

Trend Tuner

Volatility-adaptive trend engine with graded signals, live tuning and a seven-timeframe panel

User Manual • Version 4.20

This manual covers what the indicator draws on the chart, how each signal is produced, and every setting available. No programming knowledge is required.

Item	Detail
Platforms	MetaTrader 4 and MetaTrader 5
Type	Chart-window indicator: trend direction, entry signals, multi-timeframe context
Engine	Volatility-adaptive trend bands, derived from the Average True Range
Publisher	GEMA Dev

1. Overview

A single indicator answers two questions: which way the market is going, and where to enter.

- **Trend line** — follows price, green in an up trend, red in a down trend, and acts as dynamic support or resistance.
- **Signal dots and arrows** — mark each stage of a trend change, from the first live break to the confirmed entry.
- **Deviation spinner** — widens or tightens the engine directly on the chart, without reopening the settings window.
- **Multi-timeframe panel** — trend direction and trend age across seven timeframes at once.

The MT4 and MT5 builds share the same calculation engine: identical settings produce identical lines and signals.

2. Installation

1. In the terminal, open File → Open Data Folder.
2. Open the MQL4 (or MQL5) folder, then the Indicators sub-folder.
3. Copy Trend_Tuner.ex4 (or .ex5) into it.
4. Restart the terminal, or right-click the Navigator panel and choose Refresh.
5. Drag Trend_Tuner from the Navigator onto a chart and click OK.

An .ex4 file will not work in MT5, and an .ex5 file will not work in MT4. Install the file matching your platform.

On first installation the chart is prepared automatically: grid hidden, period separators shown, OHLC header and volume histogram switched off, and a right margin added so the most recent arrows stay visible.

3. How It Works

3.1 The engine

Current volatility is measured with the Average True Range, and a band is built above and below the middle of each candle. The band is tight on a quiet market and widens automatically on a volatile one, so the same settings behave sensibly across instruments and timeframes.

A strict rule is then applied to every closed candle:

- A candle closing above the upper band switches the engine to UP.
- A candle closing below the lower band switches it to DOWN.
- Anything else leaves the state unchanged: the trend is presumed to continue until proven otherwise.

The active band never moves against the trend — in an up trend the support band can only rise or stay flat. This is what makes the line usable as a trailing level.

3.2 The trend line

- **Green line below price** — UP trend. The line is dynamic support.
- **Red line above price** — DOWN trend. The line is dynamic resistance.

A candle closing through the line flips the trend: the line jumps to the other side of price and changes colour. A candle that merely pierces the line without closing beyond it is flagged as a false break.

3.3 Life cycle of a signal

Stage	What happened	Symbol
1. Live break	The forming candle has pushed through the line, but has not closed. Nothing is decided.	Orange dot
2. Resolution	The candle closes back inside the line: the break failed.	White dot
	The candle closes beyond the line: the trend has flipped.	Green / red dot
3. Confirmation	The new trend holds for the required number of candles.	▲ / ▼ arrow

The orange dot is the only symbol that can disappear. Every other symbol is drawn on a closed candle and is final: a confirmed signal is never repainted.

4. Signals on the Chart

Each symbol is placed just beyond its candle, at a distance proportional to current volatility.

Symbol	Meaning
Orange dot	Live break in progress on the forming candle. Nothing is confirmed; the dot disappears if price pulls back before the close. A heads-up, never an entry.
White dot	False break: price touched the line but the candle closed without confirming a trend change. Repeated white dots at the same level mean the level is holding.
Green dot	Trend has flipped UP, drawn below the candle. Appears on the first confirmation candles: the change is real but not yet fully confirmed.
Red dot	Trend has flipped DOWN, drawn above the candle. Same logic in the opposite direction.

Symbol	Meaning
▲ Green arrow	Entry signal UP, shown once the required number of consecutive confirmation candles is reached.
▼ Red arrow	Entry signal DOWN, same logic in the opposite direction.

5. Confirmation Candles (1 to 3)

This setting controls how many consecutive candles must close beyond the trend line before an arrow is drawn — how much proof you require before an entry is called.

Value	Behaviour
1	The arrow appears on the first confirmation candle. Fastest signal and best entry price, but more failed breaks. Suited to higher timeframes and trending instruments.
2	Two consecutive candles required. Balanced between speed and reliability.
3	Three consecutive candles required. Slowest signal, highest confidence. Suited to choppy instruments and lower timeframes.

The green and red dots always appear on the first candles of the new trend, whatever this setting is. Only the arrow is delayed.

6. ATR Period and ATR Multiplier

Setting	What it does
ATR Period	How far back volatility is measured. A short period adapts faster to a change of regime but behaves more nervously; a long period is steadier but slower to acknowledge a change of character.
ATR Multiplier	How wide the bands are, in number of normal moves. A higher value keeps the line further from price: fewer trend flips, fewer signals, looser trailing stop. A lower value brings it closer: earlier signals, tighter stop, more false breaks.

Change one at a time, and start with the Multiplier — its effect is the strongest and the most predictable. Judge the result on the white dots: too many white dots and short-lived trends means the bands are too tight; signals arriving very late with the line far from price means they are too wide.

Multiplier or Deviation?

	ATR Multiplier	Deviation (spinner)
Nature	Proportional to current volatility.	Fixed amount, expressed in pips.
Behaviour	Scales with the market: stays meaningful whether the instrument is quiet or wild.	Adds the same distance whatever the market does: strong in a quiet market, barely felt in a violent one.
Best used for	The base character of the signal, set once per family of instruments.	Fine tuning of one specific symbol, live, with instant feedback.
Where	Inputs tab.	On-chart spinner, one click.

Both widen the bands and they add up. Pick a Multiplier for the family of instruments, leave it alone, then fit each symbol with the spinner.

7. The Deviation Spinner

The panel in the bottom-right corner of the chart widens or tightens the engine in real time. Every click recalculates the whole chart: line, dots, arrows and multi-timeframe panel.

Control	Function
▲ / ▼ buttons	Increase or decrease the Deviation by the current Step value. The Deviation never goes below 0.
Step field	Sets how much each click changes the Deviation. Accepts 1 to 10000. Enter 0 to reset both Step and Deviation to their defaults. A value outside the range is refused and the previous one is restored.
Deviation display	Shows the current Deviation value.

- **Higher Deviation** — wider bands, price has to travel further to flip the trend: fewer signals, and a line further from price.
- **Lower Deviation** — tighter bands, the trend flips more easily: more signals, earlier, and more false breaks.

In practice: on the instrument and timeframe you actually trade, click ▲ until the white dots mostly disappear while the arrows still catch the real moves.

Step and Deviation are stored inside the chart. They survive a timeframe change, a change of any other input and a restart of the terminal. They are cleared when the indicator is removed from the chart, and each chart keeps its own values.

8. Using the Indicator in the Strategy Tester

The spinner is fully usable in the Strategy Tester in visual mode, exactly as on a live chart: the Deviation and the Step can be changed while the test runs, and the chart is recalculated immediately.

Platform	Setting the Step
MetaTrader 4	Click the Step field and type the value, as on a live chart.
MetaTrader 5	Click the Step field, type the digits, then press Enter. Backspace erases the last digit, Escape cancels. Clicking ▲ or ▼ also validates the value being typed.

- The Deviation starts at 0 at the beginning of each test run.
- The panels are not displayed in optimization mode, where no chart exists.

To reproduce a Strategy Tester result on a live chart, use the same ATR Period, ATR Multiplier and Deviation.

9. Multi-Timeframe Panel

Above the spinner, the panel shows the trend across D1, H4, H1, M30, M15, M5 and M1, all calculated with the same engine and the same settings as the chart.

Column	Content
TF	The timeframe name, green for an UP trend and red for a DOWN trend on that timeframe.
Now	Number of consecutive candles the current trend has lasted, in the same colour as the timeframe name.
Prev	Number of consecutive candles the previous trend lasted, in the opposite colour.

- All rows the same colour: every timeframe agrees.
- Higher timeframes green and lower ones red: a pullback inside an up trend.
- A low number under Now means the trend on that timeframe is young; a high number means it is mature.

The panel is refreshed every minute and immediately after any Deviation change. It keeps the last known values while a higher timeframe history is still loading.

10. Practical Use

- **Read the panel before the arrow.** An arrow that points in the same direction as the higher timeframes sits in a stronger context than one fighting them.
- **Wait for the arrow, not the dot.** The orange dot is information only, and it resolves at the candle close.
- **Place the stop beyond the line.** The line only moves in the direction of the trend, so it can be used as a trailing stop. The distance between price and the line is the risk, and it is known before entry.
- **Tune the Deviation per instrument, not per trade.** Find the value that removes the false breaks without removing the signals, then leave it alone.

11. Notes and Limitations

- Signals are decided at the candle close. On the forming candle only the orange dot is live; every closed-candle symbol is final.
- The engine is a trend-following tool. It performs best in directional markets and produces more false breaks in a tight range; a wider band and a higher confirmation requirement are the levers for range conditions.
- Dots and arrows are drawn over a window of recent candles only, to keep the chart light. Further back, the trend line remains but the symbols stop. Current and future signals are unaffected.
- Right after a timeframe change, the multi-timeframe panel may take a moment to fill while higher timeframe history loads.
- If the chart feels heavy on a very long history, reduce the number of bars displayed in the chart.
- No indicator removes the need for risk management. An arrow reports what the engine has detected, not what the market will do next. Always trade with a stop-loss.

12. Settings Reference

Main settings

Setting	Description	Default
Validation of consecutive bars for signal arrow	Number of consecutive confirmation candles required before an arrow is drawn. Accepts 1, 2 or 3; values outside this range are clamped.	1
ATR Period	Number of candles over which volatility is measured.	10
ATR Multiplier	Width of the volatility bands, in number of normal moves.	1.3

Alerts

Setting	Description	Default
Alerts (audible pop-up)	Terminal pop-up when an arrow is confirmed.	false
E-mail notification	Sends an e-mail on a confirmed arrow. Requires the terminal e-mail settings to be configured.	false
Push notification	Sends a push notification to the mobile terminal. Requires the MetaQuotes ID to be configured.	false
Sound file alert	Plays a sound file on a confirmed arrow.	false
Sound file name	Name of the sound file to play, taken from the terminal Sounds folder.	alert.wav

Colours

Setting	Description	Default
Bullish colour	Colour of the up trend line, its signals and its rows in the panel.	Lime
Bearish colour	Colour of the down trend line, its signals and its rows in the panel.	Red
Live break point	Colour of the unconfirmed break dot.	Orange
Failed break point	Colour of the false break dot.	White

Display settings

Setting	Description	Default
Base font size	Font size, in points, used by the on-chart panels.	8
Panel spacing (%)	Vertical spacing of the panels; 100 is normal. Accepts 50 to 200.	100
Display signal points	Shows or hides the orange, white, green and red dots.	true
Display signal arrows	Shows or hides the ▲ and ▼ arrows.	true
Display Deviation spinner	Shows or hides the spinner panel.	true
Display multi-timeframe panel	Shows or hides the multi-timeframe table.	true
Offset above/below the candle	Distance between a symbol and the high or low of its candle, as a fraction of current volatility.	0.2
Size trend line	Thickness, in pixels, of the trend line.	3
Size point	Size of the signal dots.	3
Size arrow	Size of the entry arrows.	3

On-chart controls

Control	Description	Default
Deviation	Widens or tightens the engine in real time, adjusted with the ▲ / ▼ buttons. Never goes below 0. Saved per chart.	0

Control	Description	Default
Step	Amount added or removed on each click of ▲ / ▼. Accepts 1 to 10000. Enter 0 to reset both Step and Deviation.	1