METATRADER 5 TRADING ROBOTS

AI Pro100 Trader's Guide

Testing · AI optimization · Live deployment

One guide for the whole family: **Xaurus AI Pro100** · **Swinger AI Pro100**

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Contents

1 Fundamentals

The AI Pro100 robots are high-risk leveraged-trading instruments designed for rapid account growth. Both family members — **Xaurus AI Pro100** and **Swinger AI Pro100** — are operated identically: everything in this guide applies equally to each of them. The only difference is their internal trading logic, which is neither disclosed nor configured directly.

1.1 Risk profile and the dedicated-funds rule

A trader using AI Pro100 always risks 100 % of the funds placed on the trading deposit. Money that must be protected from loss should be **kept out of this trading** — never deposited. A sensible approach is to run the high-risk trading in parallel with conservative instruments (bank deposits, real estate) holding the rest of your capital, optimizing the overall risk profile of the portfolio.

> **UNDERSTAND THIS**
>
> Any trading that is never stopped, with profit never withdrawn in time, ends in the complete loss of the deposit — that is a mathematical fact, and it is especially true for highly leveraged forex trading. Therefore the profit target at which the account is closed and trading stops must be defined **before** trading begins — see §1.4.

1.2 Trade series and virtual levels

Trade series — the basic concept of AI Pro100 trading. It is a sequence of trades that starts with a base-lot entry and ends when all positions of the series are closed at a combined profit (the virtual take-profit of the series) or, in the worst case, by an emergency stop (the protective stop or a Stop out). Intermediate closures inside the series — including losing ones — do **not** end it: the EA keeps working until the series is finally closed. The account balance at the start of a series is the reference point for the Equity SL % protection (§1.3), and the number of series enters the Rating formula (§1.9).

The EAs place no pending orders and no broker-side stop-losses or take-profits (the only exception is the Equity SL % protective stop, §1.3). Instead, all levels are **"virtual"**: the EA draws them on the chart and executes them itself. Levels are placed, moved and executed no more than once per minute bar. This is deliberate behaviour, tied to the architecture of the trading as a whole.

The absence of an SL in the order properties does **not** mean the EA "trades without stops" — it virtualizes them, among other reasons because we are convinced the broker has no need to know our trading levels before the moment they are actually executed.

1.3 Drawdown control: Equity SL %

The `Equity SL %` input sets a percentage of the account balance taken at the start of the current trade series, below which the account equity must not fall while that series develops. As long as series end normally — at a

profit — the reference balance in practice equals the latest balance high-water mark (an emergency series ending — the protective stop, Stop out — halts the EA, §8.5).

The mechanism is enforced by a **real broker-side stop-loss**: the EA computes the common price level at which account equity would touch the threshold and places it as the stop-loss on all of its open positions (recomputing on every new opening inside the series). When this stop fires, all positions are closed and **the EA stops trading** — see §8.5. A value of `0` disables the mechanism.

> **NOT A GUARANTEE**
>
> Equity SL % is not a guarantee and must not be treated as one. It is a tool that may work as expected — or may not (gaps, slippage, broker-side circumstances). The only truly effective protection against losing more than planned remains the dedicated-funds rule (§1.1).

1.4 Profit target: Equity TP $

The `Equity TP $` input is the target account equity in the deposit currency. As soon as equity reaches this value while the EA is active, all positions are immediately closed at market and the EA stops trading. A value of `0` disables the mechanism.

Set the target with a margin for closing slippage — for example +10 % over the goal if the aim is to secure *at least* a given percentage. Remember that +200 % profit corresponds to multiplying the initial deposit by 3 (not 2). Example: starting deposit 7,000, target +200 %, 10 % slippage margin — `Equity TP $` = 7000 × 3 + 10 % = 21,000 + 2,100 = 23,100.

We recommend deriving the profit target itself from the set's test period: plan for roughly **¼ of the historical span** on which the set (SSN) tested profitably. Example: a set optimized on the last 2 years with an average profit of 20 % per month — plan for 6 months of work (2 years / 4) with a result of $1.2^6 \approx 3$, i.e. about +200 % in half a year. Once the profit or time goal is reached — re-optimize for the latest market (§5) and start a new round: AI Pro100 trading is built on efficient self-optimization with minimal trader involvement.

1.5 The SSN code and closed settings

SSN (Setup Serial Number) — a compact text code that carries the complete trading configuration of the EA: all internal algorithm parameters, the symbol, the signal timeframe, the risk scale (MM) and the server time profile. Example: `xu6HDe8KUOF4tNV2x1UOPP`. One code — one reproducible trading setup: paste it into the `SSN code` input and the EA trades or tests exactly that set.

The EA does not disclose its trading parameters. That is not only protection against copying and reverse engineering — it is a usage methodology: the trader gets by entirely without deep knowledge of the internals while keeping the full power of flexible optimization for any market — **on equal terms with the developers**. In our own trading, including our public signals (copy service), we use exactly the same mechanism and the same EA version that we distribute.

We publish up-to-date sample sets in open sources — in particular, they can always be found on the product page at mql5.com. The core idea of AI Pro100, however, is different: every trader — even before purchasing the robot — can use this guide to run the powerful self-optimization engine and find settings that suit them

personally: their market, broker, capital and risk appetite. The SSNs we publish are examples of what the engine produces, meant to demonstrate its capabilities; they are not trading recommendations.

1.6 How AI Pro100 optimizes

The AI Pro100 methodology applies artificial-intelligence techniques to multi-parameter optimization: the search covers a settings space that brute force could never traverse in reasonable time. Optimization runs in the standard MetaTrader 5 Strategy Tester in the **"Open prices only"** model on an **M1** chart — with results more than 95 % identical to the "Every tick based on real ticks" model.

You should know: the "Open prices only" model on M1 always uses a knowingly understated spread (the minimum spread of each minute bar), so re-running a result on real ticks almost always shows a somewhat lower profit. We have done everything possible — and largely succeeded — to keep the overall test profile intact and matching between the two models in most cases.[1]

Using the engine is as simple as it gets: set a pass budget in the `Pass budget` input, select the "Slow complete algorithm" mode with the Custom max criterion — and press Start (§5).

1.7 The reliability — profitability axis

Sets used for trading live on a "reliability — profitability" axis. A set's position on this axis is determined by several factors, each on its own and in combination:

- **The optimization period.** Sets found on the last half-year of history are, on the whole, considerably more profitable than sets found on the last 2 years. Our premise is that the market changes constantly, and it is the most recent history that reflects the currently active tendencies; last year's tendencies may well be dead by now. This is no fringe theory — it is the well-established Adaptive Market Hypothesis (AMH). Hence a set will usually not work in the tester outside its optimization period (or will work with a deeper drawdown) — that is **normal behaviour**. A longer period shifts sets toward reliability at the cost of profitability; a shorter one — the other way. The golden mean is suggested by the number of trades: **about 1,000 trades or more** per test period looks good even for a relatively short period (half a year or a year), provided the planned trading time for the set does not exceed ¼ of the test period and the profitability of that quarter satisfies your risk-reward criteria.
- **The forward check** (the `Forward` input) — reserving part of the period for out-of-sample verification, §6.1.
- **The drawdown ceiling** (the `Drawdown to %` input) — the lower the allowed drawdown, the lower the overall profitability of the resulting sets and the higher their hypothetical survivability, §6.2.

1.8 Broker and account-type binding

Settings produced by AI Pro100 optimization are usually specific to a particular quote source — that is, to a given broker *and* account type. We run our tests and publish sample settings for the RoboForex broker, account type Pro. When trading with another broker — or even another account type of the same broker (e.g. RoboForex ECN) — re-optimization for the quirks of that account's quotes may be required. This is a normal process: the robots exploit intraday market dependencies that can differ noticeably even in quotes of the

1. That is why we pay no attention to "real ticks" during optimization itself — and only at the very last stage, before taking a set live, we always re-verify it in the *"Every tick based on real ticks"* model specifically (not "Every tick", which is the same M1 bars "from another angle": ticks generated by the terminal's algorithm). The EA has a built-in mode for exactly this re-verification — §6.5.

same instrument from different sources. Obviously, the resulting SSNs should be traded with the very broker and account type on whose quotes they were obtained.

1.9 The Rating quality score

The AI Pro100 engine uses its own "smart" quality score for a test pass — **Rating**; all optimization results are ranked by it. To see it in the tester's Optimization tab, select the **Custom max** criterion before starting (the drop-down next to the optimization mode on the Settings tab).

A positive Rating is earned only by passes that: are profitable over the whole test period; had no Stop out / Margin call events; and satisfy the Optimization group inputs set before the start — passed the forward check (if `Forward` is not 0 %), stayed within the `Drawdown to %` ceiling and collected at least `Min deals` trades.

The Rating formula intelligently combines: geometric-mean profitability; the number of trade series (unique entries); profit uniformity — equity curves made of a few large one-off "shots" get a low rating, other things being equal; and the maximum relative equity drawdown (a metric MetaTrader 5 does not show in the Optimization tab but reports on the Backtest tab as Equity Drawdown Relative).

2 EA inputs

There are just ten external inputs, identical in both EAs — three groups in the properties window. Everything else is carried by the SSN set code (§1.5).

Input	Default	Purpose	Section
=== ROBOT SETUP ===			
SSN code	empty	The set code. The EA trades and tests exactly this set. An empty code with `Pass budget = -1` runs the built-in demonstration set.	§4, §8
Minimal deposit	0	The risk scale (MM): the deposit amount, in account currency, on which the set trades the 0.01 base lot. `0` — taken from the set code; a value >0 overrides the code's MM. The optimization checkbox on this input enables special modes (§6.3, §6.6).	§5, §6
Magic (seed)	0	The identifier of the EA's trades on the account — each running instance must have its own. During optimization it is the search seed: the same Magic with the same settings gives a reproducible seeding *.	§5, §8
=== GOALS AND GUARDS ===			
Equity SL %	0 (off)	Protective equity floor as a percentage of the balance at the start of the current trade series; enforced by a real broker-side stop, firing halts the EA.	§1.3
Equity TP $	0 (off)	Target account equity: once reached, all positions are closed at market and trading stops.	§1.4
=== OPTIMIZATION ===			
Pass budget	-1	A multi-mode input. When an optimization is started — the cycle budget in tester passes (from 500 to 1,000,000). In a single test: a value ≥ 1 — the row number of the last optimization to reproduce it exactly; `-1` — a regular test driven by the SSN. A negative `-N` at optimization start — the confirmation mode: re-runs the N best book rows under precise modelling.	§5, §6
Forward	0 %	The share of the test period reserved for the built-in forward check (25/50/75 %). 0 % — forward disabled.	§6.1
Drawdown to %	100 (off)	Ceiling on the maximum relative drawdown: sets with a deeper drawdown are deemed unfit.	§6.2
Min deals	100	Minimum number of trades per pass (the Trades column): below the threshold the result is statistically empty. 0 — threshold off.	§6.2
Timing profile	EU DST +2/+3	The broker's server time profile. Optimization only — it is written into every produced SSN; in tests and trading the profile comes from the set code itself.	§7

* The seeding itself is reproducible; the final optimization result is not guaranteed to be identical: what grows out of that “seed” depends on the order in which agent results arrive in the MetaTrader 5 tester, which cannot be predicted exactly.

SAME LABELS — DIFFERENT ROBOTS

Input names, groups and defaults are identical for Xaurus and Swinger — this guide is EA-agnostic. The only difference between the robots is their internal trading logic.

3 Quick start: the mql5.com demo

You can try the full AI-optimization cycle before buying. Per marketplace rules the Market demo does not execute optimization — so the EA itself hands you a dedicated tester build free of that limitation.

1. On the product page (**Xaurus AI Pro100** or **Swinger AI Pro100** at mql5.com) press **Free demo** — MetaTrader 5 downloads the demo version of the EA.

2. Run the EA once in the Strategy Tester (any single test — e.g. per §4 on default inputs). On its first run the EA writes two files — to the local `MQL5\Files` of the terminal data folder and to the shared terminal folder — and prints their full paths to the journal:
   - `<Robot>MK6_<version>.pdf` — this guide;
   - `<Robot>MK6_<version>.zip` — a container with the tester build `<Robot>MK6_test_<version>.ex5`.

3. Unzip the archive with Windows tools and place `<Robot>MK6_test_<version>.ex5` into the terminal's `MQL5\Experts` folder (menu **File → Open Data Folder**), then refresh the Navigator list (right-click → Refresh).

4. From here on, work through this guide with the tester build: it covers the whole cycle — single tests (§4), AI optimization (§5–6). The tester build is for the Strategy Tester only — live trading is done with the Market version.

FREELY DISTRIBUTED

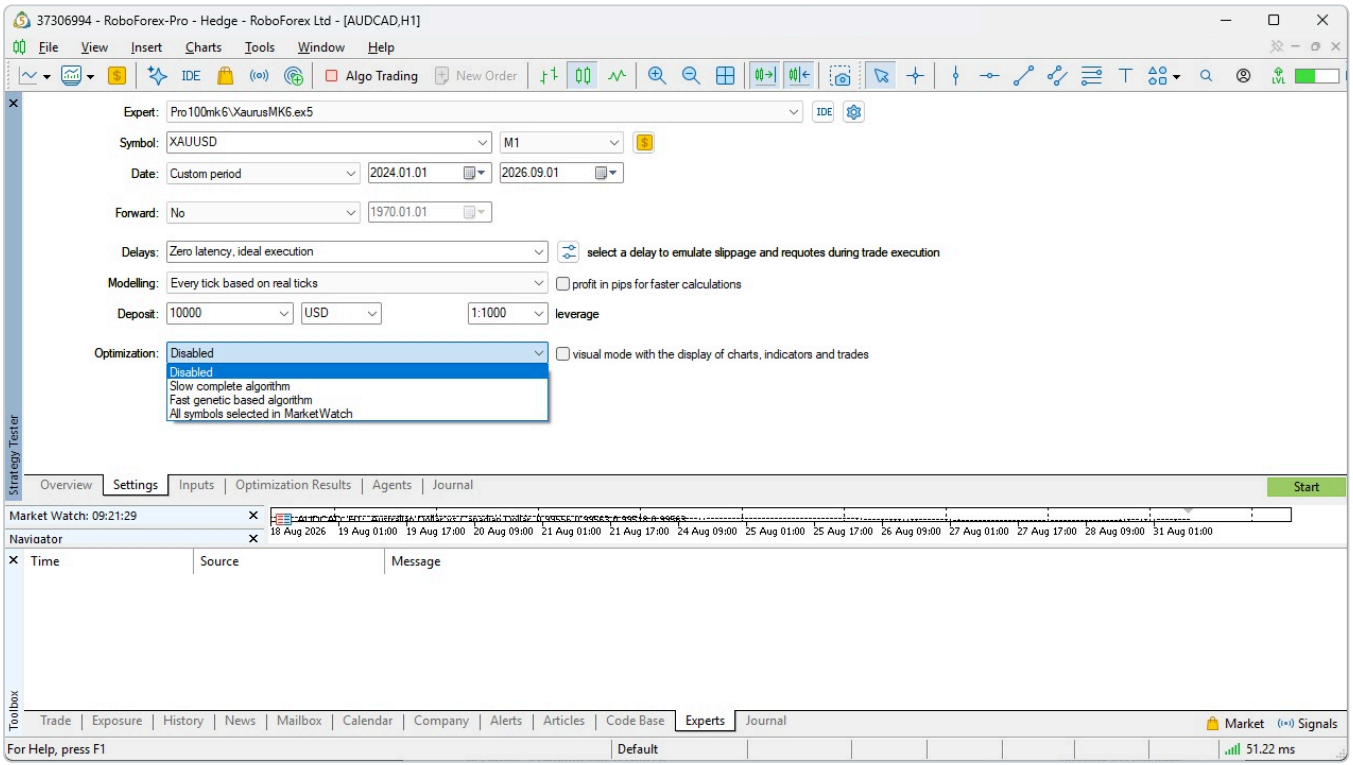
We distribute the tester build freely outside the Market as well — the file `<Robot>MK6_test_<version>.ex5` may be passed on to other traders together with this guide. The current tester builds of Xaurus AI Pro100 and Swinger AI Pro100 can be downloaded from our Telegram: t.me/xauruspro/16.

4 Regular backtest

A single Strategy Tester run: checking a ready-made set on history — a sample set from the product page, or a result of your own optimization.

4.1 The tester's Settings tab

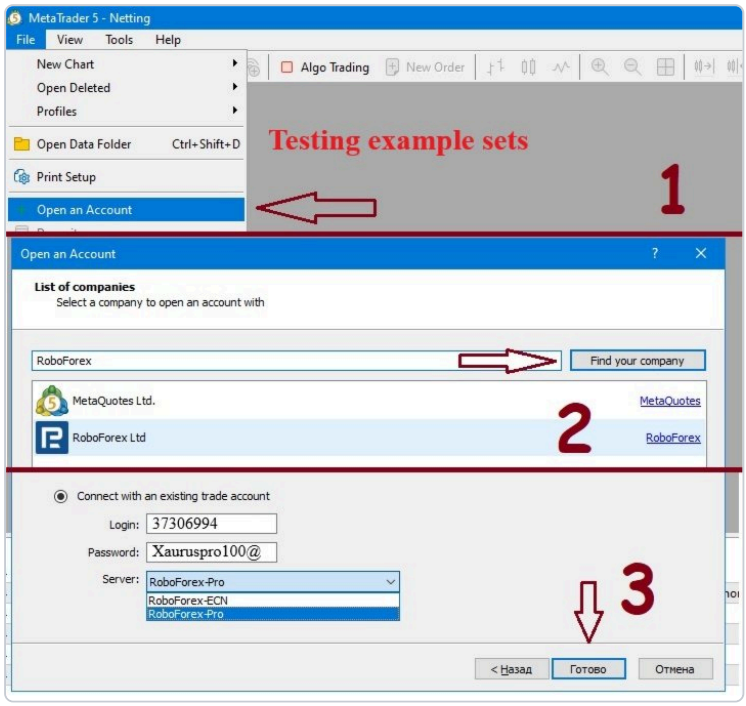
Field	Value
Expert	The AI Pro100 EA (for the Market demo — the tester build, §3)
Symbol	The instrument the set was produced for (the symbol is embedded in the SSN; broker suffixes like `.m` / `.DC` are fine — the base name is what counts)
Timeframe	**Always M1**
Date (Custom period)	The history period of interest
Deposit	Test deposit; for comparability with our samples — 10,000 (metals, crypto) or 1,000 (forex pairs)
Leverage	The maximum leverage your broker actually provides on this account type (§8.1)
Modelling	"Open prices only" — quick estimate (the model AI optimization itself runs in); "Every tick based on real ticks" — precise verification (§1.6)
Optimization	Disabled (single test)



Single-test Settings: XAUUSD, M1, period, deposit and leverage; "Every tick based on real ticks" model; Optimization — Disabled

QUOTES FOR CHECKING THE SAMPLES

Our sample settings are published for the RoboForex broker, account type Pro (§1.8). The quickest way to get quotes of exactly that account type is to connect to our demonstration access, no personal cabinet required: **File → Open an Account** → find RoboForex → "Connect with an existing trade account" — the credentials are in the snapshot below.



Connecting to RoboForex-Pro quotes: the demo access for checking samples

4.2 The EA's Inputs tab

- `SSN code` — paste the set code. Left empty (with `Pass budget = -1`) the built-in demonstration set is run.
- `Minimal deposit` — 0 (risk scale from the set code). A value >0 overrides the set's MM — a way to try the same set at a different risk scale.
- `Equity SL %` / `Equity TP $` — optional: they work in the tester too, so you can rehearse your protection and target plan right away (§1.3–1.4).
- Everything else — defaults.

4.3 The journal after the test

Progress and results are printed to the tester agent's journal (the Strategy Tester's Journal tab). The key lines:

```
Using EU DST +2/+3 Timing Profile          ← applied time profile (from the SSN)
Market day anchor: NY rollover 17:00       ← market-day anchor of the instrument
Set applied: xu6HDe8K... -> XAUUSD/M2 mm=10000   ← set applied: symbol/signal TF/MM
 MK6 SER #12 start: B=10412.50             ← another trade series starts (§1.2)
...
 MK3 RC pass: { Rating: 19.03, Annual gmean: 214.10%, Max rel DD: 18.21%, Trades: 259 }
 MK6 series: N=41 (tail=0)                 ← series in this test
Pass set: TF M5, cluster 7                 ← signal TF and cluster of the set (§5.5)
xu6HDe8KUOF4tNV2x1UOPP                     ← the set's SSN — always the last log line
```

The `MK3 RC pass` line is the quality summary: Rating (§1.9), annual geometric-mean profitability, maximum relative drawdown, number of trades. The full test statistics are in the tester's standard Backtest / Graph tabs.

> **TIP**
>
> The SSN of the actually applied set is always printed as the last log line — copy the code straight from there instead of hunting for it in the book or showcase.

5 AI Pro100 optimization

The basic scenario: find fresh sets for your instrument, broker and period. Everything happens inside one Strategy Tester optimization — no external software.

5.1 Preparation and settings

1. Make sure M1 history of the symbol is loaded for the whole optimization period (the tester downloads it on the first run anyway, but that takes time).

2. **Settings tab:** Symbol — your instrument; Timeframe — **M1**; the date range (§1.7 — typically the last 0.5–2 years); Deposit — 10,000 for metals and crypto, 1,000 for forex pairs; Leverage — your account's maximum; Modelling — **"Open prices only"**; optimization mode — **"Slow complete algorithm"** with the **Custom max** criterion; the tester's own Forward — **No** (the built-in MT5 forward is incompatible with AI Pro100 — the EA has its own, §6.1).

3. **Inputs tab:** `SSN code` — **empty** (a non-empty code at cycle start fails initialization); `Pass budget` — type the budget into the Value column. Nothing else: no optimization checkboxes, no Start/Step/Stop columns — the EA enables and configures the sweep axis itself on start.

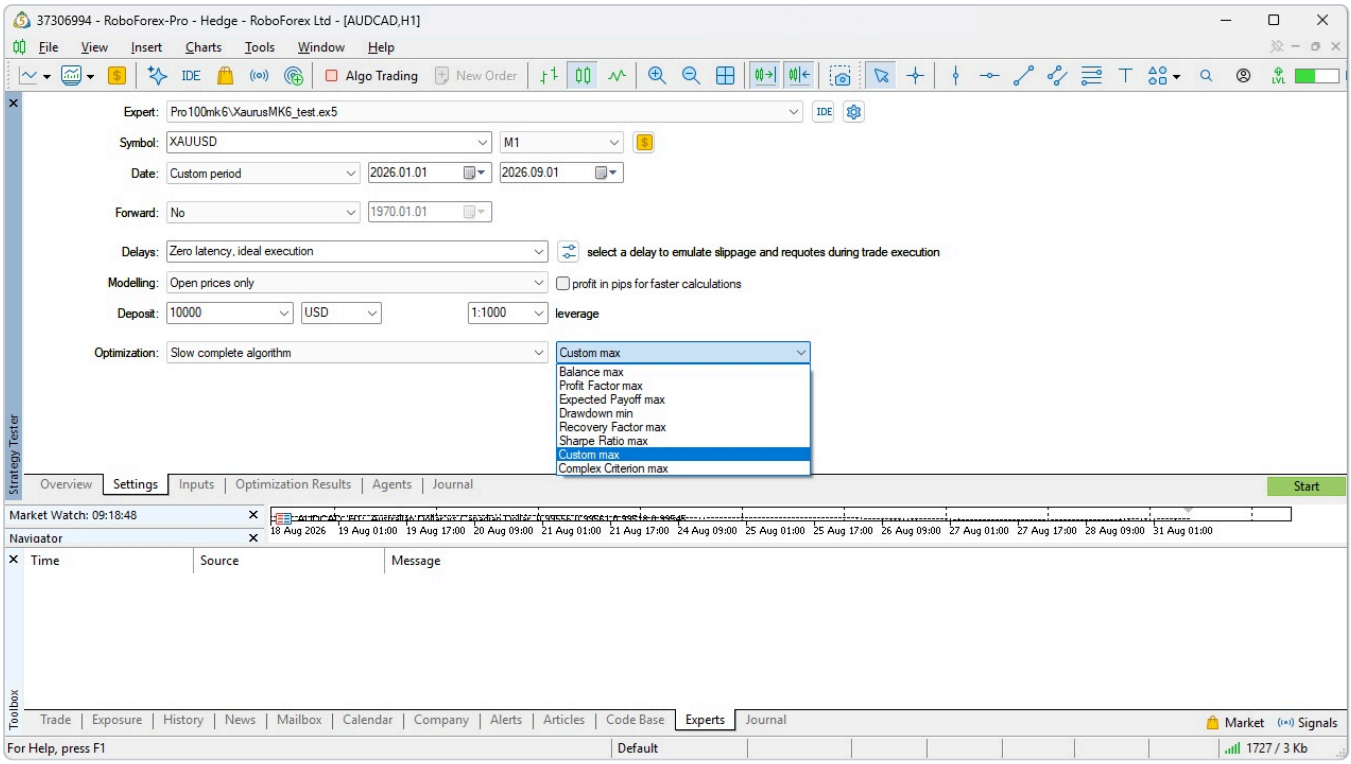
   The budget is the search quality: **20,000** — a quick optimization, **50,000** — standard quality, **100,000** — high. The minimum is 500, the ceiling is 1,000,000.

4. `Timing profile` — pick your broker's server time profile **before the start** (§7): during optimization it is written into every produced set. `Magic (seed)` — any number; it seeds the search, and repeating with the same value reproduces the seeding[2]. All other inputs — defaults (no optimization checkboxes anywhere; the only exceptions are the special modes of §6.3 and §6.6).

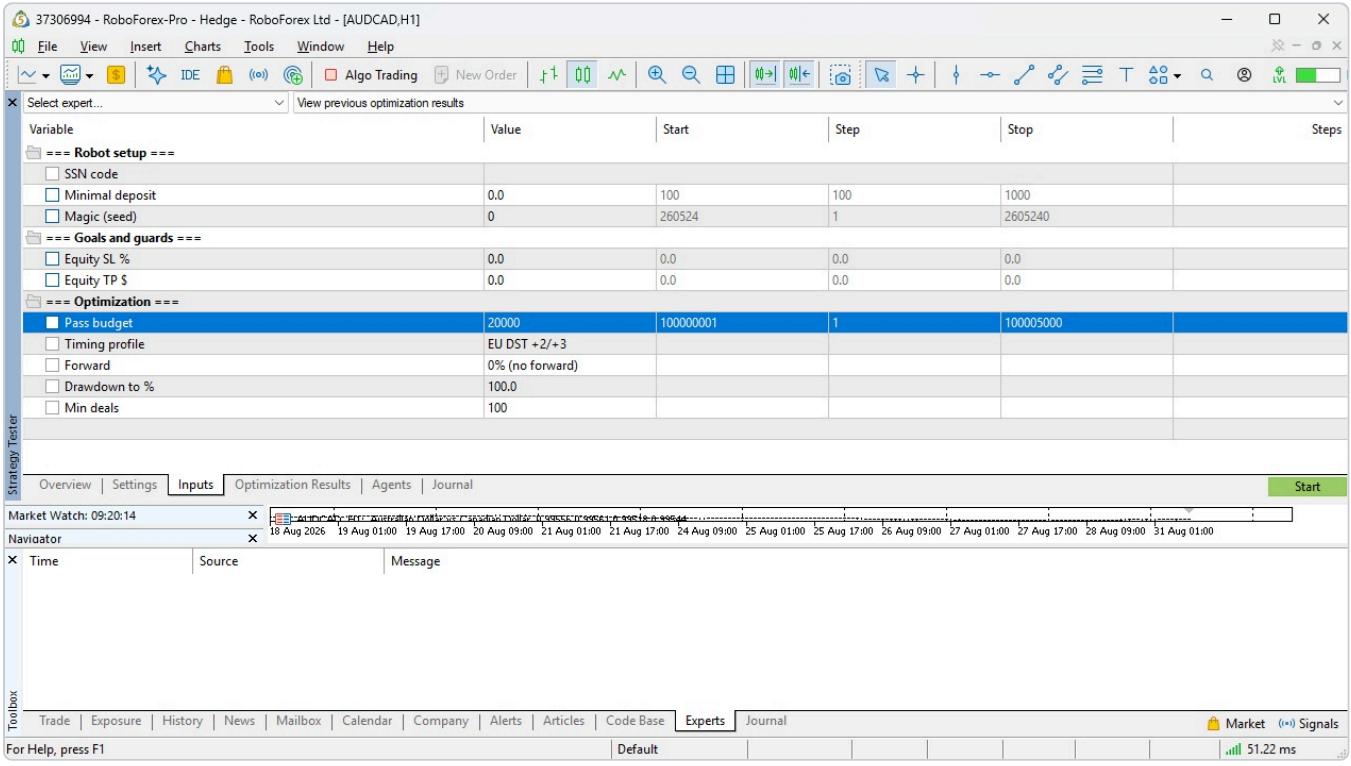
5. Agents — **local only** (disable MQL5 Cloud Network: cloud agents take no part in the AI cycle — their passes return zeros without spoiling the result, but bring no benefit either). Watch Windows Task Manager for memory or CPU overload during the optimization: under overload the pass quality may degrade unsystematically — agents skip tasks. This is especially relevant for "real ticks" verifications over a long period (§6.5). If the PC cannot cope with the full agent list — disable some of them in the tester's Agents tab in advance, before the start.

   Press **Start**. Do not close the terminal until the run finishes — the showcase and the results workbook are built at the very end.

2. The seeding itself is reproducible; the final optimization result is not guaranteed to be identical: what grows out of the "seed" depends on the order in which agent results arrive in the MetaTrader 5 tester, which cannot be predicted exactly.



Optimization Settings: M1, “Open prices only”, “Slow complete algorithm” with the Custom max criterion



Optimization Inputs: budget 20,000 in the Value column of the Pass budget row, SSN code empty — no checkboxes anywhere

5.2 Optimization progress: the Experts journal

Cycle messages go to the terminal's **Experts** journal (not the tester's). A normal run looks like this:

```
AI Optimization started: 20000 pass budget, 0% forward, MM off, DD to 100%, Min deals: 100
…the journal stays silent during the run (only emergency warnings are printed)…
AI Optimization: 2 phase(s) closed by silence (quiet=15s) -- normal pipeline behaviour
AI Pro100 is building book, please wait...
AI Optimization finished: here are 26 best records:
 1 | C4 | xu61Bvk6...Ss33 | R=19.03 | P=5410.59 | DD=18.21% | PF=4.1871 | T=259 | idx=223
 2 | C7 | xu6Qm2Lp...T1aa | R=17.44 | P=4988.10 | DD=21.02% | PF=3.8112 | T=301 | idx=1084
 ...
Full optimization book stored at: C:\...\MQL5\Files\Xaurus_XAUUSD_20260830120000.xlsx
```

- The first line is the run's settings summary: budget, forward, MM ladder, filters.
- The `building book, please wait...` line appears when the passes are done and the EA is assembling the results workbook; on big budgets this takes minutes — the notice also hangs on the chart, keep the terminal open.
- The showcase is the top-26 of the best sets: place | cluster (`C<k>` , §5.5) | SSN | Rating | Profit | drawdown | profit factor | trades | `idx` — the row number for reproduction.
- The last line is the full path to the xlsx workbook.

In the tester's Optimization tab the Result column is the Rating. Zeros in Result are normal: they are shown by passes that failed the filters or have no relevant rating (§6.2); the true values of all passes are in the book.

> **INTERRUPTING IS FINE**
>
> The Stop button is a pause, not a cancel: progress is saved, no book is built on interruption. To resume — press Start again with the same settings (§6.4).

5.3 The results workbook (xlsx)

The workbook is the file `<Robot>_<symbol>_<datetime>.xlsx` (e.g. `Xaurus_XAUUSD_20260830120000.xlsx`) in the `MQL5\Files` folder of the terminal data directory. The exact path is always printed in the journal. Workbooks accumulate — old ones are not deleted.

The book has four sheets, in this order: `Weighted` , `ALL` , `ALLGM` and `Info` . The first three are the same results table in a different selection and order; the fourth is the run's passport.

The Weighted sheet — start your selection here

`Weighted` is the first sheet of the book and, in our view, the **best compromise between rating and profitability**, based on the overall quality of the optimization results obtained.

What it does, in plain words: from every logic (cluster, §5.5) it takes the top-rated and the most profitable sets, ranks what it took by profitability (`GMon %`) and cuts off the rows that are weak by rating. Finally, sets with practically the same balance curve are collapsed — the most profitable one of the group remains.

Columns of the Weighted, ALL and ALLGM sheets

Column	Meaning
`idx`	Plan row number — the value for exact reproduction (§5.4)
`cluster`	Trading-logic cluster number 1..10 (§5.5)
`ssn`	The set code — ready to copy into the `SSN code` input
`Rating`	The quality score (§1.9); an ∞ sign means the criterion overflowed (the row is not broken, but comparing it by rating is meaningless)
`GMon %`	Geometric-mean profitability, % per annum
`DD %`	Maximum relative equity drawdown
`PF`	Profit factor
`Trades`	Number of trades
`Profit`	Profit over the test period

The ALL, ALLGM and Info sheets

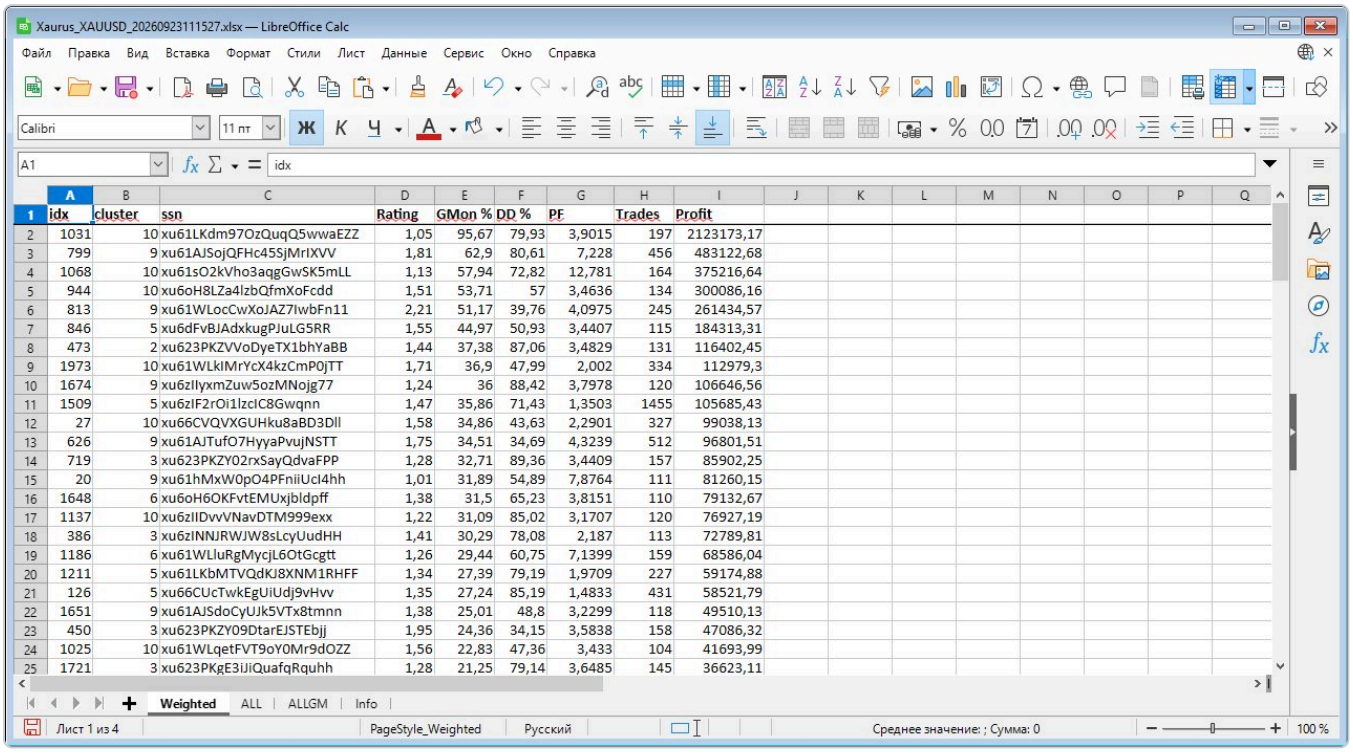
The `ALL` sheet holds the rows by descending Rating: take it when rating matters most. The `ALLGM` sheet has the same columns but is ordered by descending `GMon %`: when profitability matters most. **The contents of ALL and ALLGM differ** — each sheet has its own selection: out of a group of similar sets ALL keeps the best by Rating, ALLGM keeps the most profitable one, and the 100-rows-per-cluster cap is counted by each sheet's own metric. So the number of rows may differ between the sheets, and a row of one sheet need not be present on the other.

The book holds only the rows that passed selection: a row that failed the `Drawdown to %` / `Min deals` filters (§6.2) or, in risk mode, a set with no working ladder level (§6.3) does not enter the book at all.

The book removes clones in two ways. Full duplicates (DD % and Profit equal to 2 decimal places) are collapsed at once. Besides them, the book collapses sets with practically the same balance curve — one set of such a group remains in the book: on the ALL sheet the best by Rating, on ALLGM and Weighted the most profitable one.

The book's size is capped: each cluster (§5.5) contributes at most **100** rows to each sheet — on ALL the 100 best by Rating, on ALLGM the 100 best by `GMon %`, and on Weighted the 50 best by Rating and the 50 best by `GMon %` (if one of the lists is shorter, the remainder is taken from the other). That way the book keeps both the top-rated and the most profitable sets of every logic, while the long tail of near-identical variations does not bloat the file.

The `Info` sheet is the run's passport: EA name and version, symbol, period, deposit, leverage, budget, search seed, filters and service counters; among them `filtered_out` — how many rows the filters rejected, `cap_out_all` and `cap_out_gm` — how many rows the 100-rows-per-cluster cap cut off on the ALL and ALLGM sheets.



	idx	cluster	ssn	Rating	GMon %	DD %	PF	Trades	Profit
2	1031	10	xu61LKdm97OzQuqQ5wwaEZZ	1,05	95,67	79,93	3,9015	197	2123173,17
3	799	9	xu61AJSojQFHc45SjMrIXVV	1,81	62,9	80,61	7,228	456	483122,68
4	1068	10	xu61sO2kVho3aqgGwSK5mLL	1,13	57,94	72,82	12,781	164	375216,64
5	944	10	xu6oH8LZa4lzbQfmXoFcdd	1,51	53,71	57	3,4636	134	300086,16
6	813	9	xu61WLocCwXoJAZ7IwbFn11	2,21	51,17	39,76	4,0975	245	261434,57
7	846	5	xu6dFvBJAdxkugPJuLG5RR	1,55	44,97	50,93	3,4407	115	184313,31
8	473	2	xu623PKZVVoDyeTX1bhYaBB	1,44	37,38	87,06	3,4829	131	116402,45
9	1973	10	xu61WLklMrYcX4kzCmP0jTT	1,71	36,9	47,99	2,002	334	112979,3
10	1674	9	xu6zIIyxmZuw5ozMNojg77	1,24	36	88,42	3,7978	120	106646,56
11	1509	5	xu6zIF2rOi1lzcIC8Gwqnn	1,47	35,86	71,43	1,3503	1455	105685,43
12	27	10	xu66CVQVXGUHku8aBD3Dll	1,58	34,86	43,63	2,2901	327	99038,13
13	626	9	xu61AJTufO7HyyaPvujNSTT	1,75	34,51	34,69	4,3239	512	96801,51
14	719	3	xu623PKZY02rxSayQdvaFPP	1,28	32,71	89,36	3,4409	157	85902,25
15	20	9	xu61hMxW0pO4PFniiUcl4hh	1,01	31,89	54,89	7,8764	111	81260,15
16	1648	6	xu6oH6OKFvtEMUxjbldpff	1,38	31,5	65,23	3,8151	110	79132,67
17	1137	10	xu6zIIDvvVNavDTM999exx	1,22	31,09	85,02	3,1707	120	76927,19
18	386	3	xu6zINNJRWJW8sLcyUudHH	1,41	30,29	78,08	2,187	113	72789,81
19	1186	6	xu61WLluRgMycjL6OtGcgtt	1,26	29,44	60,75	7,1399	159	68586,04
20	1211	5	xu61LKbMTVQdKJ8XNM1RHFF	1,34	27,39	79,19	1,9709	227	59174,88
21	126	5	xu66CUcTwkEgUiUdj9vHvv	1,35	27,24	85,19	1,4833	431	58521,79
22	1651	9	xu61AJSdoCyUJk5VTx8tmnn	1,38	25,01	48,8	3,2299	118	49510,13
23	450	3	xu623PKZY09DtarEJSTEbjj	1,95	24,36	34,15	3,5838	158	47086,32
24	1025	10	xu61WLqetFVT9oY0Mr9dOZZ	1,56	22,83	47,36	3,433	104	41693,99
25	1721	3	xu623PKgE3iJiQuafqRquhh	1,28	21,25	79,14	3,6485	145	36623,11

The results workbook, Weighted sheet; at the bottom the tabs of the book's four sheets — Weighted, ALL, ALLGM and Info

5.4 Reproducing a row

Any optimization result reproduces bit-for-bit as a single test. Three ways:

- **Double-click** the row in the Optimization tab — the terminal launches a single test of that row itself.
- **The idx number** from the book — type it into `Pass budget` of a single test (requires the service folder of the last run, which is kept automatically).
- **The SSN code** — copy it from the book or the showcase into the `SSN code` input. The everlasting way: the set is fully embedded in the code and depends on no run files.

At the end of every single run the journal prints `Pass set: TF M5, cluster 7` — the signal timeframe and cluster of the set (the book has no TF column — the timeframe is optimized like any other parameter and lives inside the SSN).

> **COMMON MISTAKE**
>
> After clicking a row, its number stays in the `Pass budget` input. Starting an *optimization* with that value is rejected with a hint (protection against accidentally ruining the run) — type the budget anew before a new cycle.

5.5 Clusters: 10 trading-logic groups

Every book and showcase row carries a **cluster** number — 1..10. A cluster is a stable group of trading logic: sets of one cluster trade in fundamentally the same way, sets of different clusters — in fundamentally different ways. The number is a pure function of the set itself: it depends neither on the run nor on the instrument, so books of different runs are comparable. What exactly stands behind a number is not disclosed, and the number does not imply quality: C3 is not “better” than C7.

There are no per-cluster sheets in the book: the cluster of every row is in the `cluster` column of all three results sheets — Weighted, ALL and ALLGM; to look at a single cluster, filter or sort the book by that column in Excel. The 100-rows-per-cluster cap (§5.3) applies here too, and on every sheet: a large cluster contributes exactly 100 rows to a sheet.

The top-26 showcase is assembled round-robin over clusters (up to 4 places per cluster) — so the top holds candidates of different logic, not 26 variations of one set.

> **PRACTICE**
>
> When building a portfolio of sets, take rows from **different clusters** — so the portfolio does not end up a bunch of clones of one and the same trade.

5.6 Picking a set from the book

- Start with the **Weighted** sheet — in our view it is the best compromise between rating and profitability, based on the overall quality of the optimization results obtained (§5.3).
- Then the `ALL` sheet (best Rating on top) if rating matters more to you, and `ALLGM` (best `GMon %` on top) if profitability does. Check the drawdown (DD %) against your risk tolerance and your Equity SL % plan (§1.3).
- Number of trades: aim for ~1,000+ per test period (§1.7).
- For a portfolio — different clusters (§5.5).
- Run the selected candidates through the precise mode — §6.5 — and only then allow them into live trading (§8).

6 Advanced optimization

The tools that harden the result: the built-in forward, output filters, the risk ladder, pausing/resuming a run, and the final cross-check of the best sets under precise modelling.

6.1 Forward testing: Forward

The `Forward` input reserves 25, 50 or 75 % of the test period for the classic out-of-sample check — without leaving the single optimization. Our difference from the classic approach: the search uses the **latest** history (closest to "now") while the check uses the **earlier** part (§1.7: fresh patterns matter more than stale ones; the earlier history serves as an extra trial).

Example: period 2024.07.01–2026.07.01, `Forward = 50%`. Sets are searched on 2025.07.01–2026.07.01, then the best found are automatically re-run over the **whole** 2024.07.01–2026.07.01 — survivors are those that also made money on the earlier half.

- The pass axis widens automatically — forward passes are added on top of the budget, nothing to configure.
- In the Optimization tab the search (back) passes show Result = 0 while the forward passes show their forward Rating: sorting by Result gives a clean forward picture at once. The true ratings of back passes are not lost — they are in the book.
- The forward-run book: survivors by descending forward Rating (non-survivors do not enter the book); a collapsed Back column group (the "+" button) keeps each row's search-phase metrics. The sheets are the same four — Weighted, ALL, ALLGM, Info; the Weighted sheet of a forward book is built by the same rule (§5.3).
- In our own practice we mostly use 25 % or 50 %. Forward is off by default and not used in the sample sets we publish.

> **NOT THE BUILT-IN MT5 FORWARD**
>
> The Forward field of the tester's own Settings tab must stay **No** — the native MetaTrader 5 forward is incompatible with the AI Pro100 machinery.

6.2 Output filters: Drawdown to % and Min deals

`Drawdown to %` — the ceiling on the maximum relative drawdown: a pass with a deeper drawdown is deemed unfit. Default 100 — filtering off. The lower the threshold, the lower the overall profitability of the resulting sets and the higher their hypothetical survivability (§1.7).

`Min deals` — the minimum number of trades per pass (the Trades column): a result below the threshold is statistically empty and gets rejected. Default 100; 0 disables the threshold.

How the filters act: a failing row **does not enter the book** (the `filtered_out` counter on the Info sheet says how many), is left out of the journal showcase and shows 0 in the Result column of the Optimization tab. The search itself also respects the filters: no budget is wasted on branches that clearly cannot pass the thresholds.

CHANGING A FILTER = A FRESH RUN

Because the thresholds shape the search itself, changing `Drawdown to %` or `Min deals` makes it a different run: a finished run cannot be resumed or extended with new values — only a fresh optimization.

6.3 Risk ladder (Minimal deposit sweep)

The optimization checkbox on the `Minimal deposit` input with Start/Step/Stop values enables the **risk phase**: after the main cycle the best sets are automatically replayed on every MM level of the range, from the base downwards. The smaller the MM, the larger the lot relative to the deposit: the ladder down is a ladder of increasing risk.

- The base (top anchor) is the maximum of the range; it must not be below the Deposit of the Settings tab. Axis example: Start 10000, Step 1000, Stop 2000.
- For every set the EA picks the **working level** — the most aggressive MM at which the set still passes the §6.2 filters and does not blow up; it lands in the book's `MM min` column, and the row's SSN already carries that MM.
- The level history is a collapsed column group (a "G/D" pair per level): red fill — the level blew up, `cut` — a level below the break was not computed (pointless), an empty pair — no data.
- A candidate for which no level fits does not enter the book at all. Sets that never got a ladder (beyond the candidate-selection computation budget) do stay in the book: they rank in the common order with their base MM and an empty level history.
- In risk mode the journal showcase shows rows with a found working level — trade-ready sets straight from the journal.

The ladder can also be built **on top of an already finished** run: leaving every other input untouched, tick the MM checkbox with a range and press Start — the main cycle is not recomputed, only the ladder levels run live. The overlay's book is written next to the run's book (suffix `_ovl1`, `_ovl2`…); during an overlay the Optimization tab shows zeros — look at the book.

6.4 Pausing and resuming a run

- Stop during an optimization is a **pause**: computing agents stop within seconds, progress is saved, no book is built. In the journal: `AI Optimization INTERRUPTED at 1385 of 20000 passes: progress saved...`
- To resume — press Start again **with the same settings**: the EA recognizes its interrupted run, restores the accumulated state and finishes the remainder (already computed passes come back instantly from the tester cache). In the journal: `...resuming: 1625 of 20000 passes restored, continuing`. Resume as many times as you like.
- Any change of the inputs that shape the run (budget, Magic, Forward, filters, ladder, Timing profile, Equity SL/TP, symbol/timeframe/dates) makes it a different run. If that would kill the interrupted run, the first Start refuses with advice to restore the previous settings; a second Start with the changes kept is a conscious fresh run.
- Pressing Start again **after a normally finished** run with the same settings is refused (nothing to resume, the tester cache would replay everything at once): clear the cache (right-click the run in the Optimization

tab → delete) or change Magic; if the cache is already cleared — just press Start a second time. Tip: when making several similar runs in a row, bump `Pass budget` or `Magic (seed)` by one each time — then the cache never needs any attention.

6.5 Precise-mode confirmation: Pass budget = −N

The final step before live trading (§1.6): re-run the best book rows under "Every tick based on real ticks" and get marks in the book — who got confirmed.

1. After a finished run, type a negative number into `Pass budget`: `-20` — check the top 20 rows of the ALL sheet.
2. Modelling — "**Every tick based on real ticks**"; the chart timeframe is still M1; the dates — the same (or deliberately different, see below).
3. Start. In the journal: `Running 20 best passes from recent AI Optimization`, and at the end — `Confirmed 17 from 20 best records — see in book`.

The outcome is the **Pass column** (the last column of all three results sheets — Weighted, ALL and ALLGM): a green ✓ — the set is confirmed by the precise model; a red ✗ — not confirmed; empty — the row was not checked yet. Repeated `-N` launches accumulate the marks: failed rows are not taken into the following checks, so `-20` and then another `-20` test the next portion of candidates. Successive launches form a selection funnel.

> **CROSS-CHECKING IN OTHER CONDITIONS**
>
> The same `-N` mode can re-run the best rows under changed conditions — on shifted dates (e.g. with fresh history appended) or another instrument. The EA names every difference from the source run in the journal as a warning (`Runtime warning W23/W24/W25`) and proceeds: judging whether such a check makes sense is up to you. Sets that survive a chain of different conditions are the most robust ones.

6.6 Risk sweep of one set: SSN × MM

How does one ready-made set behave across risk scales? Paste its code into `SSN code`, tick the optimization checkbox on `Minimal deposit` with a Start/Step/Stop range — and start the optimization. The AI layer stays out (a single journal line, `AIO passthrough: plain SSN x MM sweep…`): it is a plain MT5 table where every pass is the same set with an MM from the axis, and the Result column is its Rating at that risk level. Modelling and period — any; a sweep has no book and no showcase.

7 Server time profile (Timing profile)

AI Pro100 sets exploit intraday market patterns — and the market's "internal day" does not match the broker server's clock, drifting against it twice a year with daylight-saving shifts. The `Timing profile` input tells the EA your server's time rule so the set's trading window always points at the same market phase.

7.1 Why it matters

Forex and metals live on the New York schedule: the trading day ends at 17:00 New York time. Most brokers' servers, meanwhile, run on Eastern European time with the EU daylight-saving calendar. Europe and the US switch their clocks on **different dates** — so for 3–4 weeks a year (2–3 weeks in spring, a week in autumn) every market session is shifted by an hour in server clocks: about 7 % of trading days. With the right profile the EA recomputes its trading window onto "market days", and the window rides through those weeks without shifting.

The market-day anchor is determined automatically per instrument and is not configurable: cryptocurrencies count from 00:00 UTC, everything else from 17:00 New York. The applied profile and anchor are printed on every start:

```
Using EU DST +2/+3 Timing Profile
Market day anchor: NY rollover 17:00
```

7.2 Profile values

Value	Which servers it fits
`Raw quotes timing`	No calendar binding — "raw" server time, the way previous EA generations worked. The compatibility mode.
`EU DST +2/+3`	The server runs on Eastern European time and switches clocks by the EU calendar (UTC+2 in winter, UTC+3 in summer). **The most common option** among MT5 brokers; RoboForex in particular.
`US DST +2/+3 (NY close)`	The server switches clocks by the US calendar (the day closes exactly at the New York close all year round).
`Fixed +2`	Constant UTC+2, no clock changes.
`Fixed +3`	Constant UTC+3, no clock changes.
`Fixed UTC`	The server runs on UTC with no clock changes (typical of crypto venues).

7.3 Determining your broker's profile

- The most reliable way — ask the broker's support: "what time zone does the trading server use, and does it switch clocks (by the EU or the US calendar)?"

- A practical clue: compare the server time (the Market Watch window header) with UTC. A difference of +2 in winter and +3 in summer — `EU DST +2/+3`. A constant difference all year — one of the `Fixed` values. Daily bars closing exactly at the New York close both in winter and in summer — `US DST`.
- In doubt — `Raw quotes timing`: the behaviour of previous generations, without calendar arithmetic.

7.4 Rules of application

- **Optimization only.** The input takes effect when an AI cycle starts: the chosen profile is written into every produced set. Choose it **before** the start — a finished code's profile cannot be changed later (only by a new optimization).
- **Testing and trading.** The profile comes from the SSN itself and the input is ignored — the EA merely reports in the journal what it applied.
- Sets of previous generations (codes without the profile field) work as before — on raw server time.

8 Live deployment

Taking a verified set to a real account: preparation, monitoring, and what to do in emergencies.

8.1 Account preparation

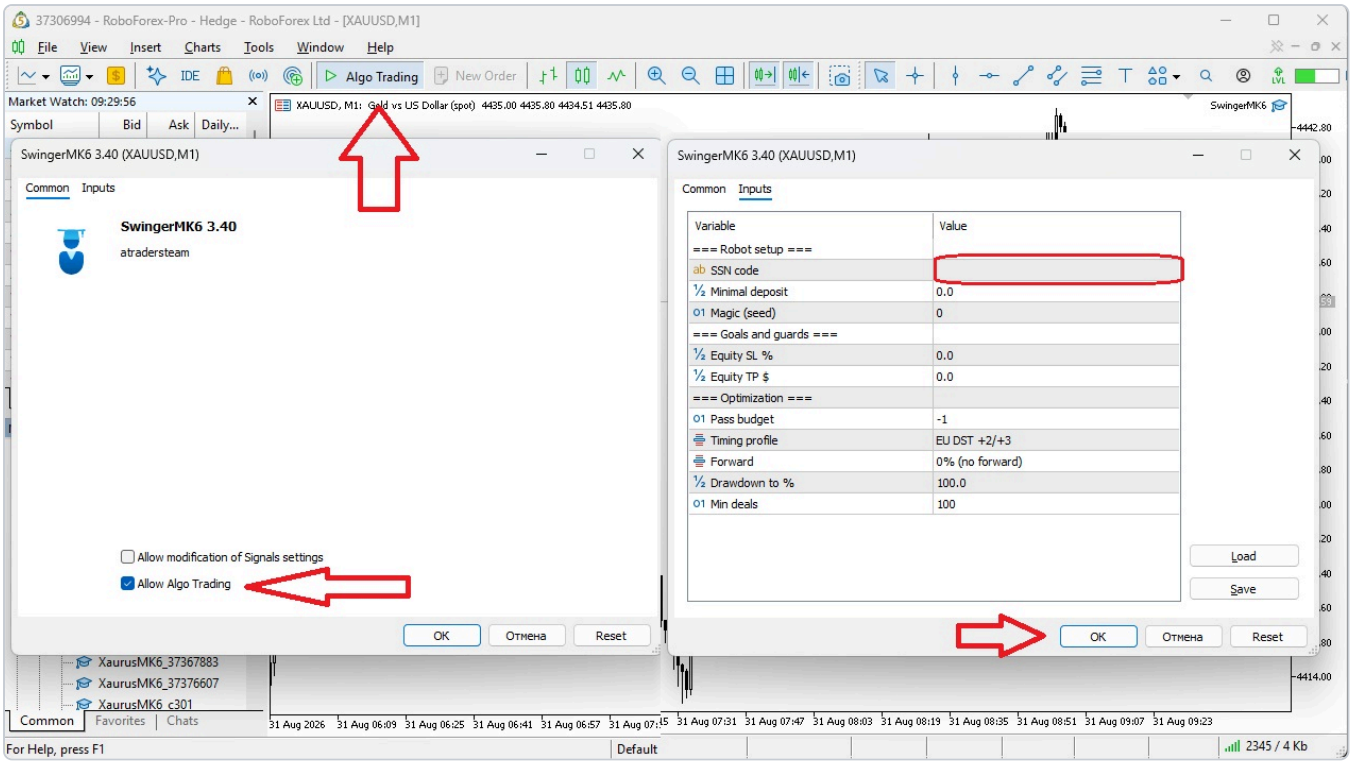
- **Broker and account type** — strictly the ones whose quotes the set was optimized on (§1.8).
- **Leverage — the maximum available** from the broker on this account type. AI Pro100 is designed to use leverage to the fullest: the higher the leverage, the farther the Margin call / Stop out levels — and the lower the chance of hitting them. The set's survivability depends on this directly.
- **A separate account, for the EA only.** The Equity SL/TP mechanisms look at the equity of the whole account: parallel manual trading or other EAs on the same account distort the protection, the target and the trading itself.
- **Deposit** — not below the set's MM (the `MM min` column of the book / the `mm` value in the `Set applied` log line). Risk scales from the MM: the same set on a larger deposit trades a proportionally larger lot.
- **Continuity.** The terminal must run uninterrupted — a VPS or a stable PC with reliable internet. `Algo Trading` enabled in the terminal.

8.2 Launch

1. Open a chart of the set's instrument. We recommend launching on the **M1** timeframe; open the charts you actually use for market analysis separately — without the EA.

2. Drag the EA onto the chart and fill in the inputs: `SSN code` — the live set (one that passed §6.5); `Minimal deposit` — 0; `Equity SL %` and `Equity TP $` — per your protection and target plan (§1.3–1.4); `Magic (seed)` — a unique number for this instance (not shared with other EAs on the account).

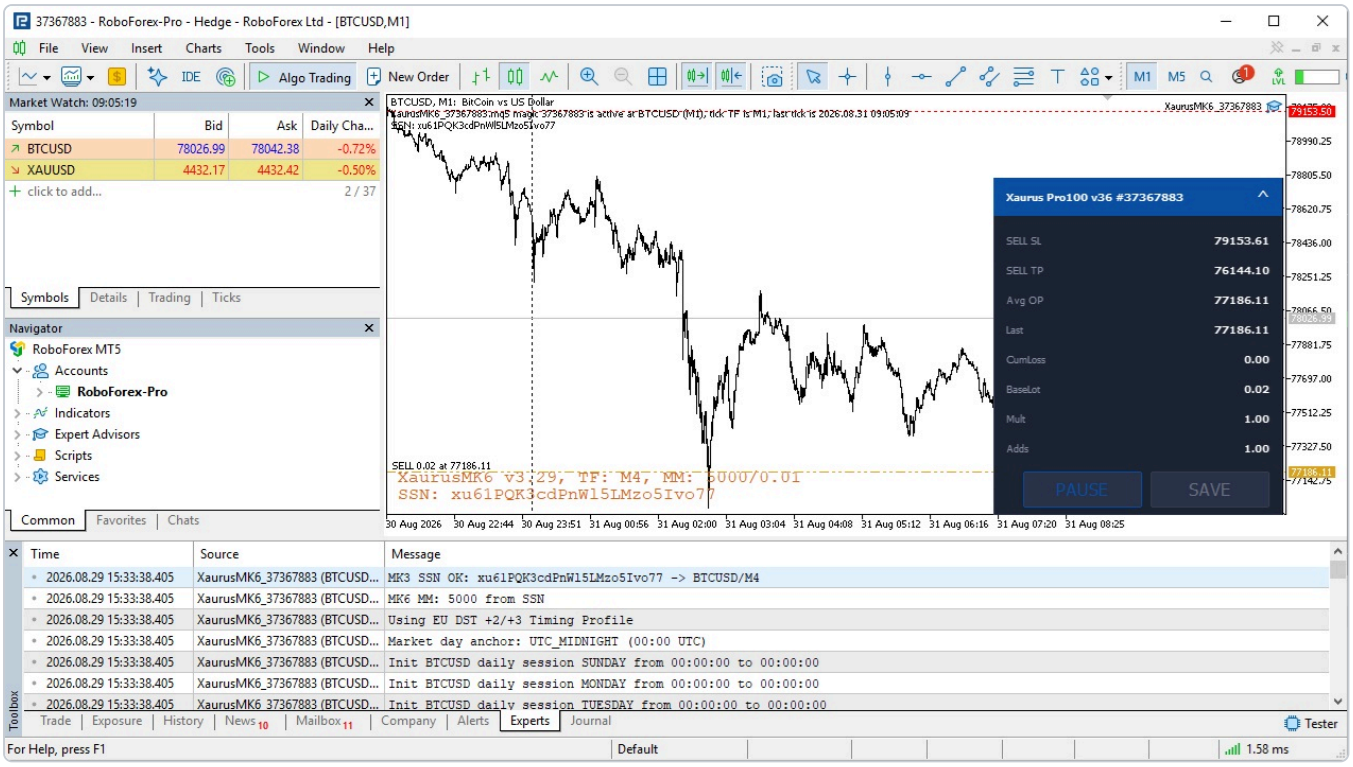
3. Check the Experts journal: the lines `Using … Timing Profile`, `Market day anchor` and `Set applied: … -> SYMBOL/TF mm=…` confirm the set is applied and matches expectations (symbol, MM).



Launching from the Navigator: left — the Common tab with "Allow Algo Trading" ticked (and the Algo Trading button on the terminal toolbar); right — Inputs: pasting the code into SSN code is all it takes to start trading

8.3 What you see while it works

- **Virtual levels** on the chart — the EA's working SL/TP (§1.2). Positions in the terminal carry no stop-losses — that is normal.
- The exception is an active `Equity SL %`: a **common** broker-side stop-loss appears on all the EA's positions, recomputed on every new opening. Don't be surprised by it and don't touch it.
- **The EA panel** on the chart. The Pause button suspends the trading logic (the EA opens and manages nothing); pressing it again resumes. The other panel elements are for special cases — leave them alone in normal operation.



The EA at work: virtual levels on the chart, the state panel with the Pause/Save buttons, the set-application lines in the Experts journal

DO NOT INTERFERE

ANY INTERFERENCE WITH THE TRADING ON THE EA'S ACCOUNT MAY STOP THE ALGORITHM

Do not close or modify the EA's positions, do not place your own orders on its account, do not switch it off mid-series without necessity. If trading must be stopped immediately: first remove the EA from the chart, then close the positions manually — accepting the current result of the series.

8.4 Restarts and recovery

A terminal or VPS restart is not a problem: on start the EA restores the state of the current series (from its state file and the account's open positions) and carries on. If a mismatch is detected during recovery (e.g. positions changed while the EA was off), it reports this with an Alert and a journal line — figure out the cause before continuing.

8.5 Emergencies: the EA has stopped

The `Robot stopped functioning.` notice on the chart means the EA has halted: positions closed, trading stopped. Possible causes and actions:

Cause (journal)	What it means and what to do
`Equity rose above maximum...`	The `Equity TP $` target is reached — the plan is complete. Lock in the result (§1.4): withdraw the profit; for a new round — re-optimize for the current market and set a new target plan.

The `Equity SL %` stop fired	The series was closed by the protective stop. Do not restart mechanically: check whether the set is still current — run it as a test over the latest history (§4); most often a re-optimization is due (§5).
Margin call / Stop out	The deposit is exhausted — the instrument's ultimate risk has materialized (§1.1). Further decisions — only with a new risk plan and a fresh optimization.

Resuming after a halt is a deliberate act: re-attach the EA to the chart (or change its inputs — that reinitializes it) once the cause is understood and the decision is made.

8.6 Scheduled set rotation

The AI Pro100 working cycle (§1.4): trade a set for roughly ¼ of its test period or until the target is reached — then re-optimize for the latest market and start again. Do not get attached to a spent set: the system's strength is cheap and fast self-optimization, not “eternal” settings.

9 Appendix: messages and common questions

Symptom / message	Cause and action
`chart period is … — AI Optimization runs on M1 only`	AI optimization runs on the M1 chart only — switch the tester Timeframe to M1.
`Runtime error E14`	The modelling is not "Open prices only" — the run aborted itself, no book. Select the right model and start again (§5.1).
`Init failed: these settings repeat a completed run…`	A finished run is being repeated with the same settings. Clear the tester cache (right-click the run → delete) or change Magic; if the cache is already cleared — a second Start forces a fresh run.
`Init failed: previous run … was interrupted and would be discarded…`	The changed settings would kill the interrupted run. Restore the previous ones — it resumes; a second Start with the new ones — a conscious abandonment (§6.4).
`AI Optimization INTERRUPTED at … passes`	The run is paused (Stop/failure). Start with the same settings resumes it (§6.4).
`"Pass budget" … looks like a confirmation pass number / is above the maximum`	A row number left in the input after clicking the results table, not a budget. Type the budget anew (§5.4).
Optimization tab: lots of zeros in Result	Normal: zero is shown by passes that failed the filters and by the search passes of forward mode. The true ratings of all passes are in the book (§6.1–6.2).
The journal showcase is empty	Not a single pass with Rating > 0 — the period/instrument yielded no positives. Widen the period, check the time profile, soften the filters.
Few rows in the book, a large `filtered_out` on the Info sheet	Strict `Drawdown to %` / `Min deals` filters: failing rows do not enter the book. Soften the thresholds or extend the period (§6.2).
Exactly 100 rows in a cluster, `cap_out_all` / `cap_out_gm` on the Info sheet	Normal: a cluster contributes at most 100 rows to each sheet, and every sheet counts them by its own metric — ALL by Rating, ALLGM by `GMon %`, Weighted the 50 best by Rating plus the 50 best by `GMon %`; the rest is the tail (§5.3).
An ∞ sign in the Rating column	The criterion overflowed (near-zero drawdown or a very short period). The row is not broken, but comparing it by rating is meaningless.
Input defaults do not behave like defaults	The tester loaded a remembered input profile. Delete `MQL5\Profiles\Tester\<EA>.set` or set the inputs explicitly.
No MM ladder in the book (no MM min column)	The optimization checkbox on `Minimal deposit` was not ticked, or the axis range does not go below the base (§6.3).

Passes “hang” at the start of an optimization	Agents are waiting for the plan from the managing instance — seconds are normal. Longer than a minute — check whether another optimization of the same EA is running on this machine (one at a time per EA; Xaurus and Swinger in parallel are fine).
The run uses a different time profile than the input	Normal: in tests and trading the profile comes from the set's SSN, the input acts only during optimization (§7.4). What was applied — the `Using … Timing Profile` line.
The Market demo does not run the optimization	An mql5.com marketplace limitation for demos. Use the tester build from the package (§3).