

Tillson Trend Resumption

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Trend-Following (Pullback Continuation)

TIMEFRAME

M30 – H4

WEBSITE

www.algobot.live

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Overview

Tillson Trend Resumption is a trend-following Expert Advisor that buys the *resumption* of an already-established, still-accelerating trend rather than trying to predict tops and bottoms. It is built on the **Tillson T3 moving average** — a six-stage cascaded-EMA smoother with a tunable "volume factor" that tracks price with far less lag than a plain EMA for a comparable degree of smoothness.

Instead of trading a classic moving-average crossover or a price-reclaim of a line, the EA watches how the separation between a **fast** and a **slow** T3 line *breathes*:

$$\text{spread} = \text{T3fast} - \text{T3slow}$$

In a healthy uptrend the fast line rides above the slow line, so the spread is positive. During a pullback the fast line drifts back toward the slow line — the spread shrinks — but if the trend is genuinely intact it does not cross below. The instant buyers step back in, the fast line pulls away again and the spread makes a fresh **local turn upward**. That turn, forming while the trend is still qualified, is the moment momentum re-accelerates, and it is exactly what this strategy trades. Downtrends are the precise mirror: a negative spread making a fresh local-maximum turn.

Why it works: T3's low lag makes the spread-turn fire early, the "spread never crossed zero" rule rejects deep retraces and regime flips, and an ATR-scaled slope gate on the slow line keeps the EA out of flat chop where a breathing spread is just noise. The result is a structurally favourable entry — joining an intact trend as it re-accelerates out of a shallow pause.

How It Works

The Tillson T3 engine

Each T3 line is computed from six EMAs chained one into the next (a cascade). The final value is a weighted blend of the third through sixth stages, using four coefficients derived from the `VolumeFactor` (v):

```
c1 = -v3
c2 = 3v2 + 3v3
c3 = -6v2 - 3v - 3v3
c4 = 1 + 3v + v3 + 3v2

T3 = c1·e6 + c2·e5 + c3·e4 + c4·e3
```

A higher `VolumeFactor` makes the line snappier (more overshoot and responsiveness); a lower value makes it smoother and calmer. The EA maintains two of these cascades in parallel — one seeded with `FastPeriod`, one with `SlowPeriod` — and updates them once per completed bar.

Entry logic

Signals are fully symmetric, with distinct long and short conditions. On each newly closed bar the EA evaluates three requirements:

LONG ENTRY

- **Slope gate:** the slow T3 has risen by at least `SlopeMinAtr × ATR` over the last `SlopeLookback` bars — confirming the slow line is genuinely trending up, not drifting sideways.
- **Trend intact:** the spread stayed positive through the pullback (`spread[0] > 0` and `spread[1] > 0`) — the fast line never fell below the slow line.
- **Fresh turn:** the spread just turned back up, forming a local minimum: `spread[0] > spread[1]` and `spread[1] ≤ spread[2]`.

SHORT ENTRY

- **Slope gate:** the slow T3 has fallen by at least `SlopeMinAtr × ATR` over the last `SlopeLookback` bars.
- **Trend intact:** the spread stayed negative (`spread[0] < 0` and `spread[1] < 0`).

- **Fresh turn:** the spread just turned back down, forming a local maximum: `spread[0] < spread[1]` and `spread[1] ≥ spread[2]`.

Reading the three spread samples

`spread[0]` is the most recently closed bar, `spread[1]` the bar before it, and `spread[2]` two bars back. For a long, the pattern `spread[2] ≥ spread[1] < spread[0]` (all above zero) is a valley in the spread — a shallow pullback that just resolved upward while the trend remained qualified.

Exit logic

Every position is protected by three independent exits:

- **ATR stop-loss:** placed `AtrStopMult × ATR` away from the entry price.
- **ATR take-profit:** placed `RewardRisk × (AtrStopMult × ATR)` away — a fixed multiple of the risk taken.
- **Trend-flip exit:** if the spread's sign flips against the open position — the fast line crossing to the wrong side of the slow line — the trend structure has broken and the position is closed immediately, regardless of price.

One position at a time. While a trade is open the EA only manages the trend-flip exit and never stacks additional positions. A new entry can only be considered once the current position is flat.

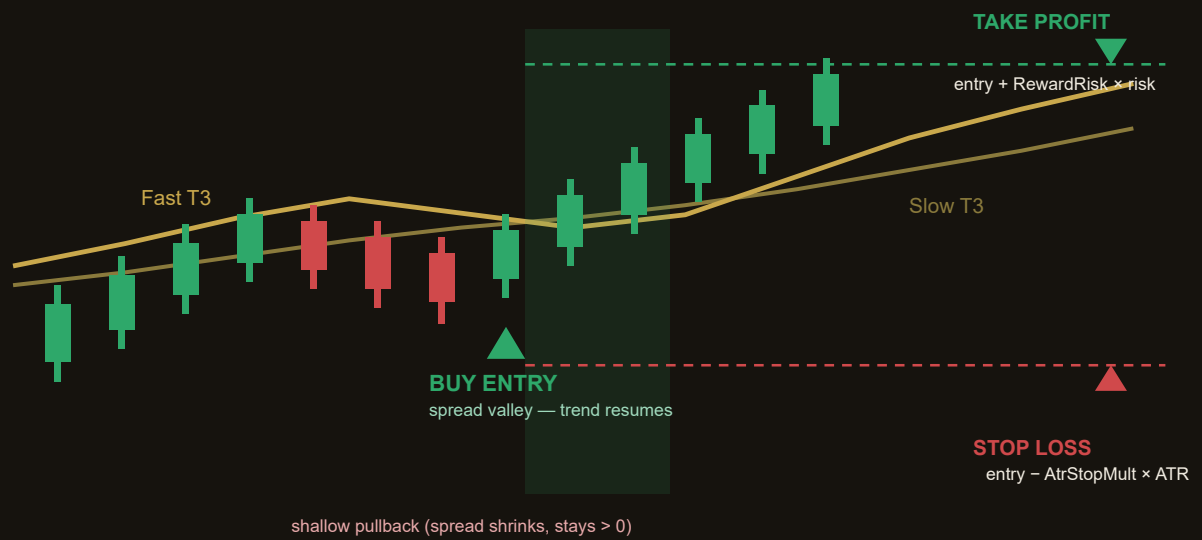
Risk model & execution

Volatility is measured with an ATR over the completed bars, and every distance in the risk model scales with it — so stops and targets automatically widen in volatile conditions and tighten in calm ones. The EA acts once per completed bar (the forming bar is ignored) and trades a fixed `Lots` volume. It runs on a single timeframe: whichever timeframe the chart or backtest selects. The timeframe is never hardcoded, making the logic suited to trending intraday-to-swing FX, index and metal series such as EURUSD, XAUUSD or US100 on M30–H4.

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.

Tillson Trend Resumption — Long Setup



Illustrative example only. Actual market behaviour varies.

Parameters

Parameter	Default	Description
FastPeriod	8	Length of the fast Tillson T3 line. Range 3–20, step 1. Lower values track price more closely.
SlowPeriod	21	Length of the slow Tillson T3 line. Range 10–60, step 1. Defines the trend backbone; auto-adjusted to always exceed FastPeriod.
VolumeFactor	0.70	Tillson volume factor v (0–1). Range 0.30–0.90, step 0.05. Higher = snappier line with more overshoot; lower = smoother.
SlopeLookback	3	Number of bars over which the slow-T3 slope is measured. Range 1–10, step 1.
SlopeMinAtr	0.10	Minimum slope magnitude required, expressed in ATR units. Range 0.00–0.60, step 0.05. Higher values demand a stronger trend before entering.
AtrPeriod	14	Averaging period for the ATR volatility measure. Range 5–30, step 1.
AtrStopMult	2.0	Stop-loss distance as a multiple of ATR. Range 0.5–5.0, step 0.1.
RewardRisk	1.6	Take-profit distance as a multiple of the risk (stop) distance. Range 0.8–4.0, step 0.1.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	7307	Magic number identifying and isolating this EA's orders and positions.

Recommended Settings

The strategy is designed for trending markets and performs best when the timeframe gives the T3 lines room to develop a clear directional bias.

- **Symbols:** liquid trending instruments — EURUSD, GBPUSD, XAUUSD (gold), US100/NAS100.
- **Timeframes:** M30 to H4. Higher timeframes produce fewer but cleaner resumption signals.
- **Trend strictness:** raise `SlopeMinAtr` toward 0.20–0.30 to trade only well-defined trends and filter out marginal setups; lower it toward 0.05 for more frequent (but noisier) entries.
- **Responsiveness:** a `VolumeFactor` of 0.70 is a balanced default. Increase toward 0.85 for faster, earlier turns on liquid FX; reduce toward 0.50 on choppy symbols to suppress false breathing.
- **Risk:** keep `AtrStopMult` around 2.0 and `RewardRisk` near 1.6 for a positive expectancy with realistic hit-rate. Size `Lots` conservatively relative to account equity.

Tip: Because every distance is ATR-scaled, the EA adapts automatically across volatility regimes — there is no need to re-tune stops when moving between a calm and a volatile session. Focus your optimisation on `FastPeriod`, `SlowPeriod`, `VolumeFactor` and `SlopeMinAtr`.

Warm-up period. The recursive T3 cascade needs seasoning before its values are reliable. The EA holds off trading until roughly `4 × SlowPeriod` bars have been processed (plus room for the slope lookback and ATR). Expect no signals immediately after attaching the EA or at the very start of a backtest.

How to Install on MetaTrader 5

- 1 Copy `TillsonTrendResumption.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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