



AZIMUTH PRO

User Manual

"Market Structure, Mastered"

6 Trading Presets + AUTO

4-Level ZigZag

Smart Dual MA System

MTF Bias Filtering

ABC Pattern Signals

20x Faster Engine

MERKAVA LABS

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Overview

Azimuth Pro is the professional evolution of market structure analysis — intelligent automation meets surgical precision.

While standard indicators require manual configuration for each instrument and timeframe, Azimuth Pro **learns your context automatically**. Drop it on EURUSD M15 and it knows you're intraday trading. Drop it on BTCUSD H4 and it adjusts for swing trading. No manual tweaking required.

This is the indicator we use daily at Merkava Labs for ourselves and our clients.

What Makes Pro Different

Feature	Standard Indicators	Azimuth Pro
Configuration	Manual tweaking required	AUTO detects optimal settings
Moving Averages	Static EMA/SMA	ATR-StepMA + VIDYA (adaptive)
Signal Filtering	Single timeframe	3-TF MTF bias validation
Alert Quality	Basic triggers	Shows +/++ MTF confluence
Performance	Standard calculation	ZigZag Anchor Proprietary Algo (20x faster)

What You'll See on Chart

- **ZigZag Lines:** 4-level structure (L1 → L4)
- **Moving Averages:** StepMA (fast) + VIDYA (slow)
- **Daily VWAP:** Institutional benchmark line
- **AVWAP L3:** Swing-anchored S/R levels
- **Colored Candles:** Bull / Bear / Neutral
- **ABC Signals:** Early / Main / Late price labels
- **Dashboard:** 3-TF bias + ATR / ADR / Spread
- **Structure Lines:** CTF + HTF S/R levels

Quick Start

Get Azimuth Pro running in under 2 minutes.

Installation

When you purchase from MQL5 Market, Azimuth Pro is **automatically installed** and ready to use. No manual file copying required.

- 1 **Open MetaTrader 5**
- 2 **Navigator → Indicators → Market** — Find Azimuth Pro in your purchased products
- 3 **Drag onto any chart** — Done! AUTO mode configures everything.

Default Configuration

Setting	Default Value	What It Does
Trading Style	AUTO	Auto-detects optimal preset from your timeframe
StepMA	Enabled	ATR-adaptive fast moving average
VIDYA	Enabled	Momentum-adaptive slow moving average
Candle Mode	3 Colors	Bull (green) / Bear (red) / Neutral (gray)
CTF Bias	WAVE	Filters signals by L3 ZigZag direction
MaxCalculationBars	9999	Bars to analyze (increase for H1+)

💡 For M1-M30 timeframes, default settings work perfectly. For H1 and above, consider increasing MaxCalculationBars to 15000+ for complete MTF analysis.

First Steps After Installation

1. **Observe the dashboard** — Check CTF, HTF1, HTF2 bias alignment
2. **Look for ABC signals** — Main signals (price labels) are your primary entries
3. **Check confluence** — Signals with ++ have highest probability
4. **Use AVWAP L3** — These levels act as dynamic support/resistance

Recommended Timeframes

Intraday: M5, M15, M30 — Fast signals, session-based trading

Swing: H1, H4 — Balanced approach, multi-day positions

Position: D1, W1 — Major trends, minimal noise

Trading Style Presets

Six battle-tested configurations plus AUTO mode and CUSTOM control.

Each preset optimizes ZigZag periods, MA settings, and signal sensitivity for specific trading horizons.

AUTO Mode (Recommended)

AUTO detects your chart timeframe and selects the optimal preset automatically:

Your Timeframe	Auto-Selected Preset	Typical Holding Period
M1 - M5	SCALPING	Minutes to hours
M15 - H1	INTRADAY	Hours to end of session
H4 - H8	INTRAWEEK	1-3 days
H12 - D1	SWING	Days to weeks
D1+	POSITION	Weeks to months

Preset Characteristics

Preset	Sensitivity	Character	Signal Frequency
SCALPING	Very High	Quick entries, tight stops	High
INTRADAY	High	Session-based, balanced	Medium-High
INTRAWEEK	Medium	Multi-day, wider stops	Medium
SWING	Low	Major moves, patient	Low-Medium
POSITION	Very Low	Portfolio-level, minimal noise	Low
GANN	Cycle-tuned	Time-cycle analysis	Varies

CUSTOM Mode

Select CUSTOM to manually configure all ZigZag periods (L1-L4). Recommended for testing non-standard combinations, exotic instruments, or research purposes.

Period Hierarchy

Each preset uses carefully tuned period ratios that create natural fractal alignment. The specific values are optimized per trading style and asset class.

Smart Moving Averages

Two adaptive MAs that respond to market conditions — both reduce whipsaws and track trends more accurately than static EMAs.

ATR-Adaptive StepMA (Fast MA)

StepMA dynamically adjusts its step size based on ATR (Average True Range), making it truly volatility-adaptive:

- **High volatility:** Larger steps → filters noise, avoids whipsaws during chaos
- **Low volatility:** Smaller steps → captures subtle trend changes in quiet markets
- **Step levels act as dynamic S/R** — price often bounces off StepMA

Aspect	Standard EMA	ATR-Adaptive StepMA
During Consolidation	Whipsaws through price constantly	Holds steady levels
Trend Entry	Multiple false crosses	Clear breakout signals
Adaptivity	Fixed period only	ATR-adjusted step size

Momentum-Adaptive VIDYA (Slow MA)

VIDYA (Variable Index Dynamic Average) uses the Chande Momentum Oscillator to adapt its smoothing factor:

- **Trending market:** Faster response, reduced lag — catches moves earlier
- **Choppy market:** More smoothing, filters noise — prevents false signals

Bullish vs Bearish Setup

✓ Bullish

Price above both MAs
StepMA above VIDYA
StepMA making higher steps

✗ Bearish

Price below both MAs
StepMA below VIDYA
StepMA making lower steps

Auto-Configuration

When **AutoConfigMA = true** (default), MA parameters auto-optimize per asset class: Forex (standard), Crypto (higher ATR), Indices (session-aware), Commodities (trend-following).

Colored Candles

Instant visual feedback on market bias through intelligent candle coloring.

Color Logic

Candles change color based on price position relative to key structural levels:

Color	Condition	Interpretation
Bullish (Green)	Price above AVWAP L3 AND above both MAs	Strong upward momentum
Bearish (Red)	Price below AVWAP L3 AND below both MAs	Strong downward momentum
Neutral (Gray)	Mixed conditions	Consolidation — wait for clarity

Candle Mode Options

Mode	Description	Best For
Off	Use chart's default candles	When you prefer standard view
3 Colors Candles	Bull / Bear / Neutral	Most traders (default)
2 Colors Candles	Bull / Bear only, no neutral	Clear directional bias
3 Colors Bars	OHLC bars with 3 colors	Traditional bar chart fans
2 Colors Bars	OHLC bars, Bull / Bear only	Simple bar view

Trading Application

- Sequence of green candles:** Strong bullish momentum — look for long entries
- Sequence of red candles:** Strong bearish momentum — look for short entries
- Gray candles appearing:** Momentum fading — tighten stops or wait
- Color transition:** Potential trend change — watch for confirmation

 **AutoHideChartCandles** (default: ON) automatically hides native chart candles when colored candles are enabled, giving you a cleaner display.

Custom Colors

You can customize the colors via inputs:

- CandleColorBullish:** Default LimeGreen
- CandleColorBearish:** Default Red
- CandleColorNeutral:** Default Gray

MTF Bias System

Filter signals based on higher timeframe structure for dramatically improved quality.

Three Timeframe Levels

The system analyzes three timeframes simultaneously to ensure you're trading with the dominant trend:

Level	Description	Example (M15 chart)	Example (H1 chart)
CTF	Current TimeFrame	M15	H1
HTF1	Higher TF 1 (~4x)	H1	H4
HTF2	Higher TF 2 (~16x)	H4	D1

Bias Filter Modes

Mode	Filter Level	Description
NONE	No filtering	Shows all signals regardless of HTF
WAVE	L3 ZigZag	Filter by wave structure direction
CYCLE	L3 + L4	Strictest — only major trend aligned

Recommended Configurations

Trading Style	CTF	HTF1	HTF2	Signal Volume
Aggressive	WAVE	NONE	NONE	High
Balanced (default)	WAVE	WAVE	NONE	Medium
Conservative	WAVE	WAVE	WAVE	Low
Ultra-Strict	CYCLE	CYCLE	CYCLE	Very Low

⚠️ Avoid setting CTF to NONE. This would show ABC signals against the current swing direction. While the swing may be a pullback (not a trend change), trading against structure without filtering increases risk. Use at least WAVE on CTF; let the MAs confirm actual trend direction.

Alert Confluence Indicators

- **(no suffix):** CTF signal only — use with caution
- **+** : CTF + HTF1 aligned — good probability
- **++** : CTF + HTF1 + HTF2 — **highest probability**

ABC Pattern Signals

Triangle pattern detection across ZigZag levels, classified by cycle timing.

Signal Types

Azimuth Pro detects ABC patterns and classifies them into three categories:

Type	ZigZag Levels	Timing	Risk/Reward
Early Cycle	L3 → L1	Beginning of move	Higher risk, larger reward
Main Trend	L2 → L3	Confirmed trend	Balanced — most reliable
Late Cycle	L1 → L2	Often late in move*	Context-dependent

Signal Characteristics & Risk Management

Early Cycle Signals

Appear at potential beginning of new moves. Higher risk because trend isn't confirmed yet, but offer larger reward potential. **Use tighter stops and reduced position size.** Best used with strong HTF confluence (++) signals).

Main Trend Signals

Core signals showing confirmed trend structure. **Most reliable for trend-following strategies.** These should be your primary entry signals with standard position sizing.

Late Cycle Signals

Appear when move may be exhausting. Use for final push entries or exit warnings. Disabled by default.

Signal Behavior

⚠ Live Structure Analysis

ABC signals anchor to ZigZag swing points. As structure evolves with new price data, signals update dynamically — including historical signals when underlying structure changes. This is a **real-time analysis tool**, not a backtesting system. For testing, use forward testing on demo account.

Filtering by Bias

When CTF Bias is set to WAVE or CYCLE:

- **Bullish bias (last swing = Low):** Only BUY signals shown
- **Bearish bias (last swing = High):** Only SELL signals shown

ATR% & ADR% Volatility Guide

Two metrics that answer: "Should I trade today?" and "Should I exit now?"

ATR% — Range Consumption

Formula: (Today's Range) \div ATR(14) \times 100 — How much daily range is already used.

ATR%	Color	Meaning	Action
<70%	Green	Range fresh	Enter — room to move
70-100%	Gray	Normal	Caution — reduced size
>100%	Red	Exhausted	Avoid / Exit

ADR% — Directional Bias

Formula: (Price - Open) \div ADR \times 100 — Directional strength vs typical daily move.

ADR%	Color	Meaning	Action
$\geq +15\%$	Green	Bullish push	Confirms BUY bias
-15% to +15%	Gray	Neutral	No clear direction
$\leq -15\%$	Red	Bearish push	Confirms SELL bias

Three Key Uses

1. Entry Filter

- ATR% Green:** YES — take the trade
- ATR% Red:** NO — skip it

3. Exit Signal

- ATR% turns Red:** Take profit
- ADR% hits $\pm 80\%$:** Close position

2. Bias Confirmation

- ADR% Green:** Favor longs only
- ADR% Red:** Favor shorts only

Quick Rule

ATR% Green + Signal = GO
ATR% Red = NO (or EXIT)

 Best entries: ATR% green + ADR% neutral + ABC signal with ++. The move hasn't happened yet!

Dashboard, AVWAP & HTF Structure

MTF Dashboard

Element	Description	Use
CTF/HTF1/HTF2 Bias	3-timeframe direction	Signal filter
ATR%	Range consumption	Entry filter / exit (page 9)
ADR%	Directional bias	Trend confirmation (page 9)
Spread / Timer	Cost + bar countdown	Entry timing

Bias Colors: ■ Green = Bullish | ■ Red = Bearish | ■ Gray = Neutral

AVWAP (Anchored VWAP)

Volume-weighted price anchored to ZigZag swings — institutional S/R levels:

Level	Anchor	Use
AVWAP L2	L2 swings	Short-term S/R (off by default)
AVWAP L3	L3 swings	Primary S/R — key levels
Daily VWAP	Session start	Institutional benchmark

AVWAP Logic

Uptrend: AVWAP = support — buy pullbacks | **Downtrend:** AVWAP = resistance — sell rallies

Structure Lines (S/R Levels)

CTF Structure: Horizontal S/R lines at current timeframe ZigZag swings — always active. Labeled as TF+R/S (e.g., M1R, M1S).

HTF Structure: When `ShowHTFStructure = true`, adds HTF1/HTF2 swing levels (e.g., M5S, H1R) as dashed lines.

Alerts & Color Themes

Alerts: Enable Box, Sound, Push, or Email notifications for ABC signals. Alerts show MTF confluence: + (HTF1 aligned) or ++ (HTF1+HTF2 aligned) for higher probability setups.

Quantum Color Themes: 18 professional color schemes (Classic, Ocean, Matrix, Gold, Quantum, Volcano, Aurora, Stealth, and more). Select via `Color Template` input to match your chart style.

The Merkava System

Azimuth Pro = WHERE. The Oracle = WHEN. Together = complete system.

Structure + Timing

Component	Question	Tool
Structure	Where am I in the cycle?	Azimuth Pro
Timing	Is this the right moment?	The Oracle

The Oracle — Perfect Companion

The Oracle is a 7-indicator consensus system for momentum confirmation. Uses the [same 3-TF structure](#) (CTF, HTF1, HTF2) as Azimuth Pro.

Aspect	Azimuth Pro	The Oracle
Purpose	Structure & Bias	Momentum & Timing
Signal Type	ABC price labels	Consensus arrows (5-7)
Best For	Direction & levels	Entry confirmation

Combined Workflow

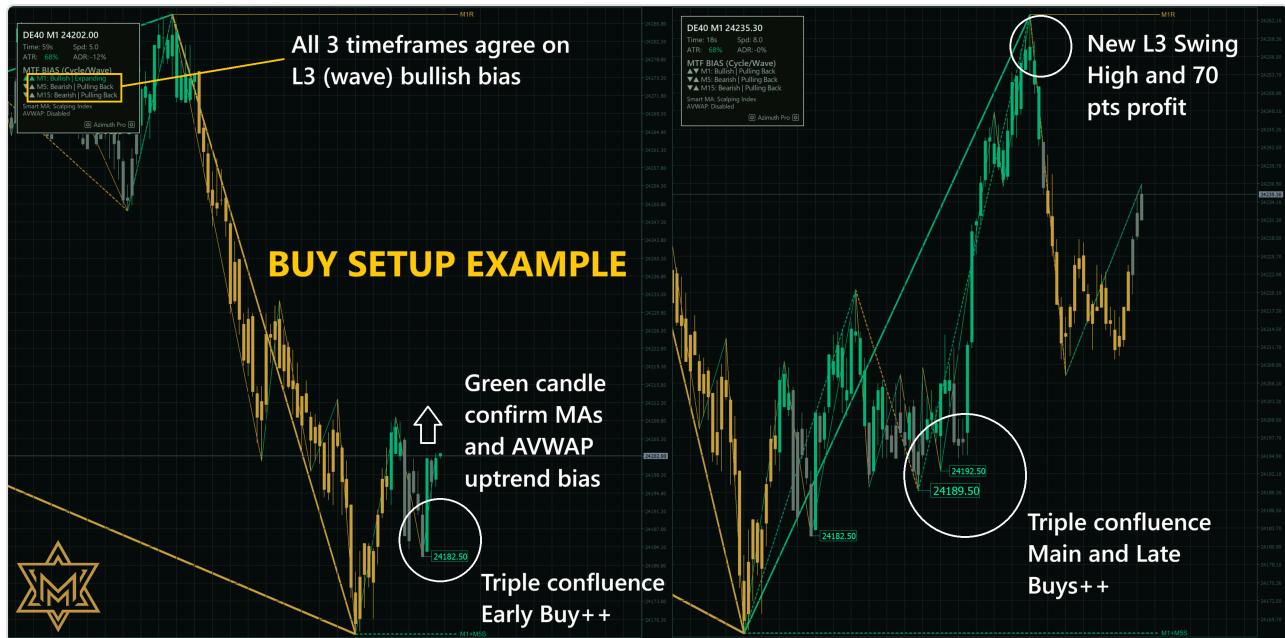
- 1 **Dashboard:** ATR% green + bias aligned
- 2 **Azimuth:** Price at AVWAP L3 + ABC signal with ++
- 3 **Oracle:** 5/7+ consensus confirms → Enter
- 4 **Exit:** ATR% red or ADR% extreme ($\pm 80\%$)

Why This Works

Most traders know direction OR timing — rarely both. Azimuth filters direction, Oracle times entry, structure + ATR/ADR signal exit.

Trade Setup Example

Early Buy setup with triple timeframe alignment.



Setup Checklist

✓	Element	Look For
<input checked="" type="checkbox"/>	ATR%	Green (<70%) — fresh range
<input checked="" type="checkbox"/>	Dashboard	CTF, HTF1, HTF2 aligned
<input checked="" type="checkbox"/>	Level	Price at AVWAP L3
<input checked="" type="checkbox"/>	Signal	ABC with ++ confluence
<input checked="" type="checkbox"/>	MAs	StepMA > VIDYA, sloping up

Entry, Stop & Exit

Entry

Bar close after signal. Size based on ATR to stop.

Stop

Long: below L2 swing
Short: above L2 swing

⚠ Exit: New opposite swing, candles turn neutral/opposite, price breaks StepMA, or ATR%/ADR% extremes.

EA Integration Guide

Azimuth Pro exposes its analysis through indicator buffers, enabling **Expert Advisors** to read market structure, signals, and bias programmatically.

Reading Buffers with iCustom

Basic iCustom Call

```
int azimuthHandle = iCustom(_Symbol, PERIOD_CURRENT, "Azimuth Pro");
double mainBuy = CopyBufferValue(azimuthHandle, 24, 0);
if(mainBuy > 0) { /* Signal present */ }
```

Buffer Reference

Buffer	Content	Values
1, 3	AVWAP L2 Up/Down	Price level
5, 7	AVWAP L3 Up/Down	Price level
8	Daily VWAP	Price level
9	Fast MA (StepMA)	Price level
10	Slow MA (VIDYA)	Price level
15	Candle Color	0=Neutral, 1=Bullish, 2=Bearish
16-17	L1 Swing High/Low	Price level
18-19	L2 Swing High/Low	Price level
20-21	L3 Swing High/Low	Price level
22-23	L4 Swing High/Low	Price level
24-25	Main BUY/SELL	Price level
26-27	Early BUY/SELL	Price level
28-29	Late BUY/SELL	Price level

⚠ Important for EA Developers

Azimuth Pro is a real-time structure analysis tool. Signals update dynamically as market structure evolves. Design your EA to handle signal changes gracefully — avoid relying on historical signal positions for backtesting logic.

💡 Use **buffer 15 (Candle Color)** for quick trend filtering: 1 = bullish context, 2 = bearish context.

Contact & Support

We're here to help you succeed with Azimuth Pro.

Get in Touch

Merkava Labs

- 🌐 Website: www.merkavalabs.com
- ✉️ Email: contact@merkavalabs.com
- 💬 MQL5: Private message via Market product page

Support Resources

Resource	Description
Product Page	Updates, changelog, screenshots
Comments	Community Q&A, tips
Direct Message	Private technical support

Before Contacting Support

1. Ensure **latest version** from MQL5 Market
2. Check **MaxCalculationBars** (increase for H1+)
3. Test on **demo account** first

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

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