

Harrier

A gold basket EA with a ladder that ends

User guide for MetaTrader 5

Version 1.65 - October 2026

Read this first

Harrier averages into losing positions, up to five legs. That is a deliberate design with a measured worst case, not a safety feature. Size the account for the worst basket, never for the win rate. Historical results do not guarantee future profit.

What does it actually do?

1

One basket at a time, and a ladder that stops.

Harrier trades gold and holds **one basket at a time**. A basket begins as a single position from one of fourteen entry models. If price moves against it, the EA adds legs at distances that scale with current volatility, up to a **hard maximum of five** with the default Classic ladder (seven with the Soft ladder), in small steps: the extra size comes late and gradually. The whole basket then closes together at a fixed distance beyond its weighted breakeven. No take profit per leg, no averaging past the last leg, no re-entry into a losing basket.

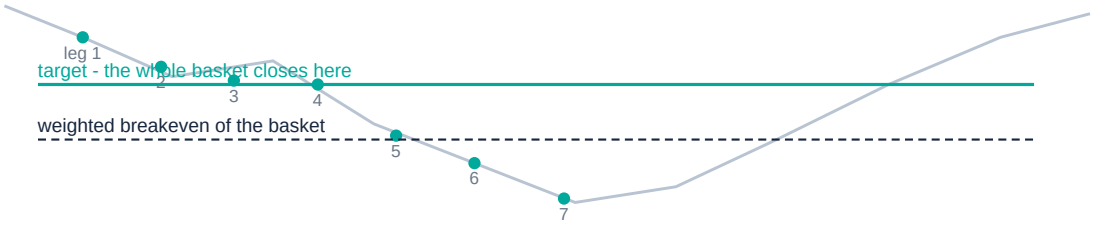


Illustration. Distances are set by the engine and scale with volatility.

Two things follow from that picture. The worst case of a basket is bounded - by the ladder and by the daily stop - so it can be measured instead of estimated. And the exit does not need the market to return to your entry: it needs the market to return to the average of the basket, which is much closer.

The basket is the unit of risk

A win rate says nothing about an unfinished basket. In six years of real-tick testing on my reference feed the deepest basket floated -340 per 0.01 lot. On the ticks of a second broker the same basket floated to about -700, and in a variant with a slightly wider leg distance a long bought at the March 2022 war peak stayed open for 13 months. That is why Harrier watches its equity with a **daily stop**: at the default of 15% it closes everything once equity falls 15% below the day's opening balance (deposits and withdrawals during the day do not count) - at the Low profile that is 750 per 0.01 lot. It never triggered in the six-year test. It turns the basket that never comes back into a known loss, without cutting the baskets that dip a little deeper and recover: in 2025 one went to about -565 per 0.01 lot and closed in profit a day and a half later. Everything in chapter 3 follows from that number: choose a size at which 750 per 0.01 lot is a loss you can take.

How do I install it?

2

Five minutes, and two conditions that are not negotiable.

	Step
1	Install from the Market tab, or copy Harrier.ex5 into MQL5/Experts and restart the terminal.
2	Open a chart of your broker's gold symbol - any suffix, any timeframe. The EA uses its own internal clock.
3	Attach it, pick a risk profile (chapter 3), enable Algo Trading.
4	Read the first lines in the Experts journal. They state the symbol, the base lot, the profile, and what the deepest measured basket would cost on your balance.
5	Leave it alone. After a restart the EA adopts its own open basket and continues managing it.

Two conditions

Condition	Why it is hard
Hedging account	On a netting account the legs merge into one position, the leg count breaks and the basket can no longer be managed. The EA refuses to start.
Gold only	Every distance in the engine was measured on gold. On another symbol the same settings mean nothing, and the EA will say so.

No DLL, no web requests, no external files. In the Strategy Tester, where the terminal calendar is unavailable, the EA falls back to a built-in list of the events it filters on.

Before you go live

Check	What to look for
Server clock	GMT+2 in winter and GMT+3 in summer (New York close), the usual MT5 clock. In the Market Watch window the server time should be 3 hours ahead of UTC in summer. The timed entries and the Friday cut-off count in server hours; on another clock the EA warns in the journal and on the panel.
Spread	On my reference feed the gold spread was 0.10 at the median entry and never above 0.50 at an entry in six years. A raw or ECN account keeps it there; a spread several times wider is a cost on every basket.
Running time	A VPS or a computer that stays on from Monday to Friday. Every protective action is taken by the EA itself, so it only protects while the terminal is open and connected.
Demo first	Two to four weeks on a demo account at the same broker. Compare the baskets and the journal with what this guide describes before you trade real money.

How much can it lose?

3

The honest answer, before the profit numbers.

A risk profile in Harrier is one decision: **how much equity you keep per 0.01 lot**. There is no hidden percentage. The table gives four numbers per setting, so you can choose with the worst case in view rather than the average.

Profile	Setting	Daily stop to set (750 per 0.01 lot)	Deepest basket of the test (-675)	Max equity DD of the test
Prop firm	0.01 lot per 10,000	7.5%	6.8%	4.7%
Very low	0.01 lot per 8,000	9.4%	8.4%	5.8%
Low (default)	0.01 lot per 5,000	15.0% (default)	13.5%	9.3%
Medium	0.01 lot per 3,000	25.0%	22.5%	15.5%
Medium-high	0.01 lot per 2,000	37.5%	33.8%	23.3%
High	0.01 lot per 1,000	75.0%	67.5%	46.5%
Very high	0.01 lot per 700	above 100% - no protection	96.4%	66.4%

The daily stop is a plain percentage you set yourself. The default of 15% is right for Low. If you choose another profile, set the value from this table: a daily stop that is too tight closes ordinary baskets that would have recovered. The EA checks this at every start - it writes a warning in the journal and shows the daily stop in red on the panel when it allows less than 500 per 0.01 lot for your profile. That 500 is the reference the EA uses for this warning and for the risk percentage on the panel; it is not the deepest basket. Since 1.62 a basket can take up to seven legs, so a deep basket floats further (-675 in the reference run, up to -1,394 when the entries are shifted by a few minutes, see below) but comes back more often. The daily stop of 750 per 0.01 lot at Low is the line that limits it.

What that means for your account

The base lot is rounded down to the broker's lot step, and 0.01 is the smallest lot. Per account size and profile: the base lot, and what one basket closed by a daily stop at 750 per 0.01 lot costs.

Account	Prop firm (1:10,000)	Low (1:5,000)	Medium (1:3,000)
1,000	0.01 lot / 750 / 75.0%	0.01 lot / 750 / 75.0%	0.01 lot / 750 / 75.0%
2,500	0.01 lot / 750 / 30.0%	0.01 lot / 750 / 30.0%	0.01 lot / 750 / 30.0%
5,000	0.01 lot / 750 / 15.0%	0.01 lot / 750 / 15.0%	0.01 lot / 750 / 15.0%
10,000	0.01 lot / 750 / 7.5%	0.02 lot / 1,500 / 15.0%	0.03 lot / 2,250 / 22.5%
25,000	0.02 lot / 1,500 / 6.0%	0.05 lot / 3,750 / 15.0%	0.08 lot / 6,000 / 24.0%
50,000	0.05 lot / 3,750 / 7.5%	0.10 lot / 7,500 / 15.0%	0.16 lot / 12,000 / 24.0%
100,000	0.10 lot / 7,500 / 7.5%	0.20 lot / 15,000 / 15.0%	0.33 lot / 24,750 / 24.8%

3

Small accounts. Below the amount of your profile the EA still trades 0.01 lot and writes a warning in the journal once a day. On 2,500 a basket closed at 750 per 0.01 lot then costs 30%, whatever profile you chose; a daily stop set tighter in percent closes it sooner, but also closes baskets that would have recovered. Switch on **Refuse a lot above the risk limit** if you would rather have no basket at all, or use a cent account or a larger balance.

Prop firms. Set the daily stop *below* the firm's daily loss limit, never at it: the stop acts on the first tick after the loss is reached, and a fast market adds slippage. On a prop firm also set **Basket ladder = Classic**. On the FXIFY feed (June 2023 - December 2024 and September 2025 - October 2026, the months with real ticks; 400,000 account) Classic beat Soft at every setting I tried: 0.01 lot per 12,000 with a 3% daily stop made +33% with one stopped day (-3.0%), 0.01 lot per 20,000 with a 4% daily stop +21% without a single stopped day. With a tight daily stop the soft ladder lets a medium-deep basket sink further before it recovers, and the stop takes it. Below 500 per 0.01 lot the EA shows the warning described above; on a prop firm that is the price of the rule.

Two other ways to size. **Custom** sets the amount of equity per 0.01 lot yourself and always sizes from equity, whatever Position size says. **Position size = Fixed** with one of the profiles above trades exactly the base lot you enter, whatever the balance; the journal and the panel warn when that lot is above the profile's risk limit. The panel always shows the lot that is actually used.

Where the ladder ends and the account does not
The depth of a basket depends on the prices of your broker and on timing: an entry a minute later, or a high that differs by a few cents, decides whether a basket closes after two legs or goes on to seven. I therefore test every version on five neighbouring paths (the same signals, entered 0, 1, 2, 3 and 5 minutes later) over 2018-2026. With the five-leg ladder of 1.61 two baskets on those paths went to about -3,000 per 0.01 lot without a stop (May 2025 and June 2026); with the seven-leg ladder of 1.62 both close by themselves and the deepest basket on any path was -1,394, the maximum equity drawdown 26% -> 11% (fixed 0.01 lot on 10,000 USD). At the Low profile the daily stop of 750 per 0.01 lot closed four baskets over the five paths in six years (1.61: about nine). So the daily stop column is the one to size on: it is what one stopped basket costs, plus a little slippage. Two stops can come on consecutive days, which is why I would not go beyond 0.01 lot per 2,000.

Three brakes

Brake	What it does	What it does not do
Daily stop (15%)	Closes everything and stands down for the rest of the server day once equity - including the floating loss of an open basket - falls a set percentage below the day's opening balance. Default 15%, right for Low; -1 = automatic for any profile (750 per 0.01 lot), 0 = off.	It cannot prevent a gap, and it counts the whole floating loss of an older basket, not only today's part.
Daily limit per leg	Refuses a new leg when the day's realised loss plus what the basket can still lose would breach your limit.	It does not close anything that is already open.
Emergency stop	Closes everything at a set drawdown from the equity peak and blocks trading for 72 hours.	It stays blocked until you clear it by hand - by design.

Other EAs on the same account. By default the daily stop and the daily limit per leg measure the equity of the whole account, because that is what a prop firm measures; they close only Harrier's

3

own positions. Next to another EA, that EA's loss then counts towards Harrier's daily stop and can close a Harrier basket that was fine on its own. Set **Daily stop and limit count** to **This EA only** to count Harrier's own result of the day instead - realised today plus the floating loss of its basket - still as a percentage of the day-open balance. On a prop firm keep Whole account: the firm's rule counts every trade. The emergency stop always measures the whole account.

Friday and weekend

On Friday Harrier opens no new basket from 17:00 server time; the hour and minute are ordinary settings. A basket that is already open is managed as usual and may stay open over the weekend. If your prop firm forbids weekend positions, switch on **Close all baskets on Friday** and set the time (default 22:00 server time). It is off by default because closing a basket early turns its floating loss into a realised one.

News days

Harrier opens no new basket on an FOMC day, and none from 60 minutes before to 75 minutes after an FOMC, CPI or NFP release. Since 1.63 it also opens none from an FOMC release until 10:00 server time the next day (**After FOMC**, 0 switches it off): the morning after a Fed decision is when the market is still repricing, and on neighbouring test paths a trend basket opened in that morning stayed open for 370 hours and floated -3,046 per 0.01 lot. With **News days without a new basket** you choose which other release days are closed for new baskets as well: FOMC only, FOMC + NFP, FOMC + Core CPI/CPI + NFP, or FOMC + Core CPI/CPI + NFP + PPI (default since 1.64; before that FOMC + NFP). Inflation releases can turn gold sharply, and a basket opened on such a day can stay open for days; by default Harrier now sits those days out too, at the cost of some profit. A basket that is already open is managed as usual on those days. Live the dates come from the MetaTrader calendar; in the Strategy Tester from the built-in list.

Notifications and safeguards

With **Notifications** on (default) Harrier sends a push message to your phone on a daily stop, an emergency stop and when a basket reaches its last leg. Enter your MetaQuotes ID under Tools > Options > Notifications in MetaTrader. Harrier also guards itself: it remembers a daily stop through a terminal restart, finishes a basket that was only partly closed, refuses to run twice on the same symbol, waits 60 seconds when the market is closed or algo trading is off, and warns in the Experts tab and on the panel when the server time is not GMT+2/+3 (New York close), because the timed entries and the Friday cut-off use server hours.

What did the test show?

4

One run, all conditions stated, including the awkward parts.

Condition	Value
Period	29 October 2020 (first real ticks at my broker) to 28 August 2026
Data	XAUUSD, 100% real ticks, spread taken from the tick data
Account	Hedging, 10,000 USD, 1:500
Size	Fixed 0.01 lot for the whole period - more conservative than every profile in chapter 3

Result		Per year	
Net profit	+4,899.37 USD (+49%)	2020 (2 months)	+36
Profit factor	3.52	2021	+436
Max equity drawdown	685.10 USD (4.63%)	2022	+464
Max balance drawdown	166.72 USD (1.11%)	2023	+458
Recovery factor	7.2	2024	+573
Deals	2,454	2025	+1,383
		2026 (8 months)	+1,549

Read this next to the table

The entry models were developed on this same period, so part of this result is in-sample and a live result below it is the normal outcome rather than a disappointment. The last two years produce more than half of the profit. The deepest basket of this run floated -675 per 0.01 lot and none closed at a loss. On this one path the older five-leg ladder looked better (equity drawdown 2.9%), because it happened to miss the two baskets that went to -3,000 on the neighbouring paths; 1.62 gives up that lucky path for a much smaller worst case on all of them (chapter 3). In 1.63 I re-ran sixteen paths (four standard paths and twelve with a different delay, leg distance and target): the only basket deeper than -900 on any of them opened the morning after a Fed decision, and the After FOMC setting takes it away; the deepest basket on all sixteen paths is then the -675 of this run. A basket on your feed can be deeper than any basket a test has shown you; the daily stop is there for exactly that case: at the Low profile it closes such a basket at 750 per 0.01 lot.

Outside its development period

4

The entry models were built on 2021-2026. I then ran the unchanged EA on October 2018 - October 2020 (including the March 2020 crash), on ticks rebuilt from one-minute bars with the tick volume of each bar and a fixed spread of 0.15; on a period where both exist, this method reproduced the real-tick run basket for basket (21 of 21). Version 1.52 lost 2,842 there: three time-anchored baskets (session open, COMEX settlement, Shanghai fix) opened in a quiet, trending market and stayed open for up to six months until the daily stop closed them. A fourth one of the same kind (London fix, 30 November 2020) showed up when I extended the real-tick test back to late October 2020. Since 1.54 all five time-anchored entries (SO, L2, FA, CX, SG) only open a basket above the same volatility floor as the trend entry. On October 2018 - October 2020 1.54 made +1,060, its worst basket closed at -136 and the maximum equity drawdown was 6.04%; 1.63 makes +1,017 there, its worst basket closes at -147 and the maximum equity drawdown is 5.76% (fixed 0.01 lot on 10,000 USD). On the main test no basket reached the daily stop. The price of that floor is paid in quiet years: against 1.52 it gives up about a fifth of the profit, almost all of it in 2021-2024.

If you re-run it yourself, use **every tick based on real ticks** from your own broker. For a basket EA the order of prices inside a bar decides when a leg is added and when the basket exits; an OHLC run answers a different question. Check the tick quality line in the report: below 99% real ticks the tester invents ticks from minute bars, and invented ticks flatter every averaging system.

Live signal. Harrier runs live on a cent account at the Medium risk profile with a 30% daily stop, tracked on Myfxbook since 31 October 2026: myfxbook.com/portfolio/harrier/12287027. That is one step above the default Low profile, so its swings are larger than in a default backtest. Read-only investor access: server VTMarkets-Live 3, login 36456112, investor password Harrier2026!

Which entries are there?

5

Fourteen roles, eight on by default, and the way each one fails.

Every model except EP must agree with the higher-timeframe trend (EP has its own strength test), and every model hands its basket to the same engine. Since 1.54 the five time-anchored entries (SO, L2, FA, CX, SG) also need the volatility floor of the trend entry before they open a basket; in SL/TP mode the stop already limits every trade, so there the floor does not apply (since 1.55). All are on by default except NF, EP (since 1.61) and, since 1.63, SO, L2, CX and SG: on sixteen test paths (four standard paths and twelve with a different entry delay, leg distance and target) SG traded only in 2026, L2 and CX opened one or two baskets per path, and the deepest SO basket was almost five times its whole profit. Together they were about 2% of the result. What follows is the role of each entry, not its recipe.

	Role	Its failure mode
TR	Trend entry - the core model, always on. A decisive move in the direction of the trend.	The trend exhausts exactly at the entry.
CT	Continuation. A second push inside a trend that is already running.	Late continuation into a reversal.
PB	Pullback. A fast counter-move inside the trend, then a turn back.	The pullback becomes the new direction.
SO	Session open (off by default since 1.63). A displacement shortly after a major session opens.	The opening move fades within the hour.
NF	News follow-through (off by default). Direction once a scheduled event has passed.	The first move after the news reverses.
MG	Monday gap. The direction of the week's opening gap.	The gap closes and keeps going.
DS	Day sweep. A run beyond the previous day's extreme.	The sweep is a liquidity grab, not a breakout.
TD	Trend day. Continuation on a day that trends strongly.	The trend day becomes a range at the entry.
N2	Second wave New York. A later continuation inside the US session.	The second wave is the end of the move.
L2	Second wave London (off by default since 1.63). A later continuation inside the London session.	The second wave is the end of the move.
FA	Morning fix. Direction once the London gold price fix has passed.	The fix marks the turn, not the continuation.
CX	COMEX settlement (off by default since 1.63). Direction once the New York gold settlement has passed.	The move was settlement flow and fades.
EP	Late-session strength, buy only (off by default since 1.61). A broad rally that is still running late in the evening.	The late rally is the exhaustion of the day.

SG	Shanghai fix (off by default since 1.63). Direction once the Shanghai Gold Exchange afternoon benchmark has passed.	The benchmark flow reverses when Europe opens.

5

Never against the trend
Every entry needs the higher-timeframe trend on its side; the late-session model buys only and needs price above its moving averages. No counter-trend "sell traps": in both test periods not a single sell basket closed at a loss (349 sells since October 2020, 70 in 2018-2020).

Fourteen entries are not fourteen risks
They all read the same gold and they all produce the same kind of basket. Enabling everything increases how often you are in the market; it does not spread the risk. Enable a model because you accept its baskets, not because it lengthens the list.

Basket ladder

Basket ladder (General) chooses Classic (default since 1.65, up to five legs) or Soft (up to seven legs). Classic keeps the worst day smaller; Soft earns a little more in calm years and needs a wider daily stop.

Path spreading

Every basket depends a little on the exact minute it starts: the same signal entered one or two minutes later can meet a different price, and on gold that is sometimes the difference between a basket that closes in an hour and one that floats for days. **Paths** (Path spreading, since 1.64) splits the lot over N copies of the same strategy: path p enters **Minutes between paths** x p later than the first, each with 1/N of the lot and its own magic number (Magic + p). The daily stop, the emergency stop and the Friday close count all paths together. Default 1 = one path, exactly the trades of 1.63; 4 is the advised setting when the account allows it. The panel row **Paths** shows the setting and the start lot of every path (for example *4 x 1 min: 0.02/0.02/0.02/0.01* at a base lot of 0.07), and turns red when the account is too small for all paths. In the test (March 2022 - August 2026, real ticks) four single paths 0-3 minutes apart made 4,003 - 4,285 per 0.01 lot with an equity drawdown of 464 - 907; four internal paths together made 4,151 per 0.01 lot (the average) with an equity drawdown of 334 - about half of a single path, a third of the unluckiest one. Each path needs at least the minimum lot, so four paths need four times the base lot: at the Low profile (0.01 lot per 5,000) that is an account of 20,000 or more. With fewer volume steps than paths only the first paths trade. Basket mode only; in SL/TP mode the setting is ignored.

Trade direction

Under General you can set **Trade direction** to Both (default), Buy only or Sell only. A signal in the direction you switched off counts as no signal, so the next entry model in line may still trade that bar. It only affects new baskets: a basket that is already open is managed and closed as usual. In the six-year test the two directions carry a comparable weight (buys +2,559, sells +2,340 of the +4,899), so limiting the direction roughly halves the result; it does not make a basket shallower.

What am I looking at?

6

The panel, and what it does not tell you.

Block	What it tells you
Balance / Equity / Floating	What is realised, and what the open basket is currently worth. The gap between them is your real exposure.
Risk profile / Daily stop	Your setting as 1:X, or the fixed lot, and the daily stop in money and percent of the day-open balance - labelled acct (whole account) or EA (this EA only), auto when set to -1, and red when it is too tight for your profile.
Realised	Closed result today, this month and in total - for this EA only.
Open basket	Legs and direction, current and next lot, average price, next leg price, target price.
Worst case	What a basket at the sizing limit (500 per 0.01 lot) would cost on your account right now, in money and in percent.
Baskets	Closed baskets, win rate, drawdown now and the deepest drawdown since you started, per account; deposits and withdrawals do not count as drawdown.
Entries / status	Which models are on, the spread and volatility, and why the EA is standing by when it is not trading.

On the chart the EA draws the next leg price, the target and the average price. Those are its own guides: they are not orders resting at your broker. Every protective action is taken by the EA in software, so it needs the terminal connected and Algo Trading on.

There is also a second mode

SL/TP mode trades one position with a hard stop and target, sized from the stop distance, with no ladder at all. It exists for accounts and prop firm rules that do not allow averaging. It wins less often than the basket mode, and its worst case is the stop. It trades six of the fourteen entries: TR, CT, SO, N2, CX and SG (SG since 1.55).

What if something looks wrong?

7

Where to look before you change anything.

Symptom	Look here first
No trades at all	Algo Trading, the status line on the panel, the symbol, and whether the account is hedging. The journal states a reason at every startup.
A lot size you did not expect	The risk profile, account currency and cent units, the broker's minimum lot and step, and the margin cap for the full ladder.
A basket that opens but adds no legs	The daily limit per leg, the margin cap, and the news rules - legs pause around scheduled events.
Everything closed at once	Daily stop, emergency stop, or the breakeven exit on a news day. Each writes its own line in the journal.
Different results at another broker	Symbol specification, spread and commission, server clock and available history.
Restarted with a basket open	Nothing to do. The EA adopts the basket, recovers its base lot from the open legs, recalculates the target and carries on.

Change settings when the EA is flat. Changing the profile does not resize an open basket, and changing the magic number makes the EA lose sight of its own positions.

The status line on the panel

Status	Meaning
ACTIVE - waiting for a signal	Normal. Hours without a basket are normal too: every entry waits for its own setup.
BASKET OPEN	A basket is being managed. Around FOMC its legs pause; on an FOMC day it exits at breakeven.
STANDBY - weekend / Friday after ... / session pause	Normal. No new basket in these hours; an open basket is still managed.
STANDBY - FOMC / NFP / CPI / PPI day, news ... until	Normal. A blocked news day or the window around a release (see chapter 3).
STANDBY - after FOMC, no new basket until 10:00	Normal. The morning after a Fed decision (After FOMC, since 1.63).
STANDBY - daily stop	The daily stop closed everything. New baskets resume the next server day, also after a restart.
STANDBY - drawdown kill until ...	The emergency stop fired. Read the journal before you clear it.
STANDBY - Algo Trading is off	Switch on Algo Trading in the toolbar and in the EA's Common tab.
CHECK - server time ... off GMT+2/+3	Your broker uses another clock. The timed entries and the Friday cut-off shift by that many hours.

7

Updating, or moving to another computer

Step	
1	Pick a quiet moment: best with no basket open, otherwise not around news or in a fast market. A weekend is ideal.
2	Press F7 on the chart, Inputs, Save: keep the .set file.
3	Replace the EA (Market: Update; manual: the .ex5 in MQL5/Experts) and restart the terminal, or attach the EA again.
4	Load your .set file. New inputs appear with their default; the changes are listed in the release notes.
5	Check the panel: the new version, the status line, and an open basket with its legs, lot and target.

Keep the magic number the same: that is how the EA finds its open basket again. A daily stop of today stays in force through the restart. When you move to another VPS, close the terminal on the old machine **before** you attach the EA on the new one. Harrier refuses a second copy on the same symbol inside one terminal, but it cannot see a second terminal on the same account, and two copies would both manage the same basket.

Words used in the panel and the journal

Basket	All positions from one signal, managed and closed together.
Leg	One position inside a basket. Leg 1 is the entry; five is the maximum (seven with the Soft ladder).
Weighted breakeven	The volume-weighted average price: where the basket is flat.
Floating	The unrealised result of the open basket - the number that matters for risk.
Standby	Running, but not allowed to open a basket. The panel gives the reason.

Support runs through the MQL5 product page. Include the journal output with any question; it is the fastest way to see what the EA decided and why.

Risk warning. Trading gold with leverage can cost more than you intend. This guide describes measured behaviour on historical data under stated conditions. It is not investment advice and not a promise of future results. Use only money you can afford to lose.