Launch rules that are code, not promises

Token-launch infrastructure on Uniswap v4: a bonding-curve launch and a fixed-price launch, with locked liquidity and terms fixed at creation.

Curve Launch | Fixed-Price Launch | Locked liquidity | Rules in code

RTP Protocol · Overview
Edition November 2026 · technical overviews 1.0-draft.26 on rtp.sh
Security review in progress: internal review rounds under way, external audit being arranged.

Two launch paths, one standard

RTP Protocol is neutral token-launch infrastructure for EVM networks. Its two paths share one standard: every term is fixed when a launch is created, liquidity is locked by the absence of code to remove it, and every payout is pulled by its owner from a contract ledger.

RTP Curve Launch

A bonding curve that graduates at a continuous price into its own Uniswap v4 pool. A decaying opening-buy tax protects the opening seconds; trade fees are split between the creator, the protocol, the integrating platform and an optional referrer.

GIWA Sepolia testnet today; Robinhood Chain mainnet next.

RTP Fixed-Price Launch

A structured raise at one price for every participant, in up to six batches, with soft and hard caps. At least 70% of a successful raise becomes permanently locked liquidity; a raise that misses its soft cap refunds 100%.

Initial mainnet deployments on Robinhood Chain and Base.

What holders can rely on

0 proxies
no upgrade path; a defect is fixed only by a new deployment

Locked
graduated and settled liquidity has no removal path in code

Snapshotted
terms fixed per launch; later changes reach new launches only

Pulled
fees, refunds and claims are credited to ledgers and claimed

No one, the operator included, can pause trading or claims, move funds credited to others, touch a pool or upgrade a contract. Protections are stated with their limits: the opening tax raises the cost of sniping; it does not make sniping impossible.

Where token launches fail, and what the code does about it

Common failure	In RTP Protocol
Liquidity is pulled	The pool position is held by an immutable graduator with no withdrawal function. It is locked, not burned.
Insiders trade on other terms	Fixed-Price Launch sells at one price to everyone, the team included. On the curve, the launcher's initial buy is capped at 10% of the supply.
Parameters move after the launch	Supply, fee and split, opening tax, threshold and caps are snapshotted at creation; no setter reaches an existing launch.
A price gap at the hand-over	Curve Launch seeds the pool at the exact last curve price in the graduating transaction.
Refunds depend on goodwill	A fixed-price raise that misses its soft cap, or is not settled within 72 hours, refunds 100%, pulled by each contributor.
Funds pushed during trades	Nothing is pushed during a trade: every share is credited to a ledger and claimed by its owner.

Neutral by construction

Any front end can register a platform and receive the platform share of fees. No logic is specific to one token or community.

Immutable contracts

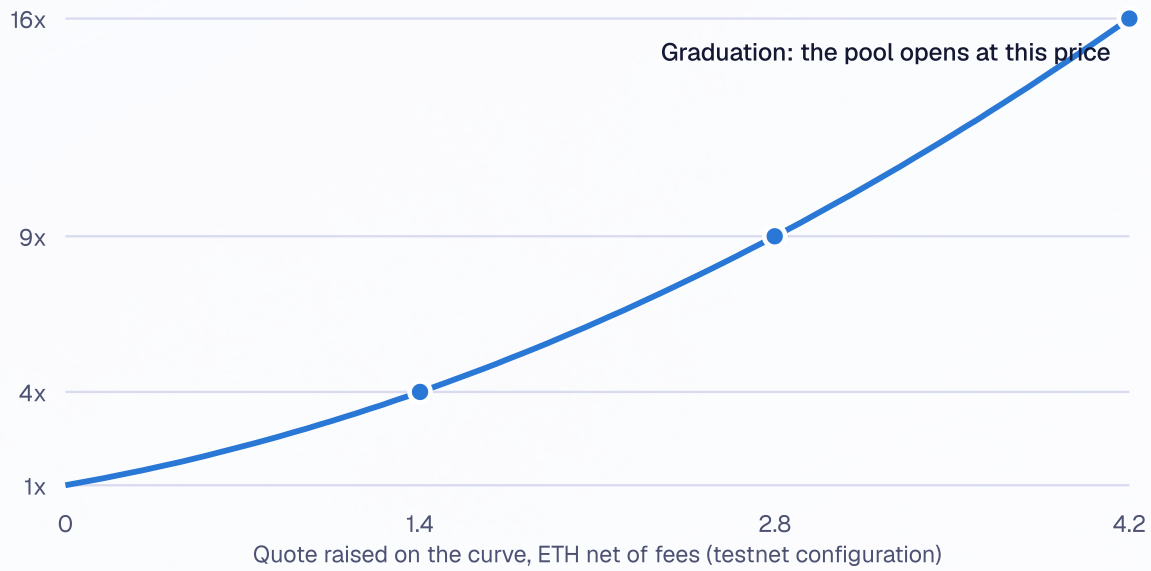
No proxy, no self-destruct, no initialiser to front-run. The trade-off, accepted deliberately: there is no emergency stop.

Verifiable deployment

Addresses predicted before broadcast and checked after; manifests published in a public deployment repository that holds no source code.

From curve to pool, without a price gap

Each launch mints its whole supply once and opens a constant-product curve against the quote asset, with a virtual quote reserve. When the quote raised, net of fees, reaches the threshold, the graduator opens the token's Uniswap v4 pool at the exact last curve price and seeds it with the raised quote and the reserved supply, as one full-range position it holds permanently.



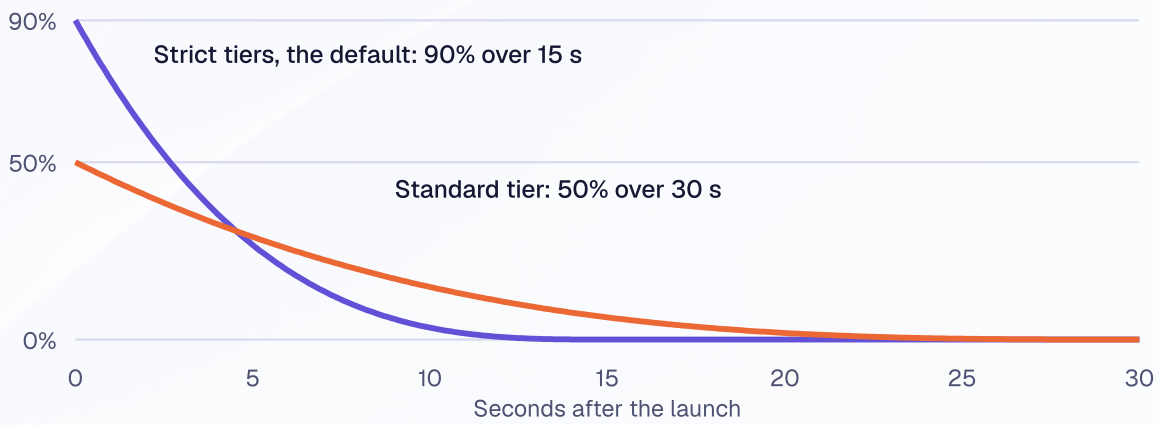
Price multiple = ((Q + vQ) / vQ)². The table and chart illustrate the formula; they are not a projection for any token.

Testnet configuration	Value
Supply	1,000,000,000 tokens, minted once
Virtual quote reserve / threshold	1.4 ETH / 4.2 ETH, net of fees
Sold on the curve / seeds the pool	80% / 20%
Price rise to graduation	16x
Hand-over	In the graduating trade; any surplus above the threshold is refunded in the same trade

If the hand-over fails inside the graduating trade, trading continues on the in-core pool at a continuous price until anyone completes the migration.

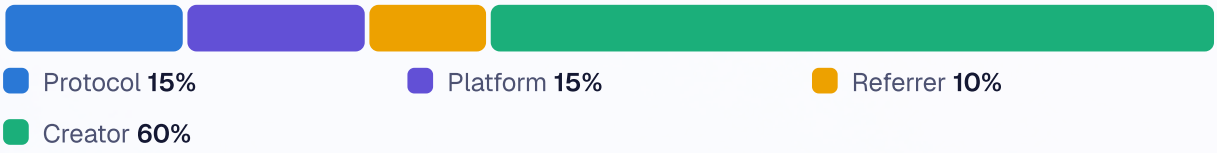
Protections and fees, stated with their limits

Opening-buy tax



tax = s0 × ((w − t)/w)³. Fee plus tax never exceeds 99% of the spend; sells pay no opening tax. The tax goes to the protocol treasury only, so self-dealing cannot recycle it. The launcher's initial buy in the launch transaction pays no tax and can receive at most 10% of the supply.

The trade fee and its split



Default testnet tier, 1% fee on every trade, on the curve and in the pool. Each launch keeps its tier's split for good. With no platform payee or no valid referrer, that share goes to the protocol treasury. After the migration, 5% of every fee, taken from the protocol's own share, funds the launch's buy-and-burn reserve.

Rule	Bound in the contracts
Trade fee on the curve	Set per tier: above 0, at most 5% (1% on testnet)
Fee in the pool	One value per deployment, at most 1%
Launch fee	Paid to the treasury at launch, at most 1 ETH
Opening tax	Starting tax at most 99%, window at most 60 s

Buy-and-burn, rate-limited and price-banded

After a launch migrates to its pool, part of every fee accrues to that launch's buyback reserve. Anyone can call the engine, which turns the reserve into buys whose whole output is burned in the same transaction. It has no owner, no setter and no pause, and holds nothing between calls.

Protection, fixed at deployment	Testnet
Reference price	Mean tick over at least 30 minutes, from the fee hook’s oracle
Band	A buy may push the price at most about 1% (100 ticks) above the lower of reference and spot
Size per call	10% of the reserve; 0.5% of the pool’s quote depth
Rate limit and cooldown	0.5% of depth per 30 minutes; 600 s cooldown
Caller’s tip	0.1% of the quote spent (compiled maximum 0.5%)

Buybacks are rate-limited and not guaranteed, and they are not a price support. A front-run that moves the price past the band leaves no fill.

Contract set

Contract	Role
RtpCore	Launches, curve trading, opening tax, fee ledger and claims, launch tiers, graduation hand-off, buyback reserves
RtpToken	ERC-20 minted once: no owner, no later mint, no transfer tax, no blacklist
RtpGraduator	Opens the v4 pool at the curve price and holds its position permanently; no owner, no setters
RtpFeeHook	Charges the pool fee and credits it to the ledger; only the graduator can add liquidity
RtpV4Router · Quoter	Exact-in and exact-out trades; quotes equal settled amounts
RtpBuybackEngine · Lens	Buy-and-burn, and read-only previews; part of v1.0.0-r4

A structured raise with the same standard

One price for every participant, up to six batches, a closed start and a decaying buy tax at the opening, and a pool fee split frozen when each launch is created.

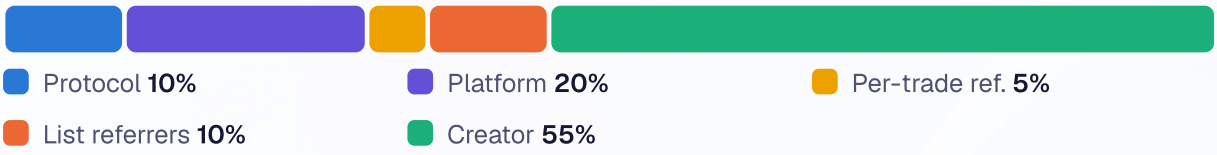
70%
at least this share of every successful raise becomes permanently locked liquidity

100%
refund, pulled by each contributor, if the soft cap is missed or no one settles in time

50%
of the pool fee always goes to the creator, a floor compiled into the contracts

10%
protocol share of the pool fee, fixed in code

Pool fee split on the RTP.fun platform



- Protocol **10%**
- Platform **20%**
- Per-trade ref. **5%**
- List referrers **10%**
- Creator **55%**

Settlement is one atomic transaction that anyone can send: it deploys the token, seeds the pool at the sale price (or a premium of up to 50% fixed at creation), burns unsold supply and registers every vesting schedule. The creator never receives the raise in a lump sum.

The RTP Fixed-Price Launch overview covers batches, bounds, settlement, the opening and releases in full.

Powers, in full

Who	Curve Launch	Fixed-Price Launch
Operator	Add, enable or disable launch tiers; approve quote assets; set the launch fee (at most 1 ETH). New launches only.	Pause creation of new launches. Change the success fee (at most 3%) and team limit (at most 25%) after 48 hours, for new launches only.
With a public delay	Treasury, attestor and verification-gate changes wait 7 days.	Yield-venue adapters enabled after 48 hours; a new referral attestor takes 7 days.
Each platform	Its payee; its platform id is namespaced by its own address.	Its fee terms within the caps; a change reaches only launches created afterwards.
No one	Pause trading or claims, move funds credited to others, touch a pool, upgrade a contract.	Pause contributions, refunds, claims, trading or settlement; change an existing launch; change the treasury; upgrade a contract.

Limits we state openly

- On-chain rules cannot tell two addresses of one person apart; self-trading economics are disclosed, not prevented.
- Sequencer ordering is outside the contracts' control; the design assumes worst-case ordering.
- Social-handle and identity bindings depend on an attestor key and a 72-hour public notice.
- Smart contracts may contain undiscovered defects. Security review in progress: internal review rounds under way, external audit being arranged. The external audit may not be complete at mainnet deployment; its results are published when it is.

Any front end can build on the protocol

Platforms

Curve Launch: a namespaced platform id, keccak256 of the registrant and a name, so an id cannot be taken over. Fixed-Price Launch: a platform registration with its own fee terms and payee within the compiled caps.

Referrers

A trade may name a referrer on either path. A Fixed-Price launch can also carry a fixed list of up to five referrers, named at creation.

Official addresses

Only addresses listed in the official deployment registry on rtp.sh are official, whatever name a front end presents. The reference SDK refuses unlisted core addresses by default.

SDKs

A viem client per path: launches, trades, quotes, claims, Merkle lists and event decoding, with each refusal named after the contract's own error. Published when the code is made public.

Ecosystem

RTP.fun, a front end built on RTP Protocol, and one integrator among potentially many. **The Protocol Behind the Play.**

From testnet to mainnet

Stages are sequential milestones rather than calendar commitments, so no dates are given.

Stage	Curve Launch	Fixed-Price Launch
Done	GIWA Sepolia instance with test tokens, source verified on the explorer	Protocol design; development and testing, with fork rehearsals of the deployment
Next on testnet	A new instance of v1.0.0-r4, adding the buy-and-burn engine and the read-only lens	No public testnet stage
In progress	Internal review rounds, then one complete verification run	Internal review rounds, then one complete verification run
Next	Robinhood Chain mainnet, on its canonical Uniswap v4	Robinhood Chain and Base mainnet, deployed directly
Being arranged	External audit; a bug bounty programme follows it	External audit, results published when complete

Testing

Curve Launch: 473 tests across 107 suites, heavy invariants (102,400 calls), mutation testing of every line changed in v1.0.0-r4 (152 mutants: 143 killed, 9 equivalent), all 88 static-analysis findings triaged. Fixed-Price Launch: unit, invariant, fuzz and fork tests, with mutation testing and static analysis before every release.

Deployment

Fixed-Price Launch deploys in three Safe transactions from a dedicated deployment Safe, each well under the 2^{24}-gas transaction limit, rehearsed on local forks of Ethereum, Base, GIWA Sepolia and Robinhood Chain. Its contracts share one address on every supported chain.

Security review in progress: internal review rounds under way, external audit being arranged. GIWA stays on testnet.

Reference

Terms used in this overview

Term	Meaning
Bonding curve	A pricing function that sets the price from the reserves on each trade; here constant-product with a virtual quote reserve
Graduation	The hand-over of a launch from the curve to its own Uniswap v4 pool, at the final curve price
Locked liquidity	A pool position held by a contract with no withdrawal function: tradable, but no one can remove it
Pull payment	Recipients withdraw amounts credited to them; contracts never push funds during other operations
Soft cap / hard cap	The minimum raise for a fixed-price launch to succeed, and the most it can accept
Settlement	The single transaction, open to anyone, that finalises a successful fixed-price launch
Hook	A Uniswap v4 contract the pool calls on swaps and liquidity events

Licences and contact

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