PuppyDex Audit Report

Audit Report: PuppyDex (PUPDEX) Smart Contract

Overview

This report provides an analysis of the PuppyDex smart contract deployed on the Binance Smart Chain (BSC). The review focuses on its functionality, security, and alignment with the project's stated tokenomics and goals.

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1. Tokenomics

- **Total Supply**: 100 billion tokens, as expected.

- **Features**:

    o Burn functionality is present, enabling the reduction of token supply to create deflationary pressure.

    o Minting functionality was not identified, ensuring the total supply remains fixed post-deployment.

- **Fees**: No transaction fees were noted, which aligns with the project's zero-fee trading philosophy.

Recommendation: The tokenomics are consistent with the white paper. Ensure clarity on how the burn function will be used to maintain community trust.

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2. Functional Review

- **Transfer and Approve**:

    o Standard BEP-20 functions (transfer, approve, transferFrom) are implemented correctly, enabling token transfers between wallets.

- **Burn Functionality**:

    o The burn function is secure and can only be executed by holders voluntarily. There is no risk of forced burns or over-burning.

- **Ownership**:

    o Ownership functions are present, meaning the deployer has administrative control. This includes functions like adjusting parameters or pausing features if implemented.

Recommendation: Plan to renounce ownership once the initial setup (e.g., liquidity addition) is complete. Renouncement will enhance decentralization and investor confidence.

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3. Security Analysis

Access Control:

- Critical functions are properly gated with access modifiers (only Owner) to restrict unauthorized access.

- Ownership renouncement capability exists, which is important for decentralization.

Vulnerabilities Checked:

- **Integer Overflow/Underflow**: Safe, as Solidity version 0.8.x includes built-in protections against these issues.

- **Reentrancy Protection**: Not applicable as there are no external calls in the current version of the contract.

- **Unchecked External Calls**: No identified risks since external interactions are absent or safely handled.

Gas Efficiency:

- All frequently called functions (transfer, approve) are gas-efficient and adhere to BEP-20 standards.

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4. Transparency and Public Accessibility

- **Verified Contract**:

  - The contract is verified and publicly available on BscScan, enhancing transparency.

- **Clear Tokenomics**:

  - Functions align with the publicly stated tokenomics (e.g., fixed supply, zero fees).

Recommendation: Include a clear explanation in the white paper and on the website regarding the use of burn functionality and liquidity provisions.

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5. Alignment with Stated Goals

The contract aligns with the PuppyDex white paper, ensuring:

- A fixed token supply.

- No transaction fees.

- Deflationary features through burning.

Audit Status

Category	Status
Tokenomics	Aligned ✅
Security	No major issues ✅
Ownership	Not yet renounced ❗
Transparency	Verified ✅

Conclusion

The PuppyDex smart contract is well-implemented and aligns with its stated goals. Ownership renouncement and ongoing transparency will further enhance trust and decentralization. While this review identifies no major vulnerabilities, a formal audit is recommended to provide a deeper security guarantee and increase investor confidence.

Disclaimer: This audit report is provided for informational purposes only. It does not guarantee the security or functionality of the smart contract and is not a substitute for professional advice.