` folder
- 2 Restart MetaTrader 5 and refresh the Navigator panel
- 3 Drag the EA onto a chart matching the recommended symbol and timeframe
- 4 Configure the input parameters and click **OK**
- 5 Enable **Algo Trading** in the MT5 toolbar

## Risk Warning

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