



# MERIDIAN PRO

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## User Manual

*"Real MTF Trend Analysis"*

8-Timeframe Matrix

Adaptive Trend Engine

Synthetic HTF Architecture

Bias · Strength · Fuel

20 Color Themes

EA-Ready Buffers

HTF Context Lines

MTF-Confirmed Alerts

EA Buffer 22

MERKAVA LABS

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# Overview

One adaptive engine. Eight timeframes. One structured readout across every asset.

Meridian Pro is a multi-timeframe trend matrix that compresses **directional state, strength, momentum condition and matrix agreement** into one compact panel. Instead of stacking disconnected indicators, you get a single adaptive engine applied consistently from M1 to W1 — no per-symbol tuning, no indicator clutter.

## What Makes Meridian Pro Different

Aspect	Typical MTF Dashboards	Meridian Pro
Engine	Disconnected indicators per row	One adaptive engine across all TFs
MTF Data	Standard iCustom/CopyRates	Synthetic HTF from M1 (no repaint)
Output	Arrows or colors only	Bias + Strength + Fuel + Consensus
Tuning	Adjust per symbol/TF	Works out of the box across all assets
EA Integration	Often missing	Direction, intensity, conviction, fuel and MTF consensus buffers

## What You'll See on Chart

### MTF Matrix Panel

- **8 Timeframe Rows:** M1 → W1
- **Bias Badges:** BULL / BEAR / FLAT
- **Strength Bars:** 0–100% intensity
- **Fuel Column:** Momentum state
- **Consensus Row:** Weighted summary

### Chart Overlays

- **Trend Ribbon:** Adaptive fill
- **Signal Arrows:** Bull / Bear entries
- **Bar Countdown:** Next bar ETA
- **Status Dot:** Live CTF bias

### Synthetic HTF Architecture

The matrix is derived from **M1 data** via cascaded feeds. No classic MTF sync problems. No repaint or lag. Better robustness across brokers with different HTF data quality.

💡 **Version 2.00 workflow:** the chart can now combine the CTF ribbon, optional HTF Context Lines, MTF alignment dots and the diagnostic 8-TF matrix. The panel remains the source for true FLAT state; chart lines stay bicolor for readability.

# Quick Start

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Get Meridian Pro running in under a minute.

## Installation

When you purchase from MQL5 Market, Meridian Pro is **automatically installed**. No manual file copying.

- 1 **Open MetaTrader 5**
- 2 **Navigator** → **Indicators** → **Market** — Find Meridian Pro
- 3 **Drag onto any chart** — Done! The panel appears with all 8 timeframes.

## Default Configuration

Setting	Default	What It Does
Trend Period	14	Base period for the adaptive engine
Trend Depth	1.0	Volatility multiplier for trend detection
Volatility Adaptation	0.5	How quickly the engine adapts to regime changes
Signal Quality	Balanced	Quality filter for signal arrows
Show Trend Ribbon	On	Adaptive trend fill on chart
Show MTF Panel	On	8-timeframe matrix dashboard
Max Bars	1000	Calculation depth (0 = all available)

💡 Default settings work well across all asset classes. Only adjust if you need faster or slower detection for your specific strategy.

## Reading the Panel in 30 Seconds

- 1 **Scan Bias column** — are most rows BULL, BEAR, or mixed?
- 2 **Check Strength bars** — wider = stronger conviction
- 3 **Check Fuel** — ▲ building · ▼ fading · ◆ neutral
- 4 **Read Consensus** — final verdict with count and strength

# The MTF Matrix

Four dimensions of trend intelligence in one compact panel.

## Panel Columns

Column	Shows	How to Read
TF	Timeframe label	M1 through W1. Your chart TF is highlighted.
TREND	Directional bias	<b>BULL</b> = up · <b>BEAR</b> = down · <b>FLAT</b> = neutral
STRENGTH	Intensity bar	0–100%. Wider bar = more conviction.
%	Numeric value	Exact percentage of trend strength.
FUEL	Momentum glyph	▲ Rising · ◆ Flat · ▼ Falling

## Bias & Strength

Each row shows the engine's directional verdict for that timeframe. The engine uses ATR-adaptive trend detection with stochastic confirmation. **All 8 rows use the same engine** — only the timeframe of the data changes. The strength bar shows how far price has committed to the current direction.

## Fuel: Momentum Condition

Glyph	State	Meaning	Action
▲	Rising	Momentum expanding	Favor entries
◆	Flat	Momentum neutral	Wait for clarity
▼	Falling	Momentum contracting	Caution / exit

## Consensus: The Matrix Verdict

The summary row aggregates all 8 timeframes using **weighted consensus**. Higher timeframes carry more weight (W1 weighs 5× more than M1).

Consensus	Meaning	Implication
<b>Strong Bullish</b> (6-8/8)	Broad multi-TF uptrend	High-confidence long setups
<b>Moderate</b> (4-5/8)	Partial alignment	Selective entries, check Fuel
<b>Weak / No Consensus</b>	Mixed signals	Reduce size or wait
<b>Strong Bearish</b> (6-8/8)	Broad multi-TF downtrend	High-confidence short setups

# Trend Ribbon & Signal Arrows

On-chart overlays that work in concert with the matrix panel.

## Trend Ribbon

The ribbon is a **filled area** between the adaptive trend line (Alpha) and its offset. It provides instant visual feedback on trend direction directly on price.

### Bull Fill

Alpha above offset → uptrend.  
Wider ribbon = stronger trend.

### Bear Fill

Alpha below offset → downtrend.  
Wider ribbon = stronger trend.

Toggle off via `Show Trend Ribbon = false` if you prefer a clean chart with panel only.

## Signal Arrows

Arrows appear on **confirmed bars only** (bar T-1, never the forming bar) when the engine detects a trend change. Nine arrow styles available:

Style	Description
Heavy Barb (default)	Bold directional arrows
Light Barb	Thinner, less chart clutter
White Block / 3D	Filled block or shaded arrows
Bullets / Squares / Diamonds	Geometric signal markers
Check / X	Checkmark for buy, X for sell
None	Hide arrows entirely

Arrow size ranges from **Tiny** to **Extra Large** (5 sizes).

## Signal Quality Filter

Mode	Behavior	Best For
<b>Off</b>	All trend changes produce arrows	Research, raw analysis
<b>Balanced</b>	Filters low-conviction and fade signals	Most traders (default)
<b>Conservative</b>	Only high-conviction entries pass	Conservative / swing

⚠ **Signals appear on closed bars only.** The forming bar is never signaled. Once a bar closes with an arrow, that arrow stays. The matrix panel updates in real-time with each tick.

# HTF Context Lines

Read the current-timeframe ribbon together with one or two higher-timeframe Meridian lines on the same chart.


## New Chart Layer: HTF Context Lines

Meridian Pro can now draw one or two higher-timeframe Meridian lines directly on the current chart. The default mode follows the institutional 1st and 2nd higher timeframe ladder, consistent with the wider Merkava Labs Pro workflow.

Input	Default	Description
HTF Overlay Lines	Auto 1st + 2nd Higher TF	Turns HTF context lines off, uses automatic 1st/2nd higher TF, or enables custom/mixed selection.
HTF Line 1 / HTF Line 2	Auto 1st / Auto 2nd	Each line can be Off, Auto 1st, Auto 2nd, or a fixed M5-W1 timeframe.
HTF Line Style / Size	Dashed Small / Solid Tiny	Style and size are controlled per line to avoid chart clutter.
Show HTF Line Labels	true	Small right-edge labels identify the timeframe of each active line.
HTF Bull/Bear Color	Theme colors	Used when Color Theme is set to None / theme colors are disabled.

## Chart-State Design

The panel remains the diagnostic source of truth and can show BULL, BEAR or FLAT. The chart ribbon and HTF lines remain bicolor by design: flat phases inherit the last valid directional visual state, matching the CTF ribbon behavior and keeping the chart readable.

 **Practical reading:** use the panel for true FLAT diagnostics; use the chart for clean directional context.

# Sensitivity & Best Practices

Three inputs control the engine. Most traders never need to change them.

## The Three Core Parameters

Parameter	Default	Range	Effect
<b>Trend Period</b>	14	5 – 50	Lower = more responsive. Higher = smoother.
<b>Trend Depth</b>	1.0	0.5 – 3.0	ATR multiplier. Higher = bigger move needed to flip.
<b>Vol. Adaptation</b>	0.5	0.0 – 1.0	0 = static threshold. 1 = fully adaptive.

## Suggested Configurations

Style	Period	Depth	Adaptation	Quality
Scalping (M1-M5)	10	0.8	0.6	Off or Balanced
Intraday (M15-H1)	14	1.0	0.5	Balanced
Swing (H4-D1)	18	1.2	0.4	Balanced or Conservative
Position (D1-W1)	21	1.5	0.3	Conservative

💡 The default (14 / 1.0 / 0.5) was validated across 66 symbols and 6 timeframes. Start there and only adjust after observing the indicator for at least a few sessions.

## How to Use Meridian Pro

### As a Trend Filter

Before any trade, check the matrix: 6+/8 same direction with rising Fuel = structural backing. Mixed matrix = reduce size or pass.

### As a Pullback Confirmation

Your chart TF shows a pullback (BEAR/FLAT) but higher TFs remain BULL with strong intensity — potential buy-the-dip. The matrix gives context a single chart cannot.

### As an Exit Signal

Fuel showing ▼ across multiple timeframes while in a position = momentum fading. Tighten stops or take partial profits.

### The Decision Matrix

**Strong consensus + Rising fuel** → Enter with conviction

**Moderate consensus + Flat fuel** → Enter with reduced size

**Weak/No consensus** → Stand aside

**Any consensus + Falling fuel** → Tighten stops or exit

# Complete Input Reference

Group	Parameter	Default	Description
<b>Sensitivity</b>	Trend Period	14	Base period for trend detection
	Trend Depth	1.0	ATR multiplier for trend threshold
	Volatility Adaptation	0.5	Regime adaptation (0=static, 1=full)
<b>Quality</b>	Signal Quality	Balanced	Off / Balanced / Conservative
<b>Appearance</b>	Color Theme	Quantum	20 professional themes
	Chart Background	Off	Off / Dark / Light
	Show Trend Ribbon	true	Adaptive fill on chart
	Arrow Style	Heavy Barb	9 styles including None
	Arrow Size	Small	Tiny / Small / Medium / Large / XL
<b>MTF Matrix</b>	Show MTF Panel	true	Toggle the 8-TF dashboard
	Panel X Offset	16	Horizontal position (px)
	Panel Y Offset	24	Vertical position (px)
<b>HTF Context Lines</b>	HTF Overlay / Line 1 / Line 2	Auto 1st + 2nd	Automatic or custom higher-TF selection; see page 6.
	Style / Size / Labels / Alignment / Colors	Dashed Small / Solid Tiny	Per-line styling, labels, MTF alignment mode and theme-off colors.
<b>Alerts</b>	Alert Popup	true	MT5 popup on signal
	Sound Alert	true	Sound on signal
	Push Notification	false	Mobile push
	Email Alert	false	Email notification
<b>Performance</b>	Max Bars	1000	Calc depth (0=all)

## Cross-Asset Workflow

The same settings work across **Forex, Crypto, Indices, Metals, Energy and Stocks**. The volatility adaptation mechanism handles vastly different ATR profiles without per-symbol retuning.

## Panel Interaction

- **Draggable:** Click and drag the header to reposition the panel anywhere.
- **Minimizable:** Click the — button to collapse. Click again to restore.
- **Bar Countdown:** Live timer in the header shows next bar ETA.
- **Status Dot:** Colored dot shows current TF bias at a glance.
- **DPI Scaling:** Auto-scales to your screen DPI for crisp rendering.

## Color Themes

20 themes from the **Quantum Color Theme** library shared across all Merkava Labs products: Classic, Ocean, Matrix, Gold, Quantum, Volcano, Aurora, Stealth, and more. Optional `Chart Background` applies a theme-matched dark or light background.

# MTF Signals, Alerts and EA Buffers

Version 2.00 adds MTF-aware signal classification without changing the original v1.0 workflow.

## MTF Alignment Dots

A dot appears only when alignment becomes operationally meaningful: on a CTF flip already aligned with active HTFs, after a CTF flip when HTF alignment arrives later, or on a later CTF flip while the active HTFs are still aligned.

## MTF Alignment Mode

Mode	Behavior	Best For
Don't Use Flat (Follow Chart)	Uses the same bicolor/inherited state visible on the HTF lines.	Most discretionary workflows.
Use Flat (Conservative)	Panel FLAT blocks bullish/bearish MTF alignment.	Conservative automation and diagnostics.

## Alert Examples

Event	Message
Plain flip	[MKV] Meridian Pro   BTCUSD M5   Bullish Flip
MTF-confirmed flip	[MKV] Meridian Pro   BTCUSD M5   Bullish Flip [MTF: M15+H1]
Alignment after flip	[MKV] Meridian Pro   BTCUSD M5   Bullish Alignment [MTF: M15+H1]

## EA Buffer Addition

Buffer	Name	Values	Use
11	Bull MTF Alignment	Price level or EMPTY_VALUE	Bullish MTF alignment dot event.
12	Bear MTF Alignment	Price level or EMPTY_VALUE	Bearish MTF alignment dot event.
22	MTF Consensus	-1.0 to +1.0	Current weighted matrix consensus for live EA filters.

The full EA contract is now: Direction 4, TIS 5, Conviction 6, Fuel 15, current MTF Consensus 22, plus event marker buffers 11 and 12 for MTF alignment dots. Buffers are hidden from the Data Window but remain accessible through CopyBuffer.

# EA Integration

Read trend state, intensity, conviction and fuel from your Expert Advisor.

## Basic iCustom Call

```
int handle = iCustom(_Symbol, PERIOD_CURRENT, "Meridian Pro");
double dir = CopyBufferValue(handle, 4, 1); // Direction at T-1
if(dir > 0) { /* Bullish */ }
```

## Buffer Reference

Buffer	Content	Values
0, 1	Ribbon (Alpha, Offset)	Price levels for DRAW_FILLING
2	<b>Buy Signal</b> arrow	Price level or EMPTY_VALUE
3	<b>Sell Signal</b> arrow	Price level or EMPTY_VALUE
4	<b>Direction</b>	+1 = Bull, 0 = Neutral, -1 = Bear
5	<b>Trend Intensity (TIS)</b>	-1.0 to +1.0 (signed strength)
6	<b>Conviction</b>	0 = none, 1 = low, 2 = mid, 3 = high
11	<b>Bull MTF Alignment</b> marker	Price level or EMPTY_VALUE
12	<b>Bear MTF Alignment</b> marker	Price level or EMPTY_VALUE
15	<b>Fuel</b>	0–100 ratchet momentum pulse
22	<b>MTF Consensus</b>	Current weighted matrix consensus (-1.0 to +1.0)

💡 **Buffer 4 (Direction)** is the simplest integration: +1 for longs, -1 for shorts. Combine with Buffer 5 (intensity) and Buffer 6 (conviction) for quality filtering.

## The Merkava Ecosystem

The Meridian adaptive engine is the core of V2 versions of **The Oracle** and **Azimuth**.

Meridian Pro is built entirely on a **synthetic HTF architecture** — all 8 timeframes are derived from M1 data through cascaded feeds, eliminating the classic problems of retail MTF indicators (repaint, sync lag, broker-dependent HTF quality). This architecture proves that real multi-timeframe analysis is possible without relying on fragile higher-timeframe data stitching, and it sets the foundation for every Merkava Labs product going forward.

💡 **EA visibility:** Visual and EA buffers are hidden from the Data Window, but remain available through CopyBuffer.

# FAQ & Support

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## Frequently Asked Questions

### Why do some TF rows show "—" at startup?

The synthetic HTF engine needs time to build sufficient history from M1 data. Higher timeframes (D1, W1) take longer. Wait 10–30 seconds after loading.

### Does it repaint?

Signal arrows appear on closed bars only and do not repaint. The matrix panel updates in real-time as ticks arrive — this is by design, not repaint.

### Can I use it in Strategy Tester?

Yes. Meridian Pro is fully Strategy Tester compatible. Use the EA-ready buffers (Direction, TIS, Conviction, Fuel) for automated testing.

### Multiple instances?

Safe to run on multiple charts simultaneously. Each instance maintains its own panel prefix and state.

### What about M1 data availability?

The synthetic HTF architecture requires M1 history to build higher timeframes. If your broker provides limited M1 depth, higher TF rows may show less history. Most brokers provide sufficient M1 data for reliable D1/W1 synthesis.

### Which assets work best?




Meridian Pro works across Forex, Crypto, Indices, Metals, Energy and Stocks without retuning. The volatility adaptation handles the different ATR profiles automatically.

## Before Contacting Support

1. Ensure you have the **latest version** from MQL5 Market
2. Wait 30 seconds after loading for all TF rows to populate
3. Test on a **demo account** first

## Contact

### Merkava Labs

-  Website: [www.merkavalabs.com](http://www.merkavalabs.com)
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-  MQL5: Private message via Market product page

**Risk Disclaimer:** Trading involves substantial risk. Meridian Pro is a technical analysis tool, not financial advice. Past performance does not guarantee future results. Only trade capital you can afford to lose.

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