VERIFY GUIDE · FOR NON-DEVELOPERS

HOW PERP BRAIN DATA IS MADE, AND HOW TO CHECK IT YOURSELF.

Perp Brain reads public Hyperliquid data, works out what a trade would cost before it happens, and writes the answer into a **receipt**: a few small files that anyone can check again without trusting us. It never holds keys, signs anything or moves money. Simulated results are labelled **SIMULATED**; testnet results **TESTNET**.

HOW A RECEIPT IS MADE

01 Collect the inputs

The order book, price bars and funding rates, or an account's funding payments, saved exactly as read in inputs.json.

02 Do the calculation

Walk the real order book to price the fill, add Hyperliquid's fees and funding, and check the owner's limits. Or add up the venue's funding and compare it with what a vault booked.

03 Fingerprint everything

Each input and result goes through SHA-256. Change one character and the fingerprint changes completely.

04 Write the receipt

Fingerprints and result go into receipt.json, plus manifest.json for a simulation. Re-checking repeats steps 2 and 3 from the saved inputs.

WHAT'S IN A RECEIPT

FIELD	WHAT IT MEANS
`kind`	perpbrain.sim-receipt (trade simulation) or perpbrain.funding-recon-receipt (funding check)
`label`	SIMULATED for a simulation; TESTNET or MAINNET for a funding check
`inputs`	The raw data the result was calculated from, and its fingerprint (data_snapshot_id or inputs_sha256)
`limits`	The owner's limits and their fingerprint, limits_hash (simulations)
`result`	Fills, prices, fees, slippage and funding, or the funding windows, with result_sha256
`statement`	Always "verified and reproducible": anyone can rerun it from the same inputs

Perp Brain is a GVNR product, owned by GVNR DAO LLC, a Marshall Islands DAO LLC. Perp Brain is developer tooling, and simulated results are not a forecast; trading perps can lose money, so please read the risk disclosure (perpbrain.com/legal/risk-disclosure).

CHECK A RECEIPT ON PERPBRAIN.COM/VERIFY

01 Open the page

perpbrain.com/verify. The check runs in your browser; nothing is uploaded.

02 Try the sample

Click Try a known-good fixture. It loads a receipt labelled SIMULATED and shows VERIFIED.

03 Add your files

Choose or drag receipt.json, manifest.json and, if you have it, inputs.json. Or paste each file into its box.

04 Click Verify

VERIFIED means every fingerprint matches. MISMATCH lists each part that doesn't.

05 Read the costs

A verified simulation also shows its fees, slippage and funding.

The browser check confirms the fingerprints. To rerun the whole calculation, use the command line below.



THE SAMPLE RECEIPT (SIMULATED) AFTER VERIFY

CHECK FROM THE COMMAND LINE

Python 3.11 or newer; no account, key or wallet. It prints VERIFIED, or MISMATCH and every field that differs.

```
pip install perpbrain
perpbrain verify-receipt path/to/receipt.json
```

Node.js 22 or newer: `npm install @perpbrain/sdk`, then `verifyReceiptAt("receipt-folder")` returns the same status. A funding receipt is checked with `verify_recon_receipt` from `perpbrain_read.sim.funding_recon`; the full command is in the online guide.

WHAT THE RESULTS MEAN

RESULT	MEANING
VERIFIED	Calculated from exactly these inputs; nothing changed afterwards. Keep the files with your records.
MISMATCH	A fingerprint or result differs, and the list says which. Ask the sender for the original files.
MATCH / DIFF	Funding receipts, per window: the vault's booked amount agrees with Hyperliquid's funding rows within tolerance, or it doesn't.
RECONCILED / DIFFERENCES	Funding receipts, whole period: every window matched, or at least one didn't.

TWO KINDS OF RECEIPTS YOU MAY SEE

SMOOTH BRAINS

SHADOW SIMULATION RECEIPTS

When the Smooth Brains strategy produces a signal, Perp Brain prices that trade on the live order book and writes a SIMULATED receipt (perpbrain.sim-receipt). Shadow mode records; it doesn't block or place orders.

Files: receipt.json, manifest.json, inputs.json. Check on perpbrain.com/verify or with perpbrain verify-receipt.

From Perp Brain 0.1.4 a receipt can be linked to the real Hyperliquid fills by order ID or fill hash, in a separate file, so the original never changes. The link records the real average price, slippage against the simulated price, the fee difference and the time to fill.

DIAMOND HANDS CARRY

FUNDING RECONCILIATION RECEIPTS

The vault books the funding it measures on-chain for its BTC short. Perp Brain reads Hyperliquid's own funding record for the same account and compares the two, window by window (perpbrain.funding-recon-receipt).

Labelled TESTNET or MAINNET, never SIMULATED, because it uses recorded data. Files: receipt.json and inputs.json. Each window is MATCH or DIFF; the whole receipt is RECONCILED or DIFFERENCES.

It checks Hyperliquid's half of the vault. The BTC vaults and the USDC bridge rely on Diamond Hands' own checks. Live example: perpbrain.com/case-studies/diamond-hands.

SIDE BY SIDE

	SMOOTH BRAINS SHADOW RECEIPT	DIAMOND HANDS FUNDING RECEIPT
Kind	perpbrain.sim-receipt	perpbrain.funding-recon-receipt
Label	SIMULATED	TESTNET or MAINNET
Answers	What would this trade cost, and do the limits allow it?	Does the vault's booked funding match Hyperliquid's record?
Files	receipt, manifest, inputs	receipt, inputs
Check with	perpbrain.com/verify or perpbrain verify-receipt	verify_recon_receipt (Python)
Outcome	VERIFIED or MISMATCH	VERIFIED or MISMATCH; windows MATCH or DIFF

> A VERIFIED receipt shows the numbers came from those inputs. It doesn't show that a strategy will make money, and simulated costs can differ from real ones.

QUESTIONS

Email info@perpbrain.com. The full guide, with copy-paste commands, is at perpbrain.com/docs/verify-guide.

Perp Brain is a GVNR product, owned by GVNR DAO LLC, a Marshall Islands DAO LLC. Perp Brain is developer tooling, and simulated results are not a forecast; trading perps can lose money, so please read the risk disclosure (perpbrain.com/legal/risk-disclosure).