

TopxAI | MT5 EXPERT ADVISOR

BinanceGrid User Guide

Grid trading on Binance USD-M perpetual futures, run from MetaTrader 5

Version 1.0.1 · November 2026

TopxAI · https://api.topxai.xyz/labs/binancegrid

Contents

1. What BinanceGrid does

2. What is in the package

3. Requirements

4. Installation

5. First start: one chart per coin

6. The dashboard

7. Inputs

8. Capital and the account stop

9. Live trading on Binance

10. Backtesting

11. Files and the ledger

12. Troubleshooting

13. The source code

14. Risk notice

15. Support

1. What BinanceGrid does

BinanceGrid is a MetaTrader 5 Expert Advisor that trades three Binance USD-M perpetual contracts: HYPEUSDT, LITUSDT and ADAUSDT. Each coin runs on its own chart with its own capital.

The EA streams Binance market data into MT5 custom symbols named `BN.HYPEUSDT`, `BN.LITUSDT` and `BN.ADAUSDT`, so the candles on your chart are Binance's candles. Every decision is taken on closed bars only. Orders go either to a built-in paper account (the default) or to your Binance futures account through the Binance REST API.

The grid is long only. A cycle opens on a signal from closed bars, adds layers as the price falls and closes the whole position at a take-profit above the average price. Later layers are larger than earlier ones. An account stop watches the combined equity of all coins on the terminal.

2. What is in the package

Path in the package	What it is
`MQL5/Experts/BinanceGrid/BinanceGrid.mq5`	EA source code
`MQL5/Include/BinanceGrid/`	Source code modules used by the EA and the script
`MQL5/Scripts/BinanceGrid/BinanceGrid_History.mq5`	Source of the script that downloads Binance 1-minute history for backtests
`BinanceGrid-User-Guide-EN.pdf`	This guide
`BinanceGrid-User-Guide-ZH.pdf`	The same guide in Chinese

The package holds source code only. Before the first start, compile the EA and the script once in MetaEditor (section 4, step 3).

3. Requirements

- MetaTrader 5 for Windows. The EA was tested on build 6230. On a Mac, MT5 runs inside Wine; it works, but if the WebSocket connection keeps failing there, set Market data to REST polling only.
- A network that can reach `fapi.binance.com` and `fstream.binance.com`. Binance does not serve its futures API to US IP addresses. MT5 can use a proxy (Tools > Options > Server > Proxy); the EA has no proxy setting of its own.
- For live trading: a Binance USD-M futures account in one-way position mode and an API key (section 9).
- For backtests: an MT5 account logged in on the terminal. A demo account from any broker is enough.

4. Installation

1. In MT5 choose **File > Open Data Folder**. A folder opens that contains an `MQL5` folder.

2. Copy the `MQL5` folder from the package into that data folder and let it merge. The EA lands in `MQL5\Experts\BinanceGrid`, the modules in `MQL5\Include\BinanceGrid` and the script in `MQL5\Scripts\BinanceGrid`.
3. Compile both programs once. Open MetaEditor (F4 in MT5), open `MQL5\Experts\BinanceGrid\BinanceGrid.mq5` and press F7, then do the same for `MQL5\Scripts\BinanceGrid\BinanceGrid_History.mq5`. Each should finish with 0 errors (section 13).
4. In the Navigator window, right-click **Expert Advisors** and choose **Refresh**. BinanceGrid appears under the BinanceGrid folder.
5. Open **Tools > Options > Expert Advisors**, tick **Allow WebRequest for listed URL** and add two entries: `https://fapi.binance.com` and `fstream.binance.com`. Sockets and WebRequest share this list. If the dashboard still reports that it cannot connect, add a third entry `https://fstream.binance.com`.
6. Open **Tools > Options > Charts** and set **Max bars in chart** to 100000 or more. The EA keeps several weeks of 1-minute history in the custom symbols; with a smaller limit it cannot read all of it and falls back to slower REST downloads.
7. Make sure the **Algo Trading** button on the MT5 toolbar is on.

If WebRequest is not allowed, the first line of the dashboard turns red and names the two addresses to add.

---

5. First start: one chart per coin

1. Open three charts. Any symbol will do; the EA switches them.
2. Drag BinanceGrid onto the first chart. On the **Inputs** tab, set **Coin on this chart** to HYPE and set the capital for this coin (section 7). Click OK.
3. Repeat on the second chart with LIT and on the third with ADA.

On its first start the EA creates the custom symbol for its coin in the `Binance\USDT-M` symbol group and switches the chart to it, on the decision timeframe (M5 for HYPE and ADA, M3 for LIT). Switching the symbol makes MT5 reload the EA once; that is expected. Afterwards you may change the timeframe freely. The strategy reads the closed 1-minute bars of the custom symbol and does not depend on the timeframe you display.

The first chart to start becomes the **feeder**. It downloads recent history (10 days for HYPE and LIT, 35 days for ADA) and then opens the Binance WebSocket connection for all three coins. The other charts are **followers** and read the custom symbols. If the feeder chart is closed, a follower takes over within a fraction of a second; if the feeder stalls, within 5 seconds. Before taking over, it fills any missing bars from Binance's REST API.

You can run a single coin on a single chart. Each coin may only run on one chart: if two charts select the same coin, the chart with the lower chart ID keeps running and the other one stops and says so on its dashboard. Remove the EA from that chart.

After a computer sleep, a terminal restart or a template reload, the EA reads the open position, average price, layers and funding back from its ledger, recomputes the indicators from history, fills the gap and carries on.



The EA on a HYPE chart: the dashboard on the left, Binance candles on the custom symbol on the right.

6. The dashboard

The dashboard sits in the top-left corner of the chart. Drag it by its title bar. The right side of the title bar shows the execution mode (PAPER or LIVE), the **EXP** button that exports this coin's fills to CSV, the language button, the market-data light and the collapse button. The row below shows the coin, the custom symbol, the timeframe, the chart's role and, on the right, the open layers and quantity. The bottom row counts down to the next decision and shows the UTC clock.

The tab, language, position, collapsed state and curve options are remembered per coin, across EA reloads and terminal restarts. If a warning is active, a red banner appears above the tabs; click it to open the Feed page.

Overview. Coin equity, account total, floating P&L and drawdown from the peak; an equity curve for this coin or the whole account over 1 day, 7 days or all time; the signal state and the position (layers, quantity and average price, next layer, take-profit, stop, opening time); realized P&L, fees and funding. The buttons at the bottom pause new entries, close the position and reset the paper ledger.



Overview page

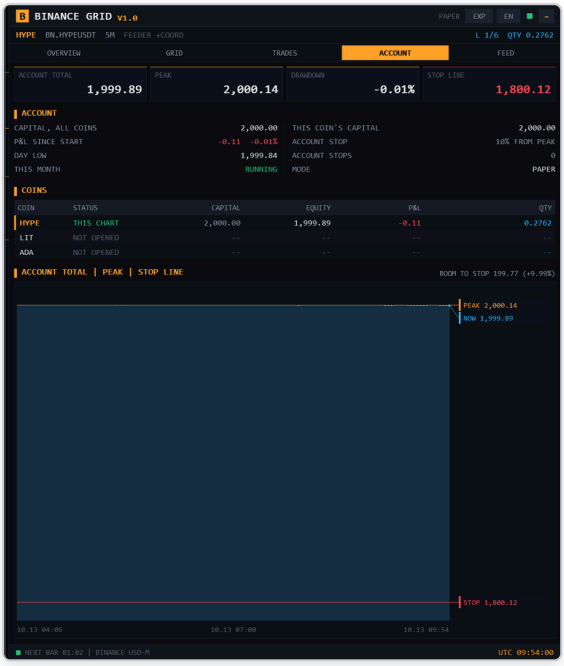
Grid. Each layer of the current cycle with its price, quantity, notional and distance from the current price, colour-coded as filled, next or planned; when flat, the table shows what a cycle opened now would look like. Below it, the decision-bar closes are drawn together with every layer, the average price, take-profit, stop and estimated liquidation price, and the cycle's buys and sells. The last block shows the exits and the cycle's opening time, holding time, floating P&L and funding.



Grid page

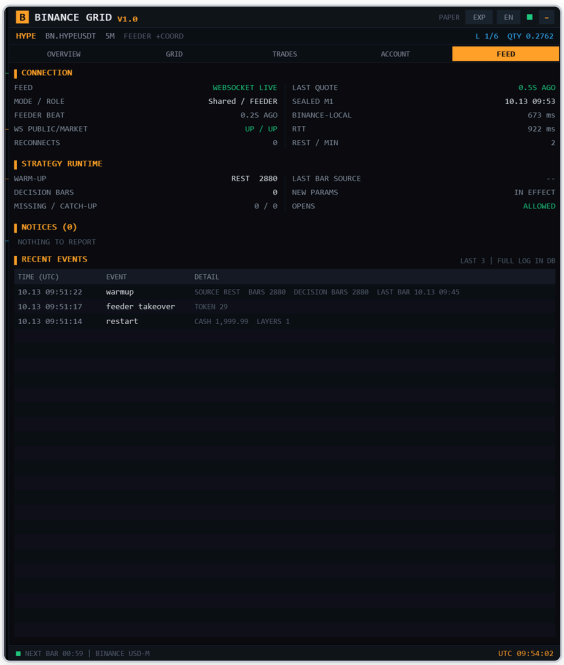
Trades. The latest 50 fills with time, action, layer, price, quantity, P&L and reason. Scroll with the mouse wheel or the buttons on the right. The last row totals realized P&L, fees and funding for this coin.

Account. Account total, peak, drawdown and stop line; the capital of all coins, P&L since start, today's low, whether the month is halted; this coin's capital and the account stop. A table lists each coin with status, capital, equity, P&L and position. In live mode an extra block shows the last four characters of the API key, the wallet and available balance, the capital in use, the reconciliation status and the minimum capital for this coin. The bottom chart draws the account total with the peak and the stop line.



Account page

Feed. Connection state (source, role, feeder heartbeat, WebSocket streams, reconnects, last quote, last sealed 1-minute bar, clock offset to Binance, round-trip time, REST requests per minute), strategy runtime (warm-up, decision bars, missing and caught-up bars, whether entries are allowed), every active notice and the latest 40 events. The full event history is in the ledger.



Feed page

Size and language. The layout scales with screen DPI. If the whole dashboard is too small, raise **Dashboard size**; if only the text is too small, set **Text size** to about 1.2. While the mouse is over the dashboard, the chart's wheel zoom is paused. The language button switches between English and Chinese at any time; chart labels follow. Logs, events and the ledger stay in English.

7. Inputs

The inputs are grouped as in the MT5 dialog. The strategy rules (signal, layer spacing, sizing, exits) and the execution model (fees, slippage, delays) are built into the EA and are not inputs.

Input	Default	What it does
Coin		
Coin on this chart	HYPE	HYPE, LIT or ADA. One coin per chart.
Capital and risk		
Capital for this coin (USDT)	2000	The money this coin trades with. Each chart has its own value. See section 8.
Account stop: max drawdown of all coins from peak (%)	10	When the combined equity of all coins on this terminal falls this far below its peak, every coin is closed and no new cycle opens until the next calendar month. Use the same value on every chart.
Trading		
Mode	Paper (simulated)	Live (Binance USD-M futures) sends real orders. See section 9.
Binance API key (Futures only, no withdrawals, IP-bound)	empty	Needed for live mode only.
Binance API secret	empty	Needed for live mode only.
Display		
Show dashboard	true	Draws the dashboard.
Dashboard language (switchable on the dashboard)	English	Starting language; the button on the dashboard switches it later.
Dashboard size	1.0	Scales the whole dashboard.
Text size (0 = auto by screen DPI)	0	0 sizes text by screen DPI; any other value multiplies it.
Black-and-gold chart colours	true	Black background, gold bull candles, dark bear candles. Your original colours return when the EA is removed or this input is turned off.
Trade arrows and price lines on the chart	true	Fill arrows with layer numbers, the average price, next layer, take-profit and stop lines.

Input	Default	What it does
Connection		
Market data	Shared connection (recommended)	Shared: one chart connects and feeds the others. One connection per chart: every chart connects for its own coin. REST polling only: no WebSocket; quotes every 2 s and bars every 5 s.

If an input is out of range (capital not above 0, account stop not between 0 and 100), the EA does not connect or trade. It shows the reason on the dashboard and waits for you to correct the input.

The account stop is compared across running charts. If two charts disagree, the dashboard marks it in red and the value of the chart that started first applies.

8. Capital and the account stop

Capital per coin. Each coin trades with the capital you enter on its chart. Profit and loss stay with that coin: after a winning cycle the next one is sized from more cash, after a losing one from less. The P&L shown on the dashboard is equity minus capital.

Changing the capital. Change the input and click OK. The EA adds or removes the difference and leaves past P&L untouched. When the coin is flat the change applies at once and is logged as a capital event. When a position is open it waits until the cycle closes, and the dashboard says so. Capital cannot be cut below the loss made so far: if the coin has lost 300, the capital must stay above 300.

Account total and peak. The account total is the sum of the equity of every coin that runs, or has run, on this terminal. The peak is the highest P&L reached plus the sum of capital, so adding capital raises the peak and the total together and never triggers the stop. Removing capital lowers both by the same amount, but the drawdown percentage gets larger: with a loss of 500, cutting total capital from 6,000 to 4,000 moves the drawdown from 8.3% to 12.5%, which would trigger a 10% stop at once.

What the stop does. When the total falls to the stop line, all coins are closed at market and no new cycle opens for the rest of the calendar month. The peak resets after the stop. Running a single coin alone means the account stop applies to that coin by itself.

Minimum capital for live trading. The first layer scales with capital. If it falls below Binance's minimum order size, that cycle does not open and the dashboard shows the minimum. At 13 October 2026 prices the minimums were about 510 USDT for HYPE, 1,465 USDT for LIT and 471 USDT for ADA. They move with the coin price; the dashboard always shows the current figure.

9. Live trading on Binance

Prepare the Binance account.

1. In Binance, create an API key for this EA. Enable futures trading only. Leave withdrawals disabled. Restrict the key to the public IP address of the computer that runs MT5. MT5 stores EA inputs in plain text in chart templates and profiles; with these restrictions a leaked key can only place futures orders from that IP.

2. Set the futures position mode to **One-way**. The EA refuses to start live trading in hedge mode.
3. Keep other positions and open orders off HYPEUSDT, LITUSDT and ADAUSDT. The EA reconciles with the exchange every 30 seconds; if the exchange position differs from its ledger, a short position exists or unknown orders are open, it turns the dashboard red and stops opening and adding. Exits continue.
4. Leverage, margin mode and multi-asset mode are taken from your Binance account. At full size the grid's notional is 0.75 to 2 times the coin's equity, depending on the coin, so common leverage settings leave room.

Switch a chart to live. Open the EA inputs, set **Mode** to Live, enter the API key and secret and click OK. The EA synchronises its clock, verifies the key, checks one-way mode and loads the contract rules. If all of that passes, a confirmation dialog shows the last four characters of the key and the wallet balance. After you confirm, any paper position of this coin is closed in the paper ledger and the live ledger opens. If verification fails (network error, wrong key, Binance error), the EA does not fall back to paper; it stays not ready and retries every 10 seconds. Clicking **No** in the dialog keeps the chart in paper mode.

While live.

- Orders are market orders, each with its own client order ID.
- If an order's result is unknown (timeout, HTTP 5xx), the EA never sends it again. It looks the order up by that ID every 3 seconds and books the real fill.
- Before each new cycle the EA compares the capital of all live coins with the futures wallet. If the capital exceeds the wallet by more than 1%, no new cycle opens and the dashboard shows both figures. If you withdraw from the wallet, lower the capital.
- Funding is booked from Binance's income records.
- The **Algo Trading** button on the MT5 toolbar and **Allow Algo Trading** in the EA properties must both be on. If either is off, the EA sends no order at all, including stops, and says so at the top of the dashboard.

Stops run inside the EA. The single-coin stop and the account stop are watched by the EA and executed with market orders. No conditional orders are placed on the exchange. While the EA is offline, the terminal is closed or the computer sleeps, an open position has no protection. Run live trading on a computer or VPS that stays on.

Back to paper. Set Mode back to Paper. The EA refuses while the live ledger still holds a position for this coin. If you closed that position by hand on Binance, switch to Live and press **Close position**: Binance rejects the order, the next reconciliation sees a flat exchange position and closes the ledger, and the switch to paper then goes through.

10. Backtesting

The Strategy Tester has no network access, so the EA reads Binance history from the custom symbols. Download that history first.

Step 1. Download history. In the Navigator, run **Scripts > BinanceGrid > BinanceGrid_History** on any chart. Its inputs:

Input	Default	What it does
Coins	All three coins	Or HYPE, LIT or ADA only.

Input	Default	What it does
From	2025.01.01 00:00	UTC start. Begin at least 35 days before the first test day, because the indicators need history to warm up.
To	0	UTC end; 0 means now.

The script writes Binance 1-minute bars into `BN.HYPEUSDT`, `BN.LITUSDT` and `BN.ADAUSDT`. Bars that already exist are overwritten with the same values, so running it again is harmless. For reference, eleven months of all three coins took about 15 minutes.

Step 2. Set up the Strategy Tester. Press Ctrl+R and set:

Setting	Value
Expert	BinanceGrid\BinanceGrid
Symbol	`BN.HYPEUSDT`, `BN.LITUSDT` or `BN.ADAUSDT` (the EA refuses other symbols and writes the right one to the log)
Timeframe	Any
Date	Start at least 35 days after the start of the downloaded history
Modelling	1 minute OHLC
Inputs	**Coin on this chart** must match the symbol; **Mode** stays Paper; API key and secret must stay empty

The tester writes all inputs to its log, so it refuses to run while an API key or secret is filled in. The terminal must be logged in to an account; otherwise the log says that the tester was not started because the account is not specified.

Step 3. Read the results. The EA runs its own paper account inside the tester and does not place MT5 orders, so the tester's built-in report shows no trades. Read the **Journal** instead. Once per UTC day the EA prints a line such as

```
HYPE day 2026.03.29 low=2170.36 close=2171.73 cash=2179.42 layers=5
```

with the day's lowest equity, the equity at the day change, the cash and the open layers. At the end of the run it prints

```
BinanceGrid test finished HYPE equity 2579.85 cash 2612.87 realized 647.78 fees 69.70 decision bars 82080
```

Equity curves and drawdowns can be built from the day lines. In visual mode the dashboard is updated once per tester minute.

How the tester fills. As in live trading, the decision is taken 2.5 seconds after the bar closes. The fill price is the open of the next 1-minute bar plus 1 bp; fees are 5 bp; funding is not included.

One coin per run. The tester runs one symbol at a time, so the account holds only that coin and the account stop applies to it alone. To see three coins in one account, run each coin and add up the daily equity. In that case use a test in which the single coin does not hit its own account stop, because in a shared account the stop is measured on the combined total.

Reference results. MT5 Strategy Tester, 2026-01-01 to 2026-10-12, 1-minute OHLC, 2,000 USDT per coin:

	Return	Max equity drawdown
HYPE	+29.0%	−9.1%
LIT	+8.8%	−10.4%
ADA	+4.5%	−4.4%
Three coins in one account	+18.9%	−4.8%

Run alone, LIT hit its own 10% account stop on 27 March and sat out the rest of the month. The three-coin row adds up the daily equity and uses the LIT run without that stop (LIT alone +23.1%), because in a shared account the combined drawdown never came close to 10%. Its drawdown adds up the daily lows, which makes it slightly deeper than the true figure. Past results do not indicate future returns.

11. Files and the ledger

All charts write to one SQLite ledger in the terminals' common data folder, usually `%APPDATA%\MetaQuotes\Terminal\Common\Files\BinanceGrid\`:

File	Contents
`paper.sqlite`	Paper ledger: fills, events, account snapshots, funding and state
`live.sqlite`	Live ledger, kept separate from paper
`export_<COIN>_<date>_<time>.csv`	Fills exported with the EXP button

The tables are `pb_fills`, `events`, `pb_equity`, `pb_funding`, `kv` and `mt_curve`, with the views `equity`, `fills` and `funding`. Any SQLite tool can read them. Do not edit the ledger while the EA runs.

Reset paper on the Overview page deletes this coin's paper fills, funding and curve and returns its cash to the capital you set. It is not available in live mode.

12. Troubleshooting

What you see	What to do
Red line: WebRequest whitelist missing	Add `https://fapi.binance.com` and `fstream.binance.com` in Tools > Options > Expert Advisors (section 4).

What you see	What to do
Red banner: no quote for 10 s	The WebSocket is down. The EA polls quotes over REST every 2 seconds meanwhile. In live mode it opens and adds nothing until quotes return; stops keep working. Check the network.
Frequent TLS or socket errors, often on a Mac	Set **Market data** to REST polling only. The chart updates more slowly; the strategy is not affected.
US IPs cannot access fapi	Binance blocks US addresses. Use a network outside the US.
This coin is already running on another chart	Remove the EA from one of the two charts.
Algo Trading is off in MT5	Turn on the toolbar button and **Allow Algo Trading** in the EA properties.
Not enough room for the chart	Make the MT5 window taller, or lower **Dashboard size**.
Chinese text shows as boxes on a Mac	Wine lacks the Chinese font. Use the English dashboard.
Tester log: account is not specified	Log the terminal in to any account, a demo is fine.
Tester refuses to run	Clear the API key and secret, choose a `BN.` symbol that matches **Coin on this chart**, and start 35 days after the history begins.

13. The source code

The full source is included. Everything is plain ASCII; the Chinese dashboard text is stored as UTF-16 code units in `LangZh.mqh`.

Compiling. Open MetaEditor (F4 in MT5), open `MQL5\Experts\BinanceGrid\BinanceGrid.mq5` and press F7; then do the same for `MQL5\Scripts\BinanceGrid\BinanceGrid_History.mq5`. The includes use `<BinanceGrid\...>`, so the modules must sit in `MQL5\Include\BinanceGrid\`. The result should be 0 errors and 0 warnings.

Module	Purpose
`Presets.mqh`	Built-in rules for the three coins and input validation
`Core/Indicators.mqh`	Incremental RSI, signal state, trend gate, 9-minute bar grouping
`Core/Sleeve.mqh`	The grid state machine of one coin
`Core/Account.mqh`	Capital per coin, account total, peak and account stop across charts
`Core/Runner.mqh`	Bar timing, warm-up, decisions, fills, funding, capital changes, ledger I/O

Module	Purpose
`Feed/WebSocket.mqh`, `Feed/BinanceFeed.mqh`, `Feed/Election.mqh`	WebSocket client, Binance data into custom symbols, feeder election and hand-over
`Exec/Paper.mqh`, `Exec/Binance.mqh`	Paper fills; live signing, orders, order look-ups and reconciliation
`Store/Db.mqh`	SQLite ledger
`UI/Panel.mqh`, `UI/ChartMarks.mqh`, `UI/I18n.mqh`, `UI/LangZh.mqh`	Dashboard, chart marks and translation
`Util/Json.mqh`, `Util/Http.mqh`, `Util/Crypto.mqh`	JSON, WebRequest with Binance time sync, HMAC-SHA256

If you change the strategy rules, backtest the change before running it live.

14. Risk notice

Trading leveraged futures can lose more than you expect. The grid adds to a losing position, so a long one-way decline concentrates risk in the last layers and can reach the account stop. Stops are executed by the EA, not by the exchange, and do not work while the EA is offline. The backtest uses 1-minute bars and leaves out funding; live fills, latency and funding will differ. Past results do not indicate future returns. Start in paper mode and move to live only with money you can afford to lose.

BinanceGrid is an independent product by TopxAI and is not affiliated with or endorsed by Binance.

15. Support

- Downloads and updates: https://api.topxai.xyz/labs/binancegrid
- Support: support@topxai.xyz