



Boa Scalper EA — User Guide

XAUUSD breakout scalper for MetaTrader 5 and MetaTrader 4 · version 1.00

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1. What the EA does

Boa Scalper EA trades breakouts of swing levels on gold (XAUUSD). Levels are built on closed bars of the timeframe set in the inputs. The EA places a **buy stop** above the latest swing high and a **sell stop** below the latest swing low. When one order fills, the opposite one is removed, so there is never more than one position per chart.

- Every position has a **server stop loss** from the moment it opens.
- The exit is a **virtual trailing stop** that follows the price on every tick. Its distance is set in points or as a share of ATR, so it widens in volatile hours and tightens in quiet ones.
- No martingale, no grid, no averaging.

Because the EA works on every tick with short stops, its results depend on **spread, commission and execution speed**. Sections 6 and 7 explain how to choose the account and the VPS.

2. Installation

1. **MetaTrader 5:** download the terminal from the recommended broker — [MetaTrader 5 from Tickmill](#).
2. **Market purchase:** the EA appears in the terminal automatically (Navigator → Expert Advisors → Market). **Manual install:** put `Boa Scalper EA.ex5` (MT5) or `Boa Scalper EA.ex4` (MT4) into `File → Open Data Folder → MQL5\Experts` (MQL4\Experts) and restart the terminal.
3. Put the preset files (six `Boa_XAUUSD_*.set` files: three standard and three risk presets) into `MQL5\Presets` (MQL4\Presets) or keep them anywhere on the disk.
4. Open an **XAUUSD** chart. The chart timeframe does not matter: the EA builds its levels on the timeframe from the inputs.
5. Drag the EA onto the chart. On the *Common* tab allow algorithmic trading. On the *Inputs* tab press **Load** and choose a preset.
6. Turn on the **Algo Trading** button (MT4: *AutoTrading*) on the toolbar. The info panel shows *Status: waiting for a breakout* when everything is ready.

MT4: the preset files for MT4 store timeframes in minutes (5, 15, 60). Use the files from the MT4 package.

3. Presets

Three standard presets with a fixed lot 0.01 are supplied, plus three risk presets (below). Each standard preset was tuned for its level timeframe; all other inputs are the same.

Preset file	Level TF	Channel, bars	Bars scanned	ATR period	Trailing, ATR	Stop loss, points	Trail step, points	Magic
<code>Boa_XAUUSD_M5.set</code>	M5	49	1000	19	0.15	240	7	26401
<code>Boa_XAUUSD_M15.set</code>	M15	15	250	24	0.20	470	11	26151
<code>Boa_XAUUSD_H1.set</code>	H1	4	200	14	0.10	700	15	26301

Common to all presets: fixed lot 0.01, virtual initial stop 600 points, volume filter 0.9, run-up limit 2.5 ATR, max spread 50 points, trading hours 01–23 server time (Friday until 20).

Several presets at once. Open a separate XAUUSD chart for each preset. Every chart must have its own magic number (the presets already have different ones). On MetaTrader 5 use a **hedging** account: on a netting account positions of the same symbol merge, so run only one preset per symbol there.

Risk presets

Three more presets trade with a lot calculated from the balance (risk per trade at the server stop loss). They are meant for growing a small account and are much more aggressive than the fixed-lot presets.

Preset file	Level TF	Channel	Bars scanned	ATR period	Trailing	Stop loss, points	Trail step	Max spread / remove after, s	Risk	Magic
<code>Boa_XAUUSD_M5_5%+ATR.set</code>	M5	49	1000	19	0.15 ATR	240	7	50 / 60	5 %	26402
<code>Boa_XAUUSD_M15_5%+ATR.set</code>	M15	15	200	24	0.20 ATR	240	11	30 / 10	4 %	26152
<code>Boa_XAUUSD_H1_5%.set</code>	H1	4	200	14	85 pts	700	15	50 / 60	5 %	26302

- **Boa_XAUUSD_M5_5%+ATR.set** — the M5 preset with risk 5 % per trade; trailing 0.15 ATR.
- **Boa_XAUUSD_M15_5%+ATR.set** — M15 levels with a shorter server stop (240 points instead of 470), 200 bars scanned, a stricter spread limit (30 points, orders removed after 10 seconds) and risk 4 % per trade; trailing 0.20 ATR.
- **Boa_XAUUSD_H1_5%.set** — H1 levels with the trailing in points (85 points, ATR trailing off) and risk 5 % per trade.

With risk 4–5 % per trade the lot grows quickly and soon reaches the broker's volume limits and the free margin (see the test results in section 10). Before trading set `InpMaxLot` (the tests used 50) and consider lowering `InpRiskPct` to 1–3 %, especially when the three risk presets run together on one account. These presets have their own magic numbers (26402, 26152, 26302) and can run next to the fixed-lot presets.

4. Main settings

Inputs in points refer to two-digit gold quotes (1 point = 0.01 of the price, 100 points = 1.00 USD of the price). Three-digit quotes are converted automatically — enter the same values.

Lot

Input	Default	Meaning
<code>InpFixLot</code>	0.01	Fixed lot (used when risk = 0).
<code>InpRiskPct</code>	0	Risk per trade, % of balance at the server stop loss. 0 = fixed lot.
<code>InpMaxLot</code>	0	Maximum lot per trade. 0 = no limit.
<code>InpMagic</code>	26151	Magic number. Unique for every chart.
<code>InpDeviation</code>	30	Maximum slippage, points.

Levels

Input	Default	Meaning
<code>InpPivotTF</code>	M15	Timeframe of the levels.
<code>InpPivotMode</code>	Boa channel	How levels are found: Boa channel (recommended), bars, fractals.
<code>InpChannelLen</code>	15	Boa channel length, bars of the level timeframe.
<code>InpPivotLookback</code>	250	How many bars of the level timeframe to scan.
<code>InpDistance</code>	0	Order offset from the level, points.
<code>InpMinOrderDist</code>	15	No order closer than this to the current price, points.
<code>InpMinOrderATR</code>	2.0	No order is placed or moved closer to the price than this share of the M1 ATR(14). Protects against a fast market passing the level while the request is on its way (0 = off).
<code>InpIntervalMin</code>	1	Pause after a closed trade, minutes.
<code>InpMaxPerLevel</code>	1	Maximum entries per level (0 = no limit).

Filters

Input	Default	Meaning
<code>InpATRPeriod</code>	24	ATR period on the level timeframe.
<code>InpMinVolRatio</code>	0.9	Tick volume of the last closed bar / its average must be at least this (0 = off).
<code>InpMaxRunATR</code>	2.5	No entry after a run-up towards the level larger than this, in ATR (0 = off).
<code>InpTrendMA</code> / <code>InpTrendTF</code>	0 / H1	Trend filter: EMA period and timeframe; buys above, sells below (0 = off).
<code>InpMaxTradesDay</code>	0	Maximum trades per day (0 = no limit).
<code>InpSkipHours</code>	empty	Server hours without new orders, e.g. 6,7,20.

Stop loss and trailing

Input	Default	Meaning
<code>InpStopLoss</code>	470	Server stop loss, points. Always set on every position.
<code>InpVirtualInit</code>	600	Initial virtual stop, points, until the trailing starts.
<code>InpATR_Trail</code>	0.2	Virtual trailing distance as a share of ATR (0 = use points).
<code>InpVirtualTrail</code>	75	Virtual trailing distance in points (used when ATR = 0).
<code>InpVirtualStep</code>	11	Trailing step, points.
<code>InpTakeProfit</code>	0	Server take profit, points (0 = off).
<code>InpBESStart</code> / <code>InpBEPoint</code>	0 / 10	Breakeven after a profit of N points, with an offset (0 = off).
<code>InpMaxHoldSec</code> / <code>InpMinHoldSec</code>	0 / 0	Maximum and minimum holding time, seconds (0 = off).

Time and spread (server time)

Input	Default	Meaning
<code>InpStartHour</code> / <code>InpEndHour</code>	1 / 23	Trading window; orders are removed at the end hour.
<code>InpFridayEndHour</code>	20	End hour on Friday.
<code>InpMon</code> ... <code>InpFri</code>	true	Trading days.

InpMaxSpread	50	Maximum spread for placing orders, points.
InpSpreadDeleteSec	60	Remove orders if the spread stays too high for N seconds.

Other

Input	Default	Meaning
InpTradeBuy / InpTradeSell	true	Allow buys / sells.
InpReverse	false	Reverse mode (limit orders at the levels). Keep false: the presets are tuned for breakouts.
InpShowPanel / InpPanelFont	true / 9	Info panel and its font size.
InpShowLines	true	Lines of the virtual stop, take profit and trailing start.
InpComment	Boa Scalper	Order comment.

5. Money management

- **Fixed lot** (`InpRiskPct = 0`): every trade uses `InpFixLot`. A start of **100 USD per preset with 0.01 lot** is the minimum we recommend.
- **Risk per trade** (`InpRiskPct > 0`): the lot is calculated so that the server stop loss costs the given percentage of the balance. Example: balance 1 000 USD, risk 1 %, stop 470 points → 10 USD at risk; one lot loses 470 USD at 470 points, so the lot is $10 / 470 \approx 0.02$.
- **Maximum lot** (`InpMaxLot`): an upper cap for the risk-based lot. Always set it when you use risk mode — otherwise the lot keeps growing with the balance until it hits the broker limits or the free margin.
- With several presets on one account the risks add up: three presets at 1 % each can lose about 3 % if all of them stop out. We recommend 0.5–1 % per preset.
- Before a new order the EA checks the free margin, the symbol volume limit and the broker's minimum stop distance. If an order cannot be placed, the reason is shown in the panel.

6. Account: low or zero spread

The EA enters with stop orders and exits by a tight trailing stop, so every trade pays the spread and the commission. Use an account with the **lowest total cost per lot**:

- **Recommended broker:** [Tickmill](#) — the EA was tested on Tickmill quotes.
- Account types called **ECN, Raw, Razor, Zero, Pro** or similar — raw market spread plus a fixed commission.
- Compare the **total cost**, not the spread alone. For XAUUSD one point (0.01) on 1 lot equals 1 USD, so:
 $\text{cost per lot} = \text{average spread in points} \times 1 \text{ USD} + \text{commission per lot (round turn)}$
 Example: spread 15 points + commission 7 USD = 22 USD per lot; zero spread + commission 12 USD = 12 USD per lot — the zero-spread account is cheaper.
- Recommended: average XAUUSD spread **up to 15–20 points** during the trading hours and commission **up to 7–10 USD per lot** round turn. Standard accounts with spreads of 25–40 points and more are not suitable.
- Watch the spread in the panel ($\text{Spread } N / \text{max } 50$). If it stays above `InpMaxSpread` for `InpSpreadDeleteSec` seconds, the EA removes its orders and waits.
- Check the swap if positions may stay open overnight, and make sure the broker allows scalping and EA trading.
- Always test on a demo account of the same broker and account type before trading real money.

7. VPS: latency 1–10 ms to the broker server

The virtual trailing stop is executed by a market order sent from the terminal at the moment the price touches it. Every millisecond between the terminal and the broker server turns into slippage on entries and exits. That is why the terminal must run on a **VPS with a ping of 1–10 ms to the broker's trade server**, 24 hours a day, 5 days a week.

- **Recommended VPS:** [FXVPS](#) — choose the location closest to your broker's trade server and check the ping after setup.
- **Choose the location** of the VPS in the same city or data center as the broker's trade server (commonly London, New York, Amsterdam, Frankfurt, Tokyo — ask your broker where the server is).
- **Check the ping:** in the terminal running on the VPS look at the connection indicator in the bottom-right corner of the window (it shows the ping in ms), or open the server list on the login window. The value should stay within 1–10 ms; above 20–30 ms results get worse.
- **MQL5 Virtual Hosting:** right-click your account in the Navigator and choose *Register a Virtual Server*; the list shows the ping from each hosting point to your broker — choose the one with the lowest value. After any change of inputs synchronize the EA with the hosting again. The info panel is not visible on the virtual server; the EA works as usual.
- Give the VPS at least 2 GB of RAM for one terminal, switch off automatic restarts for updates during the trading week and keep only the trading terminal running.
- A home computer is not suitable: ping to the broker is usually 30–150 ms, and the internet or power may go down at any moment.

8. Info panel and chart lines

The panel shows the symbol and level timeframe, magic number, balance, equity, today's result and drawdown, the status, the current levels and orders, the open position with its virtual stop, the lot, stop loss and trailing settings, trading hours and the current spread, and results by side (trades, win rate, profit, floating result).

Information panel

Everything the EA is doing, on the chart

Boa Scalper EA 1.00
XAUUSD M5 levels M15 Magic 26151
Balance: 10116.20 USD
Equity: 10117.05 (+0.85)
Today: +3.40 Drawdown: 0.00% (max 0.21%)
Status: in position
Levels: high 4175.14 low 4142.34
Orders: BUY STOP - SELL STOP -
Position: BUY 0.01 @4175.21 +85 pts +0.85 vSL 4174.70 [TRAIL]
Lot: FIXED 0.01 (next 0.01)
SL 470 pts Trail 0.20 ATR = 1.72
Hours 01-23 (Fri 20) Spread 18 / max 50

SIDE	TRD	WIN%	P/L	FLOAT
BUY	93	51%	+47.86	+0.85
SELL	87	41%	+68.34	+0.00
TOTAL	180	46%	+116.20	+0.85

Sample values

Account

Balance, equity, today's result, current and maximum drawdown.

Status

What the EA is waiting for, and why an order is not placed.

Levels and orders

Current swing levels and the prices of the pending orders.

Position

Side, lot, points, money, the virtual stop and trailing state.

Results

Closed trades, share of winners and result for buys, sells and total.

XAUUSD | levels on M5 · M15 · H1 | MetaTrader 5 · MetaTrader 4

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Info panel (example values).

Status messages: *waiting for a breakout, in position, outside trading hours, market closed, trading is disabled* (Algo Trading button or EA settings), and notes *spread too high, not enough free margin, volume limit of the symbol reached, pause after a trade*.

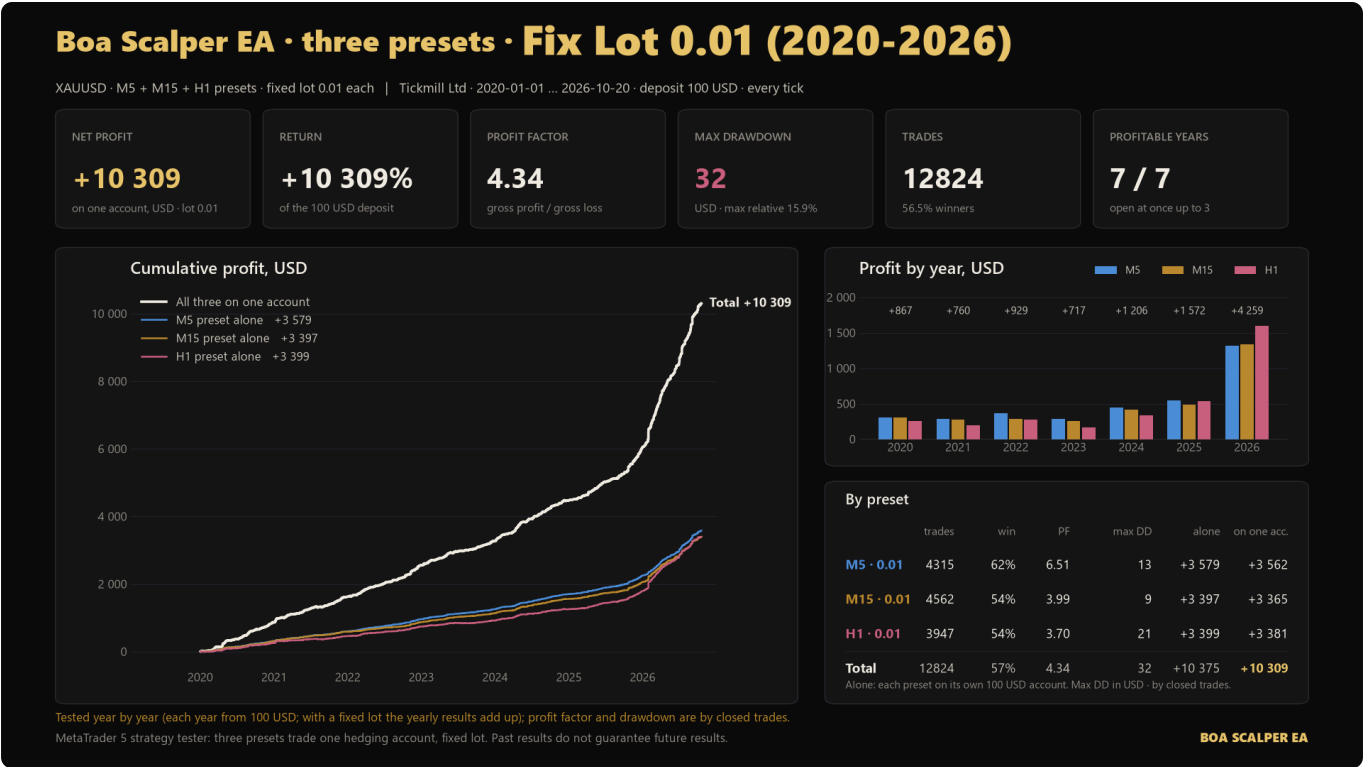
Lines on the chart: virtual stop (red — initial, blue — trailing), take profit, trailing start. Turn them off with `InpShowLines = false`.

9. Backtesting

- Use the model **Every tick based on real ticks** — the trailing stop works inside the bar, and bar-based models do not show the real price path. MT4 has no real ticks: use **Every tick** there.
- Set a realistic delay (for example 50–200 ms) to see the effect of execution speed.
- Test with the commission of your account type (*Symbol settings* of the tester).

10. Test results

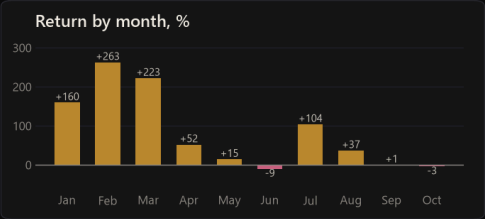
All results below are from the MetaTrader 5 strategy tester on XAUUSD. They show how the presets behaved on history, not what they will earn in the future. Spread, commission, execution speed and the price feed of your broker change the result.



Boa Scalper EA · three presets on one account · RISK 4-5% (2026)

XAUUSD · M5 + M15 + H1 presets at the same time · risk M5 5% / M15 4% / H1 5% of the shared balance | Tickmill Ltd · 2026-01-15 ... 2026-10-20 · deposit 10 000 USD · 100% real ticks

NET PROFIT	GROWTH	PROFIT FACTOR	MAX DRAWDOWN	TRADES	OPEN AT ONCE
+1 310 056	×132.0	1.21	37.6%	1321	3
final balance 1 320 056	from 10 000 start	gross profit / gross loss	relative, by equity	44.7% winners	max positions together



By preset

	trades	win	on one account	separately
M5 · 5%	419	50%	+1 341 162	+459 019
M15 · 4%	485	41%	+430 676	+1 355 119
H1 · 5%	417	41%	-461 782	+58 249
Total			+1 310 056	+1 872 387

Separately: each preset alone on its own 10 000 USD account.

At this risk the lot runs into broker limits: M5 alone stops opening on 13 Aug (a ~90-lot order needs more margin than the account has), M15 reaches the 100-lot maximum; on one account some orders are skipped for margin. MetaTrader 5 strategy tester: three presets trade one hedging account, lot from the shared balance. Past results do not guarantee future results.

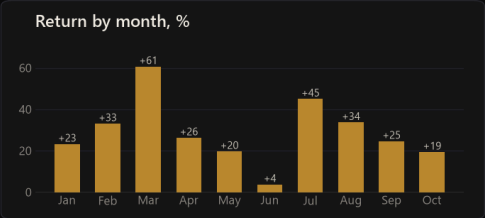
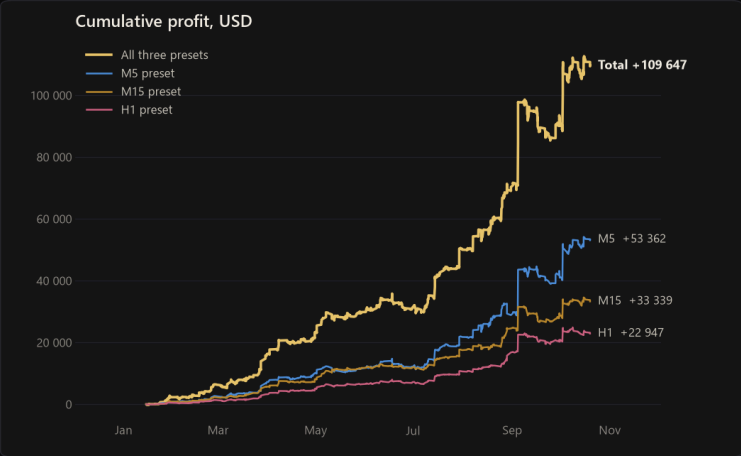
BOA SCALPER EA

Risk presets as supplied (5 % / 4 % / 5 %), no lot cap. The lot reaches the broker limits: M5 alone stops opening in August, M15 reaches the 100-lot maximum. Shown to explain why InpMaxLot matters.

Boa Scalper EA · three presets on one account · RISK 1% (2026)

XAUUSD · M5 + M15 + H1 presets at the same time · risk 1% each of the shared balance | Tickmill Ltd · 2026-01-15 ... 2026-10-20 · deposit 10 000 USD · 100% real ticks

NET PROFIT	GROWTH	PROFIT FACTOR	MAX DRAWDOWN	TRADES	OPEN AT ONCE
+109 647	×12.0	1.83	14.1%	1440	3
final balance 119 647	from 10 000 start	gross profit / gross loss	relative, by equity	48.6% winners	max positions together



By preset

	trades	win	on one account	separately
M5 · 1%	478	50%	+53 362	+21 370
M15 · 1%	515	46%	+33 339	+12 876
H1 · 1%	447	48%	+22 947	+7 259
Total			+109 647	+41 505

Separately: each preset alone on its own 10 000 USD account.

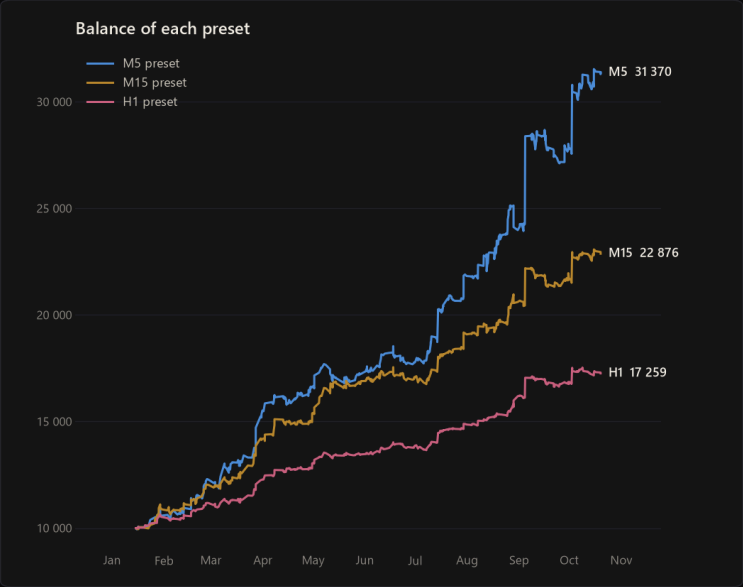
MetaTrader 5 strategy tester: three presets trade one hedging account, lot from the shared balance. Past results do not guarantee future results.

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Standard presets on one account with risk 1 % each. 2026-01-15 – 2026-10-20, deposit 10 000 USD, real ticks.

Boa Scalper EA • three presets • backtest

XAUUSD • Tickmill Ltd • 2026-01-15 ... 2026-10-20 • deposit 10 000 USD each • 100% real ticks • each preset tested on its own



Backtest in the MetaTrader 5 strategy tester. The presets were tested separately, not as one account. Past results do not guarantee future results; trading carries a high risk of loss.

BOA SCALPER EA

Preset	M5	M15	H1
Risk per trade	1%	1%	1%
Stop loss, pts	240	470	700
Trailing	0.15 ATR	0.2 ATR	0.10 ATR
Net profit	+21 370	+12 876	+7 259
Profit factor	1.99	1.87	2.03
Max drawdown, equity	5.7%	4.7%	3.1%
Trades	478	515	447
Winners	49.6%	46.2%	48.1%
Avg holding	14 s	42 s	46 s
Losing streak, max	8	11	11

Standard presets with risk 1 %, each on its own account. 2026-01-15 – 2026-10-20, deposit 10 000 USD, real ticks.

11. Troubleshooting

What you see	What to do
No orders, status <i>trading is disabled</i>	Turn on Algo Trading and allow algorithmic trading in the EA properties.
<i>outside trading hours</i>	Normal outside <code>InpStartHour</code> – <code>InpEndHour</code> (server time) and after <code>InpFridayEndHour</code> on Friday.
<i>spread too high</i>	The spread is above <code>InpMaxSpread</code> . Wait, or move to an account with a lower spread.
<i>not enough free margin</i>	Lower the lot or the risk, set <code>InpMaxLot</code> , or add funds.
Orders are placed but entries slip a lot	Check the ping to the broker (section 7) and the account type (section 6).
Two presets interfere with each other	Every chart needs a unique <code>InpMagic</code> ; on MT5 use a hedging account.

Risk warning. Trading leveraged products carries a high risk of loss. Past results, including strategy tester results, do not guarantee future results. Test the EA on a demo account with your broker before trading real money.