

Trend Core

Adaptive price-channel trend engine with entry arrows and a seven-timeframe panel

User Manual • Version 2.40

This manual covers what the indicator draws on the chart, how to read each signal, and every setting available. No programming knowledge is required, except for the final section, which is addressed to developers who want to read the indicator from an Expert Advisor.

Item	Detail
Platforms	MetaTrader 4 and MetaTrader 5
Type	Chart-window indicator: trend direction, entry signals, multi-timeframe context
Engine	Adaptive price channel with a one-way trailing line
Publisher	GEMA Dev — https://www.mql5.com/en/users/gem_dev/seller

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.
- Entry arrows — mark the candle on which the trend changed direction.
- Multi-timeframe panel — trend direction and trend age across seven timeframes at once.
- **Light and dark themes** — the whole rendering follows the chart background, automatically.

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



Trend Core on XAUUSD H1: trend line, entry arrows and the multi-timeframe panel.

2. Installation

Bought from the MQL5 Market, Trend Core installs itself: open the Market tab in the terminal, go to the Purchased section and click Install. The steps below apply to a file received directly.

1. In the terminal, open File → Open Data Folder.
2. Open the MQL4 (or MQL5) folder, then the Indicators sub-folder.
3. Copy Trend_Core_v2_40.ex4 (or .ex5) into it.
4. Restart the terminal, or right-click the Navigator panel and choose Refresh.
5. Drag Trend Core 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.

3. How It Works

3.1 The engine

The engine holds one direction at a time, up or down, and reassesses it on every closed candle. It stays with the current direction while price keeps confirming it, and switches only once the market has moved decisively against it. The threshold is derived from the recent behaviour of price rather than being a fixed distance, so the engine adapts on its own from one instrument and one timeframe to the next.

The active line never moves against the trend — in an up trend it can only rise or stay flat. This is what makes it usable as a trailing level. At a direction change the line joins the previous one exactly, so the trend line is continuous across the whole chart.

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.

The colour change marks the exact candle on which the trend flipped.



The same engine on the daily chart: the line only ever moves with the trend.

4. Signals on the Chart

An arrow is drawn on every direction change, placed away from the line at a distance proportional to current volatility so it stays clear of price.

Symbol	Meaning
↑ Green arrow	Trend has flipped UP. Drawn below the line.
↓ Red arrow	Trend has flipped DOWN. Drawn above the line.

The last candle on the chart is still forming, and its direction can change until it closes. Alerts and the multi-timeframe panel therefore read the last closed candle, never the forming one.

5. Multi-Timeframe Panel

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. It is drawn as a solid card in the foreground, so it stays readable over the candles whatever the chart background.

TF		Now	Prev
M1	▲	18	28
M5	▼	10	10
M15	▲	6	10
M30	▲	37	25
H1	▲	17	14
H4	▲	16	16
D1	▲	2	74

The panel: direction arrow, current trend age and previous trend age, per timeframe.

Column	Content
TF	The timeframe name, in a neutral colour — direction is carried by the arrow next to it.
▲ ▼	Trend direction on that timeframe: a green up triangle for an UP trend, a red down triangle for a DOWN trend.
Now	Number of consecutive candles the current trend has lasted, in the trend colour.
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. It keeps the last known values while a higher timeframe history is still loading. Counters are capped at 150 candles and are then shown as 150+, meaning the trend is at least that old. Hovering over any cell shows what it contains.

The panel can be placed in any of the four chart corners, moved inward with the offset settings, and its vertical order reversed to put D1 on top. It is not displayed in the Strategy Tester.

6. Alerts

Four independent channels, all disabled by default. Any combination can be enabled.

- A notification is sent only when an arrow appears on a closed candle.
- One notification per candle at most, whatever the number of price updates.
- Attaching the indicator, changing a setting or changing timeframe never replays a past signal.

The audible pop-up already plays the sound configured in the terminal. Enabling the sound file option as well will produce two sounds.

7. Colour Themes

The indicator carries two complete colour palettes and chooses between them on its own. One setting decides, in the Colors group of the Inputs tab.

Value	What it does
Light	Forces the light palette. It is calibrated for the white chart background MetaTrader installs by default.
Dark	Forces the dark palette. This is the rendering of every build before v2.40, value for value.
Auto	Default. Reads the luminance of the chart background and selects the matching palette.

Auto is re-evaluated whenever the chart itself changes, so switching the background colour in the terminal colour window repaints the indicator without reloading it.

- **The theme drives everything the indicator draws** — the trend line, the entry arrows and the multi-timeframe panel.
- **The colour settings default to clrNONE**, which means follow the theme. Any other value is an explicit choice and wins over the theme, on both palettes.
- **A template or a .set file saved before v2.40** carries its colours in hard, so the rendering you had is preserved.

The screenshots in this manual were taken on a dark chart. On a light background the same elements take their light palette; what they mean, and how you read them, does not change.

8. Practical Use

- Read the panel before the arrow. An arrow pointing in the same direction as the higher timeframes sits in a stronger context than one fighting them.
- 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.
- Choose the timeframe, not the settings. The engine is pre-tuned and identical on every timeframe, so the timeframe you attach it to is what sets the pace of the signals.

9. Notes and Limitations

- Signals are decided at the candle close. On the forming candle the line and the arrow are provisional and may change until the candle closes.
- The engine is a trend-following tool. It performs best in directional markets and changes direction more often in a tight range.

- Base font size also scales the thickness of the trend line and of the arrows, with the default size 8 as the reference. The terminal caps line thickness at 5, so beyond roughly 13 points the line stops thickening while the panel keeps growing.
- Right after a timeframe change, the multi-timeframe panel may take a moment to fill while higher timeframe history loads.
- Trend counters may differ by one candle between MT4 and MT5 on some timeframes. The two platforms build their candles from separate history databases, and weekend sessions are not always aggregated the same way.
- 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.

10. Settings Reference

Main Settings

Setting	Description	Default
Calculation depth (bars)	How far back the trend line is drawn. Accepts 50 to 5000.	2000

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
Play sound file	Plays a sound file on a confirmed arrow.	false
Sound file	Name of the sound file to play, taken from the terminal Sounds folder.	alert.wav

Colors

Setting	Description	Default
Color theme	Light, Dark, or Auto to follow the chart background. See section 7.	Auto
Bullish color (trend line)	Colour of the up trend line and of its arrows. clrNONE means follow the theme.	clrNONE
Bearish color (trend line)	Colour of the down trend line and of its arrows. clrNONE means follow the theme.	clrNONE

These two settings apply to the chart only. The multi-timeframe panel has its own pair of palettes, chosen by the same theme but tuned for a card rather than for a line, so it stays readable whatever the two colours above are set to.

MTF Panel

Setting	Description	Default
Base font size (6-20)	Font size, in points, used by the panel. All panel spacing scales with it, and so does the thickness of the trend line and arrows.	8
Panel anchor corner	Chart corner the panel is attached to: top left, top right, bottom left or bottom right.	Bottom right
Reverse vertical order (D1 on top)	Reverses the order of the rows. Off, M1 is on top; on, D1 is on top.	false
Horizontal offset in pixels (inward)	Moves the panel away from the side of the chart it is anchored to.	10
Vertical offset in pixels (inward)	Moves the panel away from the top or bottom of the chart it is anchored to.	10

11. Reading the Values from an Expert Advisor

Trend Core publishes its four values as standard indicator buffers, so an Expert Advisor can read them with iCustom. No bridge file and no source code are needed. The numbering is identical in the MT4 and MT5 builds: an EA written against one reads the other unchanged.

Buffer	Name	Contains
0	Trend Up	Level of the trend line while the trend is up. Empty otherwise.
1	Trend Dn	Level of the trend line while the trend is down. Empty otherwise.
2	Buy Signal	Set on the candle where the trend flipped up. Empty on every other candle.
3	Sell Signal	Set on the candle where the trend flipped down. Empty on every other candle.

An empty slot returns EMPTY_VALUE. Buffers 0 and 1 carry the price level drawn on the chart, and that level can be used directly as a trailing stop. Buffers 2 and 3 are different: they carry the position at which the arrow is drawn, offset from the line so that it stays clear of price. What matters there is whether the value is set, not what it is. Read shift 1, the last closed candle: the forming candle can still change direction until it closes.

MetaTrader 4

```
double line = iCustom(NULL, 0, "Market\\Trend Core", 0, 1); // Trend Up
double buy  = iCustom(NULL, 0, "Market\\Trend Core", 2, 1); // Buy Signal

if(buy != EMPTY_VALUE)
    Print("Trend flipped up on the last closed candle, line at ", line);
```

MetaTrader 5

```
int handle = iCustom(_Symbol, _Period, "Market\\Trend Core");
if(handle == INVALID_HANDLE) return(INIT_FAILED);

double line[], buy[];
ArraySetAsSeries(line, true);
ArraySetAsSeries(buy, true);

CopyBuffer(handle, 0, 0, 2, line); // Trend Up
CopyBuffer(handle, 2, 0, 2, buy); // Buy Signal

if(buy[1] != EMPTY_VALUE)
    Print("Trend flipped up on the last closed candle, line at ", line[1]);
```

Bought from the Market, the indicator is installed in the Market sub-folder, so its name is prefixed as shown above. Installed manually into the Indicators folder, pass the file name on its own. Calling iCustom without listing the settings runs the indicator with its default values; to use different ones, pass them all, in the order of the Inputs tab, before the buffer index.

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https://www.mql5.com/en/users/gem_dev/seller