



MON · MON · MONSTER

The Sovereign Whitepaper

Hyper-Competitive On-Chain PvP · \$MONSTR

PHASE 7.0 · MONAD · CHAIN ID 10143

VERSION 7.0 – JUNE 2026



1. Executive Summary & Ethos

Mon Mon Monster is a hyper-competitive, server-authoritative Web3 monster battler rendered as a translucent 1990s handheld console over an animated cyberpunk circuitry backdrop. It pairs tactical 1v1 combat with a real-economy loop built on a single, non-negotiable principle: **reward the players, eliminate team extraction**. Every economic lever in this document is enforced by code and the chain — not by promise.

The platform is authoritative end to end: all combat math runs backend-side from a hidden, HMAC-derived seed, so client memory-injection or speed-hacking cannot alter an outcome. Paid results are signed with EIP-712, so payouts are trustless and any party may relay them on-chain. Rarity is the on-chain VRF roll; supply is a hard-capped one-billion flat cap with no mint authority left after genesis.

This whitepaper documents the live system: the dual-flow token engine, the Asymmetric Concentrated POL grid, the VIP holder grid, the cryptographic reward pools, the deterministic combat + replay architecture, and the deflationary, immutability-first governance roadmap.



Orb hatch — VRF rarity reveal

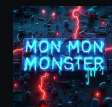
ORBS = MONSTERS

Throughout this paper, **an Orb is a monster**. You **hatch** an Orb to mint your monster as an ERC-721 NFT — the token id is the creature. Its hidden combat rolls, rarity, lifetime + PvP win record and evolution stage all travel with that Orb's on-chain identity, wherever it is battled, traded or evolved.

THE ANTI-EXTRACTION THESIS

Item store — 80% returns to players (40% Rolling Jackpot + 40% Weekly Leaderboard); 20% treasury.

Battle escrow — 90% of every pot to the match winner; the 10% protocol fee is **half-burned** (deflationary), half to treasury.



2. Hatching Orbs — Your Monster’s Genesis

Your journey begins by **hatching an Orb** — minting your monster on-chain (an Orb is a monster). For a flat **\$5.00 USDC**, `Orb_Mint` requests verifiable randomness and returns a brand-new ERC-721, with our \$0.05 internal fee absorbed cleanly from within the payment to keep player checkout completely frictionless. Every creature’s rarity, combat rolls and stamina pool are sealed by VRF at the moment of birth.

THE MINT ENGINE

VRF RARITY ROLL

Chainlink VRF rolls rarity to parts-per-million — Common 84.00% · Rare 14.99% · Ultra-Rare 1.00% · God-Tier 0.01%. Rarer Orbs strike harder, up to a $\times 1.20$ damage multiplier.

ANTI-WHALE CAP

Each wallet may mint at most **10 Orbs per UTC day** — keeping genesis supply organic, fair and bot-resistant. (Top it back up with an Orb Regen from the shop.)

HIDDEN ROLLS

Attack & Power rolls (1-5) and a 100-300 max-stamina pool are set at mint and stay secret — revealed to you alone, never to an opponent.

2.1. The 10 Founding Bloodlines

Every Orb belongs to one of **10 founding bloodlines** — each a three-stage line from a base form, through a mid evolution, to an apex “Mega”: **30 unique creatures** in all, across the four rarity tiers — charted in full on the page that follows.

2.2. Evolution & The Discovery Mystery

A monster **evolves by fighting**: **Tier 2** unlocks at 20 wins (or 100 total battles), doubling HP and damage; the elite **Tier-3 “Mega”** bracket unlocks at 50 paid-wager victories. But the higher forms are a **collective secret**.

SEALED LINEAGES — A LIVING DISCOVERY

FIRST-EVOLUTION REVEAL

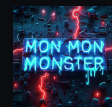
A line’s 2nd and 3rd evolution art is masked behind a glowing question mark — for **everyone** — until the first player anywhere evolves that line to that stage. That pioneer unlocks the sprite globally, turning the Dex into a living, community-driven reveal.

GOD-TIER · CLASSIFIED

The God-Tier bloodline — a 1-in-10,000 roll — is concealed entirely: its name, element, damage multiplier and every stage redacted. The apex of \$MONSTR stays a mystery until one is found in the wild.



The Mon Mon Evolution Chart — all 10 founding lines × 3 stages, grouped by rarity. Locked evolutions show a sealed glyph until first-evolution discovery; the God-Tier line is fully classified.



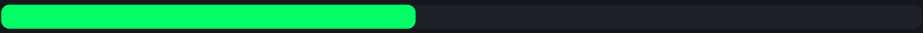
3. Tokenomics — The Zero-Extraction, Infinite Flywheel

\$MONSTR is a hard-capped ERC-20 framework of exactly **1,000,000,000** tokens. The entire supply is minted at genesis, and the mint authority is **permanently burned** post-initialization — guaranteeing zero future dilution.

Instead of predatory tokenomics that leak value to passive speculators, the \$MONSTR distribution is engineered for pure internal velocity. Every single token in circulation is built to feed the active player ecosystem — **100% to the players, 0% extraction.**

ALLOCATION MATRIX // 1,000,000,000 \$MONSTR // 100% TO THE ECOSYSTEM

45% **Orb Mint Vault** 450,000,000 \$MONSTR



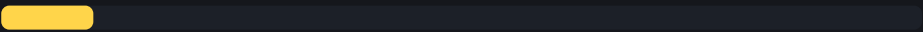
Dynamically backs the flat \$5.00 entry engine — every mint absorbs supply directly off the market, forcing continuous DEX buy pressure and locking mints in as buy-side liquidity.

35% **Gameplay Rewards Pool** 350,000,000 \$MONSTR



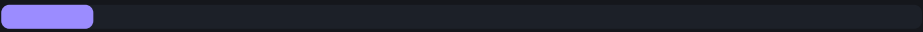
The permanent engine fueling play-to-earn emissions and hydrating the high-stakes weekly leaderboard payouts for competitive grinders.

10% **Decentralized Rolling Jackpot** 100,000,000 \$MONSTR

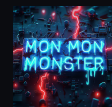


A dedicated, contract-automated vault built to drop massive random rewards during casual play and global PVE world-boss events.

10% **Team & Ecosystem War Chest** 100,000,000 \$MONSTR



Custodied securely behind a Gnosis Safe multi-sig — continuous infrastructure costs and future game expansions.



THE ZERO-EXTRACTION FLYWHEEL

When a player mints an egg for **\$5.00 USDC**, the value is captured entirely by the liquidity pool and the community — the team never touches it, and outside speculators cannot drain it.

01 USDC STAYS LOCKED

The \$5.00 stays inside the DEX pool as permanent, un-extractable **Protocol-Owned Liquidity** that continually hardens the price floor — never routed to team wallets.

02 TOKENS HIT THE VAULTS

The contract instantly routes the purchased \$MONSTR straight into the **Weekly Leaderboard Pool (35%)** and the **Rolling Jackpot Vault (10%)**.

03 NOBODY CAN DRAIN IT

Value is captured by the pool; the tokens flow instantly back to active grinders and winners. A flawless, community-first fly-wheel.

3.1. Asymmetric Concentrated Protocol-Owned Liquidity (POL)

To maximize capital efficiency on the Monad network, the protocol entirely skips outdated v2 liquidity models that scatter funds thinly across infinite price ranges. Instead it deploys an **Asymmetric Concentrated Buy/Sell Grid** via v3 automated market makers — sophisticated by design, with launch configurations kept off-paper so snipers and MEV bots can't pre-compute the pool.

ASYMMETRIC CONCENTRATED POL BUY/SELL GRID

▶ THE CONCENTRATED BUY FLOOR

Stablecoin / gas assets are deployed **single-sided** into a hyper-dense, narrow tick bracket immediately below the listing peg — an impenetrable, contract-defended wall of buying depth that shields the community from predatory short-sellers.

▶ THE SCALING SELL LADDER

A targeted tranche of the ecosystem reserve is seeded **single-sided** above the launch peg. As players market-buy \$MONSTR to load their inventories, the AMM automatically absorbs the incoming cash.

The Result: 100% of all player-entry capital stays locked inside the DEX pool as permanent, un-extractable POL — the game mechanics mathematically force the price floor to deepen and climb as volume increases.

4. Shop Dynamics — The VIP Power Grid

The item shop is denominated in \$MONSTR and recycles 80% of all spend straight back to players. Layered on top is the **VIP Power Grid** — a holder-incentive system keyed purely to a wallet’s live \$MONSTR balance, rewarding holding with **no staking and no token locking**.



The VIP Power Grid Controller — three Radioactive Power Cores light up by holding tier.

RADIOACTIVE POWER CORES

Three cores energise by live balance, each with escalating canvas glow:

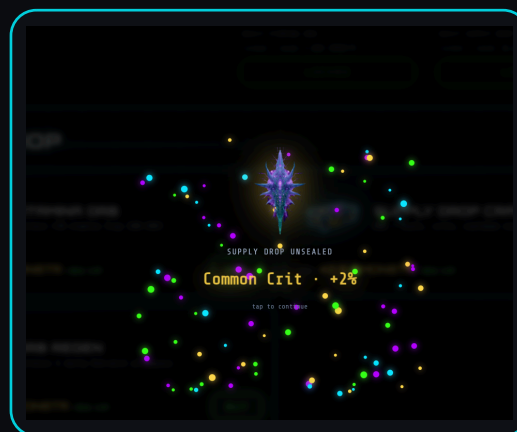
- **Tier 1** ($\geq 1,000$ \$MONSTR) — 1 core · slow neon-green pulse
- **Tier 2** ($\geq 5,000$ \$MONSTR) — 2 cores · high-intensity glow
- **Tier 3** ($\geq 10,000$ \$MONSTR) — 3 cores · radioactive swell

PERKS & DAILY CLAIM EPOCH

- **15% VIP discount** applied to the on-chain tokenCost of every shop item — the 40/40/20 split then runs on the discounted amount.
- **Daily Stamina Orb** claim (Tier 2+) and **daily Supply Drop** claim (Tier 3), each gated by a server-enforced 24-hour epoch.



Item catalog — strikethrough VIP pricing



Supply Drop — synthesized crate-roller reveal

4.1. The Arsenal — Items & Their Tactical Weight

Items are bought with \$MONSTR and deployed as a **free action** — one per match, so timing is everything. The flat-rate shop sells the essentials; the RNG Supply Drop is the gateway to the rarer combat power-ups that decide close fights.

SHOP CATALOG

STAMINA ORB · 25 \$MONSTR

Restores **+50** stamina (cap 100–300). Stamina gates every queue entry at 50 / match — no orbs, no battles. The lifeblood that keeps you in the arena.

SUPPLY DROP CRATE · 50 \$MONSTR

An authoritative, server-rolled loot box — your gateway to every combat consumable below (75% Common · 20% Rare · 5% Ultra).

ORB REGEN · 250 \$MONSTR

Restores a daily Orb-mint allowance, so the most active minters can keep hatching past the anti-bot daily cap.

COMBAT CONSUMABLES // ONE FREE ACTION PER MATCH

HEAL · C/R/U

Restore **+10%** / **+30%** / **+50%** of Max HP. Clutch survival — swing a losing HP race back in your favour the instant you're cornered.

CRIT · C/R/U

+2% / **+3%** / **+5%** crit chance for the rest of the match. Stack the edge, then unload the Major for a potential one-shot finisher.

COOLDOWN RESET

Instantly re-arms the Major finisher. Burst tempo — chain two heavy hits back-to-back the moment a window cracks open.

EMP SHIELD

Halves the next **landed** hit (a whiff never wastes it). Pure defensive timing — neutralise an incoming Major before it connects.



5. The Battle Arena

At its heart, Mon Mon Monster is a 1v1 tactical battler — and you can start fighting **and earning** the moment your first Orb hatches. Matchmaking is **blind** (you never scout an opponent's hidden rolls), and every hit, crit and point of damage is resolved server-side, so a match can never be sped up, memory-hacked or cheated.

5.1. Two Ways to Fight — Free-to-Earn or High-Stakes

New players, take note: **you never have to risk a cent to earn \$MONSTR**. The casual queue is free to enter — just bring stamina — and it is the whole game in miniature: fight, earn, climb, evolve.

CASUAL VS. PAID

CASUAL · FREE-TO-EARN

No USDC, ever. Jump in, fight, and earn \$MONSTR play-to-earn emissions simply for competing. Every win climbs the global leaderboard and pushes your Orb toward its Tier-2 and Tier-3 evolutions — the entire grind runs on free play alone.

PAID WAGER · HIGH-STAKES

Optional. Stake \$5.00 USDC into a \$10.00 pot; the winner takes \$9.00 (90%). Paid victories are what rank you for the **Weekly Pay Day**. Pure opt-in — for players who want real money on the line.

5.2. Never Queue Alone — The PVE Bot

You're never stranded in an empty lobby. If no human joins your casual queue within 30 seconds, a server-driven **PVE bot** takes the seat — mirroring your tier and stat cap for a fair fight — so you can always practice, grind and earn \$MONSTR. The bot plays autonomously: it picks its moves on its own clock and even deploys a survival item when it drops low. (Paid queues never fall back to bots — they pool for organic human liquidity, with a one-tap escrow pull if you'd rather not wait.)

5.3. The Turn Engine

Combat is turn-based — easy to learn, deep to master. Each turn you pick one move; once per match you may also deploy one item as a **free action** that doesn't cost your turn. A 45-second timer keeps the pace honest: idle too long and the server auto-resolves your turn, so no one can camp a lead.



MOVE MATRIX

LIGHT

70% accurate · no cooldown
· always available. Reliable chip damage to whittle them down.

MEDIUM

45% accurate · 1-turn
cooldown. A harder swing for a bigger bite when you can spare the tempo.

MAJOR

30% accurate · the finisher. Unlocks after 2 attack attempts, then charges on cooldown for huge damage.

Keep winning and your Orb **evolves**: **Tier 2** (20 wins, or 100 battles) doubles its HP and damage and unlocks its Power/crit potential; the elite **Tier-3 “Mega”** bracket unlocks at 50 paid-wager victories.

5.4. Trustless Replay & Audit

All combat math runs server-side only — every roll is $\text{HMAC-SHA256}(\text{seed}, \text{label})$ reduced to a float in $[0, 1)$, so a match is a pure function of its seed. That seed is secret during play and **revealed in match_end**: every settled match is persisted with its seed and a full turn transcript, and the public `/verify` view re-derives each turn’s hit/crit/damage to prove the result was never tampered with. Paid outcomes are additionally EIP-712 signed, so `Battle_Escrow.settleMatchSigned` can pay out trustlessly — any party may relay.

VERIFICATION — STRESS-TEST RESULTS

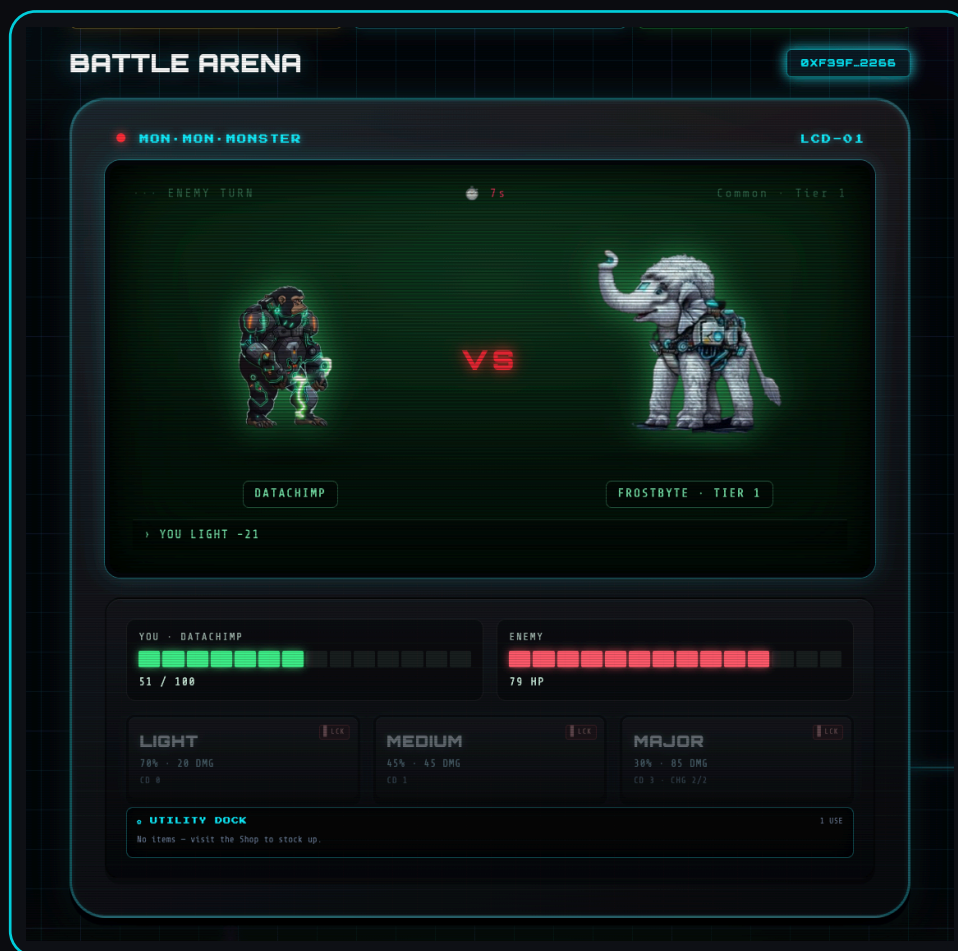
1,579

TURNS REPLAYED

Across two scaled concurrent battle stress runs, **1,579 turns** were re-derived from their seeds with **0 verification failures**. Determinism holds under load: every `turn` packet reconstructs exactly from `(seed, matchId, turnIndex)`. Anyone can audit any past match by replaying its revealed seed through `/verify` — no trust in the operator required.

6. The Visual Engine — Signature Moves & Synthesized Audio

Each of the 10 monster archetypes carries a unique signature move that persists through every evolution. On a landed hit the authoritative server tags the turn packet with the attacker's `signatureAttackKey`; both clients then fire the matching HTML5-canvas particle system and a browser-native Web Audio cue — with **zero external asset files**.



The battle console — canvas FX overlay, floating damage, and the 45s anti-camp turn timer.

6.1. The 10 Signature Particle Systems

GLACIER_CRUSH

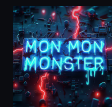
Heavy 15-frame horizontal screen-shake + 30 rising cyan triangle vectors (vy -5...-9) erupting from the defender's base.

DIGITAL_ENVENOM

Five jagged neon-purple lightning lines (`shadowBlur 15`) with floating `ERR_INFECT_glitch` text around the target.

OVERCLOCK_FURY

The attacker's block slices through the defender, trailing fading crimson square particles.



SEISMIC_SLYCE

Vertical camera shake + a bright-green pixel fissure tearing the baseline, throwing dark dirt particles.

VOLTAGE_DIVE

Neon-yellow electrical starburst projecting from the top-left corner down onto the target.

HYDRO_BURST

Thick expanding neon-blue beam that pushes the defender's sprite back during its 300ms lifespan.

PHANTOM_STRIDE

Two low-opacity holographic twin slashes striking from opposite sides simultaneously.

MAGMA_PINCER

Two molten-orange arcs snapping shut at centre, casting upward-drifting ember particles.

KINETIC_BREACH

A layered neon-blue hexagon vector shield accelerating into the target with a deep camera ripple.

MATRIX_BURST

Four concentric wireframe boxes rotating and imploding to 0 into downward green data-rain.

BROWSER-NATIVE 8-BIT SYNTHESIS

Every cue is generated live from Web Audio oscillators + gain envelopes — no files. `playHitSound(key)` carries 10 distinct sweeps (e.g. **Glacier Crush**: sawtooth 600 → 80 Hz; **Overclock Fury**: 1200 → 200 Hz in 0.12 s); `playMissSound()` is a soft triangle whoosh. Each particle decays by frame-time and dead particles are flushed every frame — memory-safe over arbitrarily long sessions.



7. The Sovereign Secondary Marketplace

Every Orb is a tradeable asset. The secondary marketplace is a fixed-price resale engine: any holder lists a minted Orb, any buyer purchases it — fully on-chain, non-custodial, and settled through a griefing-proof pull-payment pattern. Each card surfaces the monster’s hidden rolls plus its lifetime + PvP win record, so traders can value exactly what they’re buying.



The Mon Mon Marketplace — list, browse and buy Orbs across three currencies, with live rolls + win records on every card.

FIXED-PRICE RESALE ENGINE

TRI-CURRENCY

List and buy in native **MONAD**, **USDC**, or **\$MONSTR**. The two ERC-20s are owner-allowlisted; native MONAD is always accepted.

2.5% TREASURY FEE

A flat **2.5%** of every sale routes to the protocol treasury; the seller takes the remainder, with **fee + proceeds == price** exactly — no dust.

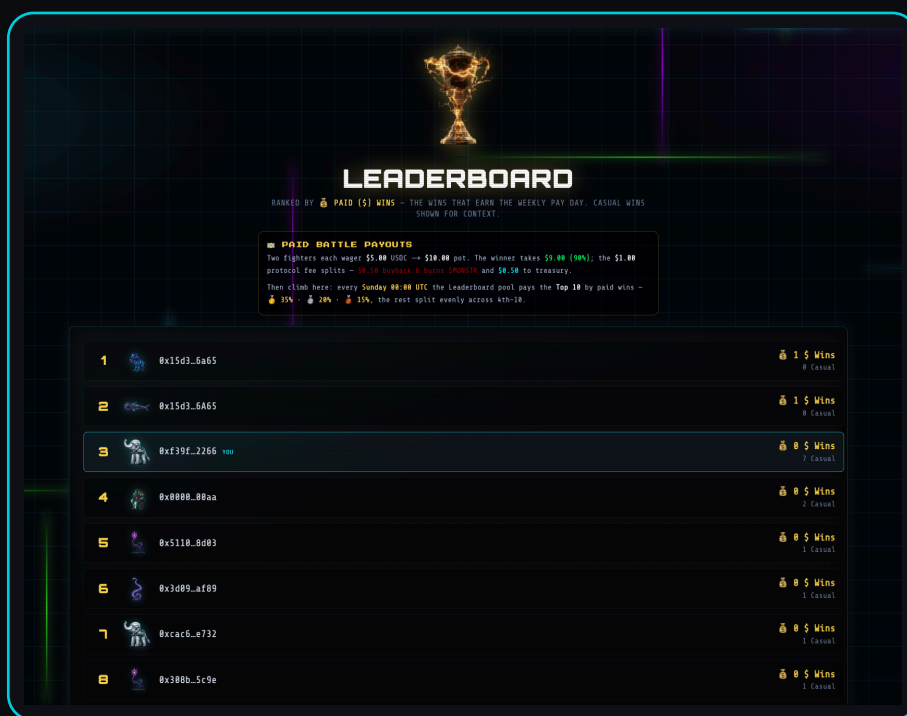
NON-CUSTODIAL

Approval-based listings + pull-payment settlement: the Orb stays in the seller’s wallet (still battle-usable) until it sells; proceeds are withdrawn on demand.

Listings are pure on-chain state — the backend index rebuilds from full chain history on every restart — and a buyer’s buy(tokenId, expectedCurrency, maxPrice) reverts if the price or currency shifts underneath them, so slippage protection is baked directly into the settlement path.

8. The Weekly Pay Day & Competitive Leaderboard Grid

Competition pays — literally. Every paid (\$5 USDC) wager victory ranks a wallet on the global Top-50 board, and every Sunday at 00:00 UTC the Leaderboard Vault is disbursed across the Top 10 grinders in a single automated, drift-free payout.



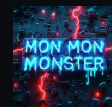
The competitive leaderboard — Top-50 by paid (\$) wins; the lightning trophy crowns the reigning champion driving the weekly Pay Day.

WEEKLY PAY DAY — TOP 10 DISBURSEMENT

Rank 1	35%
Rank 2	20%
Rank 3	15%
Ranks 4-10	30% split

The pool pays the Top 10 wallets by paid wins every Sunday 00:00 UTC. Ranks 1-3 take **35% / 20% / 15%** the remaining **30%** splits evenly across ranks 4-10 ($\approx 4.28\%$ each). The schedule is self-correcting — it re-arms to the next Sunday boundary after every fire, so it never drifts across long uptimes.

Zero-dust remainder protection: ranks 4-10 divide 3,000 bps by 7 under integer math, and the 4-bps rounding remainder is **automatically absorbed by Rank 1** — so the entire pool is distributed to the last wei, never stranded in the vault.



9. Deflationary Mechanics & Immutability-First Governance

9.1. The \$0.50 Flat Buyback-and-Burn

Every settled paid match carries a deterministic, **flat** burn — not a soft percentage estimate, but a fixed, on-chain-enforced quantity. Two fighters escrow \$5.00 USDC each into a \$10.00 pot; `Battle_Escrow._settle` pays the winner \$9.00 and splits the \$1.00 protocol fee into two equal halves: a flat **\$0.50 buyback-and-burn** and \$0.50 to treasury. The burn leg swaps that \$0.50 USDC → \$MONSTR through the on-chain `IDexRouter` and sends the output straight to the canonical dead address `0x0000...dEaD` — permanent, irreversible supply removal.

\$0.50 FLAT BURN — HYPER-DEFLATIONARY VELOCITY

Per-match pot	\$10.00
Winner payout	\$9.00 (90%)
Protocol fee	\$1.00 (10%)
<hr/>	
→ Flat BURN to dead	\$0.50
→ Treasury	\$0.50

A **flat** \$0.50 is the deterministic floor of value accrual on **every single settled wager** — `BURN_PORTION = 500,000` micro-USDC, hard-coded in the contract and proven by the **65/65** Foundry suite (`test_SettleByResolver_SplitsCorrectly`). Because it is a fixed micro-USDC quantity rather than a percentage, the burn does not decay as the token appreciates — at higher \$MONSTR prices the same \$0.50 simply buys back and destroys a **larger share of circulating value**, accelerating deflationary velocity precisely when holders benefit most. No team action, no discretion: the destruction is enforced by the settlement path itself.

9.2. Immutability & Secure Scaling

REVOKE THE MINT

Immediately post-genesis the \$MONSTR ERC-20's mint authority is **revoked**: `cap()` — `totalSupply() == 0` and no minter role remains. This guarantees **zero future dilution** — the one-billion cap is mathematically final.

GNOSIS SAFE MULTI-SIG

The game/shop loops and reward vaults are transferred to a **Gnosis Safe multi-sig**, so the protocol can scale and patch the off-chain game securely — without bricking future upgrades or handing any single key unilateral control.

BUILT TO REWARD PLAYERS — NOT TO EXTRACT FROM THEM.

\$MONSTR // MON · MON · MONSTER