

LITEPAPER · VERSION 1.0

KEYS

An unlimited, randomized issuance protocol on Robinhood Chain. A key is minted at one price, draws its class on-chain, and unlocks the right to buy \$KEYS at a strike that never changes.

NETWORK ROBINHOOD CHAIN · ID 4663
TOKEN \$KEYS · 1,000,000,000 FIXED SUPPLY
STRIKE 1 ETH = 100,000,000 \$KEYS
DATE JULY 2026

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01 Overview

KEYS turns token distribution into an open, verifiable draw. There is no sale, no presale and no fixed collection size — supply of keys is unlimited, while the tokens they unlock are strictly finite.

A participant pays the live mint price in ETH. The price is identical for every class, and nothing about the outcome is known — to the minter, to the operator, or to any observer — until the transaction has confirmed. Only then does the key draw one of five classes from verifiable on-chain randomness.

Each class unlocks an **allowance**: the right to purchase a set quantity of \$KEYS at a fixed strike of 1 ETH = 100,000,000 \$KEYS. The strike never changes. The market price of \$KEYS moves independently, in either direction. Allowances do not expire, may be exercised in whole or in part, and are bound to the key itself rather than to a wallet.

Keys may additionally be staked to earn \$KEYS from a fixed emission pool, weighted by class and damped so that concentration is discouraged.

The core mechanism. Allowances halve every 2,500 mints. Because each epoch issues half of the previous one, total emission through the mint converges — mathematically, not by policy — at 500,000,000 \$KEYS, and can never exceed it however many keys are minted.

Three roles

- **Minters** pay the live price and draw a class at published odds.
- **Holders** claim allowances at strike, stake their keys, or transfer both together.
- **The protocol** routes a fixed share of every mint into liquidity, by contract rather than by discretion.

02 The mint

2.1 Pricing

The mint price follows demand. It rises while minting runs ahead of a target schedule and decays back down when it slows, always bounded by a published floor and ceiling. At any given moment there is exactly one price, and it is the same for every class — a participant cannot pay more to improve their odds, and cannot pay less by accepting worse ones.

PARAMETER	VALUE	NOTE
Base price	0.005 ETH	Price at mint #1
Floor	0.002 ETH	Decay cannot pass this
Ceiling	0.050 ETH	Demand cannot pass this
Target rate	500 / day	Schedule the curve corrects toward
Max per transaction	10	Batch cap

2.2 Classes and odds

Odds are enforced by the contract and published before the mint opens. They do not vary with price, wallet, timing or batch size.

CLASS	ODDS	EPOCH 1 ALLOWANCE	STRIKE COST	STAKING WEIGHT
Common	60%	50,000	0.0005 ETH	1.0×
Uncommon	25%	80,000	0.0008 ETH	1.5×
Rare	10%	150,000	0.0015 ETH	2.5×
Ultra	4%	450,000	0.0045 ETH	5.0×
Extinct	1%	1,700,000	0.0170 ETH	12.0×

The expected allowance of a single mint in epoch 1 is therefore:

$$0.60 \times 50,000 + 0.25 \times 80,000 + 0.10 \times 150,000 + 0.04 \times 450,000 + 0.01 \times 1,700,000 \\ = 30,000 + 20,000 + 15,000 + 18,000 + 17,000 = \mathbf{100,000 \text{ $KEYS}}$$

Risk. Minting is a random draw. Three in five keys are Common and unlock the smallest allowance. An allowance may be worth less than the price paid to mint it, and \$KEYS has no guaranteed value.

2.3 Reveal and randomness

Payment and reveal are separate steps. The class is drawn only after the mint transaction has confirmed, from a seed that cannot be observed or influenced at the time of payment. No participant can simulate an outcome and settle only on favourable results, and no operator can select outcomes for a given address.

Note on timing. Robinhood Chain exposes two clocks: network blocks of roughly 0.1s, and Ethereum blocks of roughly 12s, which is what Solidity's block number reports. Every window in the protocol names the clock it is measured in, and all user-facing durations are anchored to timestamps rather than block counts.

03 Allowances

3.1 A fixed strike

An allowance is a standing right to purchase \$KEYS at $1 \text{ ETH} = 100,000,000 \text{ \$KEYS}$. The strike is set at deployment and is immutable. It is not a discount to a moving market price, nor a claim on a treasury; it is a fixed conversion rate that the holder may use at any time, in full or in parts, with no deadline.

Because the strike is fixed while the pool price floats, the relationship between the two may be favourable or unfavourable. If the market price of \$KEYS trades above the strike, exercising an allowance acquires tokens below market. If it trades below the strike, the allowance has no economic use until that changes — it does not expire, but it confers nothing.

3.2 Halving epochs

Every 2,500 mints constitutes an epoch. At each epoch boundary, the allowance attached to every class halves. A key carries the allowance of the epoch in which it was minted, permanently.

EPOCH	COMMON	UNCOMMON	RARE	ULTRA	EXTINCT	EPOCH ISSUANCE
1	50,000	80,000	150,000	450,000	1,700,000	250,000,000
2	25,000	40,000	75,000	225,000	850,000	125,000,000
3	12,500	20,000	37,500	112,500	425,000	62,500,000
4	6,250	10,000	18,750	56,250	212,500	31,250,000
5	3,125	5,000	9,375	28,125	106,250	15,625,000
...	...	...	...	...	...	...
Limit	—	—	—	—	—	500,000,000

The series is geometric. Total issuance through the mint is the expected allowance per mint multiplied by the epoch size and by the sum of the halving series:

```
100,000 × 2,500 × ( 1 +  $\frac{1}{2}$  +  $\frac{1}{4}$  +  $\frac{1}{8}$  + ... ) = 100,000 × 2,500 × 2 = 500,000,000 $KEYS
// exactly the mint-allowance allocation; the bound holds for any number of keys minted
```

3.3 Transfers

An allowance is bound to its key, not to the wallet that minted it. Selling or transferring a key transfers the unused portion of its allowance with it, which allows a secondary market to price an unexercised key on its remaining rights. Staked keys cannot be transferred until they are unstaked.

04 Staking

Keys may be locked in the staking contract to earn \$KEYS from a fixed pool of 150,000,000, emitted at 100,000 per day for approximately four years. Rewards accrue per second and may be claimed at any time. There is no lock-up period and no penalty for unstaking.

4.1 Weight

A wallet's share of each day's emission equals its weight over the total weight staked across the network. Weight is the square root of the sum of the class multipliers a wallet has staked, which damps concentration: a hundred keys earn roughly ten times what one key earns, rather than a hundred times.

```
rawWeight =  $\sum$  multiplier(key)
walletWeight =  $\sqrt{\text{rawWeight}}$ 
dailyYield = 100,000  $\times$  walletWeight  $\div$  networkWeight

// worked example – one Extinct (12.0 $\times$ ) and one Rare (2.5 $\times$ )
rawWeight = 14.5  $\rightarrow$  walletWeight = 3.81
```

Risk. The emission pool is fixed. As more keys are staked, each key's share of the daily emission falls. Yield is not fixed, is not guaranteed, and ends when the pool is exhausted. Nothing is minted beyond the 150,000,000 allocated.

05 The token

5.1 Supply and allocation

\$KEYS has a fixed supply of 1,000,000,000. There is no mint function beyond deployment, no inflation and no discretionary issuance.

ALLOCATION	SHARE	TOKENS	RELEASE
Mint allowances	50%	500,000,000	Halving epochs; converges, never exceeded
Liquidity	20%	200,000,000	Seeded at deployment against 2 ETH
Staking	15%	150,000,000	100,000 per day, $\approx$ 4 years
Treasury	10%	100,000,000	Development, audits, operations
Team	5%	50,000,000	Vested over 12 months, publicly verifiable
Total	100%	1,000,000,000	

5.2 Liquidity and the price relationship

The \$KEYS/ETH pool on Uniswap v4 is seeded with 2 ETH against 200,000,000 \$KEYS, which sets the opening pool price equal to the strike. Sixty percent of the ETH from every mint is routed into that pool by the contract itself — this is enforced in code, not promised in a document.

The consequence is structural: as ETH accumulates in the pool while the strike stays fixed, the pool price and the strike diverge. Allowances minted earlier are therefore exercised against a deeper pool than the one that existed when they were issued. This is the mechanism that gives an allowance value over time, and it is also the mechanism that fails if minting does not occur — a point stated plainly in Risks.

ETH PROCEEDS	SHARE	USE
Liquidity	60%	Routed on-chain into the \$KEYS/ETH pool
Treasury	25%	Audits, infrastructure, development
Operations	15%	Ongoing costs

06 Parameters

Every configurable value is bounded in the contract. No operator action can move a parameter outside its published range, and any change within range is emitted as an event.

PARAMETER	VALUE	BOUND
Total supply	1,000,000,000	Immutable
Strike rate	100,000,000 / ETH	Immutable
Epoch size	2,500 mints	Immutable
Mint base price	0.005 ETH	Immutable
Price floor	0.002 ETH	Immutable
Price ceiling	0.050 ETH	Immutable
Target mint rate	500 / day	250–1,000
Daily staking emission	100,000	50,000–100,000
Max mints per transaction	10	1–10
ETH to liquidity	60%	≥ 50%

07 Security

- **Randomness.** Class selection uses a seed that is unavailable at the time of payment, making pre-simulation and selective settlement impossible.
- **Allowance accounting.** Allowances are stored per token id, decremented on claim, and follow the token on transfer. A key cannot be drained and then sold as unexercised.
- **Reentrancy.** Claim, stake, unstake and mint paths follow checks-effects-interactions and are guarded.
- **Bounded authority.** There is no function that can mint tokens beyond the fixed supply, alter the strike, change published odds, or seize user assets.
- **Audit.** Contracts will undergo independent review before mainnet deployment. Until an audit report is published, the contracts should be treated as unaudited.

08 Roadmap

PHASE	SCOPE
I — Ignition	\$KEYS deployed on Robinhood Chain; pool seeded on Uniswap v4; mint, allowance and staking contracts audited and published; epoch 1 opens.
II — The machine	Demand-following price live; allowances claimable; staking open; liquidity routing running on-chain; full parameter and outcome transparency.
III — Depth	Secondary market for keys with their attached allowances; governance over the bounded parameters; further distribution mechanics.

09 Risks

- **Total loss.** \$KEYS may lose all value. Keys may become worthless.
- **Unfavourable draws.** Sixty percent of mints are Common. An allowance may be worth less than the mint price paid.
- **Underwater allowances.** If the pool price falls below the strike, an allowance confers no economic benefit. It does not expire, but it may never become useful.
- **Thin liquidity.** The pool opens with 2 ETH. Slippage may be severe and exit may be difficult. The liquidity mechanism depends on continued minting; if minting stops, the pool does not deepen.
- **Emission dilution.** Staking yield falls as more keys are staked and ends when the pool is exhausted.
- **Experimental software.** Contracts may contain defects. Until an audit is published, treat them as unaudited.
- **Regulatory and jurisdictional.** Availability, legality and tax treatment vary. Participants are responsible for their own compliance.
- **Randomized distribution.** The mechanism involves a paid random outcome, which is treated differently across jurisdictions and may be restricted where you live.

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