



Building the Futuristic **Blockchain Ecosystem**

SECURITY AUDIT REPORT

SonicSwap Factory

TOKEN OVERVIEW

Risk Findings

| Severity | Found |
|-----------------|-------|
| ● High | 0 |
| ● Medium | 1 |
| ● Low | 3 |
| ● Informational | 0 |

Centralization Risks

| Owner Privileges | Description |
|-------------------------------------|--------------|
| ● Can Owner Set Taxes >25% ? | Not Detected |
| ● Owner needs to enable trading ? | Not Detected |
| ● Can Owner Disable Trades ? | Not Detected |
| ● Can Owner Mint ? | Not Detected |
| ● Can Owner Blacklist ? | Not Detected |
| ● Can Owner set Max Wallet amount ? | Not Detected |
| ● Can Owner Set Max TX amount ? | Not Detected |

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OVERVIEW

The Expelee team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analysed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks. According to the smart contract audit:

| | |
|---------------------|-----------------------------|
| Audit Result | Medium Risk Detected |
| Audit Date | 13 April 2025 |

CONTRACT DETAILS

Contract Address:

0x0569F2A6B281b139bC164851cf86E4a792ca6e81

Contract Name: SonicxSwapFactory

Blockchain: Sonic

Contract Type: ERC-20

Contract Creator:

0xa4c576e2373282e94ae08ee4212f552d9555b986

Compiler Version: v0.5.16+commit.9c3226ce

AUDIT METHODOLOGY

Audit Details

Our comprehensive audit report provides a full overview of the audited system's architecture, smart contract codebase, and details on any vulnerabilities found within the system.

Audit Goals

The audit goal is to ensure that the project is built to protect investors and users, preventing potentially catastrophic vulnerabilities after launch, that lead to scams and rugpulls.

Code Quality

Our analysis includes both automatic tests and manual code analysis for the following aspects:

- Exploits
- Back-doors
- Vulnerability
- Accuracy
- Readability

Tools

- Manual Review: The code has undergone a line-by-line review by the Ace team.
- BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.
- Slither: The code has undergone static analysis using Slither.

VULNERABILITY CHECKS

| | |
|--|--------|
| Design Logic | Passed |
| Compiler warnings | Passed |
| Private user data leaks | Passed |
| Timestamps dependence | Passed |
| Integer overflow and underflow | Passed |
| Race conditions & reentrancy. Cross-function race conditions | Passed |
| Possible delays in data delivery | Passed |
| Oracle calls | Passed |
| Front Running | Passed |
| DoS with Revert | Passed |
| DoS with block gas limit | Passed |
| Methods execution permissions | Passed |
| Economy model | Passed |
| Impact of the exchange rate on the logic | Passed |
| Malicious event log | Passed |
| Scoping and declarations | Passed |
| Uninitialized storage pointers | Passed |
| Arithmetic accuracy | Passed |
| Cross-function race conditions | Passed |
| Safe Zeppelin module | Passed |

RISK CLASSIFICATION

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

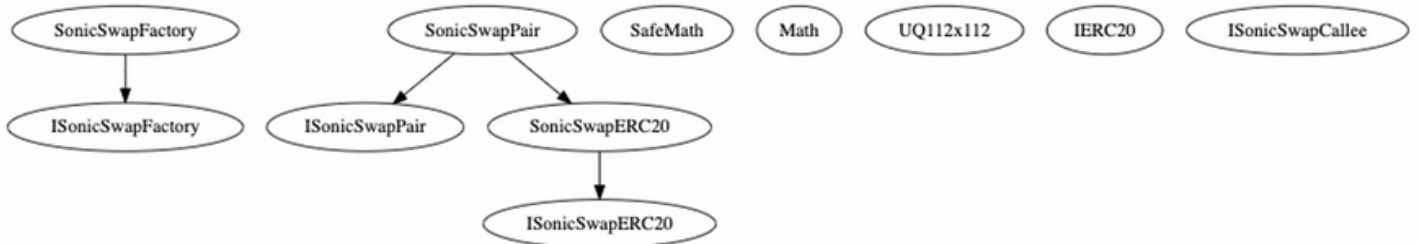
Low Risk

Issues on this level are minor details and warnings that can remain unfixed.

Informational

Issues on this level are minor details and warnings that can remain unfixed.

INHERITANCE TREE



POINTS TO NOTE

- The feeToSetter can change the fee receiver address
- The feeToSetter can transfer the fee-setter privilege

MANUAL REVIEW

Severity Criteria

Expelee assesses the severity of disclosed vulnerabilities according to methodology based on OWASP standards.

Vulnerabilities are divided into three primary risk categories:

High

Medium

Low

High-level considerations for vulnerabilities span the following key areas when conducting assessments:

- Malicious input handling
- Escalation of privileges
- Arithmetic
- Gas use

| Overall Risk Severity | | | | |
|-----------------------|------------|--------|--------|----------|
| Impact | HIGH | Medium | High | Critical |
| | MEDIUM | Low | Medium | High |
| | LOW | Note | Low | Medium |
| | | LOW | MEDIUM | HIGH |
| | Likelihood | | | |

MEDIUM RISK FINDING

Centralization – Centralized Control of Fee Parameters

Severity: **Medium**

Overview:

The protocol fee mechanism is controlled by a single address (`feeToSetter`) with no time-delay or multi-signature requirements. If this address is compromised, an attacker could immediately redirect protocol fees to an address they control, potentially extracting significant value from the protocol.

```
function setFeeTo(address _feeTo) external { require(msg.sender == feeToSetter, "SonicxSwap: FORBIDDEN"); feeTo = _feeTo; } function setFeeToSetter(address _feeToSetter) external { require(msg.sender == feeToSetter, "SonicxSwap: FORBIDDEN"); feeToSetter = _feeToSetter; }
```

Recommendation: Consider implementing a timelock mechanism for fee changes and requiring multi-signature authorization to reduce centralization risk and improve governance security.

LOW RISK FINDING

Centralization – Missing Events for Critical Parameter Changes

Severity: **Low**

Suggestion:

Emit events when changing critical parameters, making it impossible to track changes off-chain.

```
function setFeeTo(address _feeTo) external {  
    require(msg.sender == feeToSetter, "SonicxSwap: FORBIDDEN");  
    feeTo = _feeTo;  
}  
function setFeeToSetter(address _feeToSetter) external {  
    require(msg.sender == feeToSetter, "SonicxSwap: FORBIDDEN");  
    feeToSetter = _feeTo
```

Suggestion: Add event emissions for all protocol parameter changes to improve transparency and enable proper tracking of administrative actions

LOW RISK FINDING

Centralization – Missing Zero-Address Validation

Severity: Low

Description: There's no check preventing the feeToSetter address from being set to address(0). Setting feeToSetter to address(0) would permanently disable the ability to change fee parameters, as no address would have the authority to call

```
setFeeTo or setFeeToSetter again. function setFeeToSetter(address _feeToSetter)
external { require(msg.sender == feeToSetter, "SonicxSwap: FORBIDDEN");
feeToSetter = _feeToSetter; }
```

Recommendation: Add a require statement to prevent setting feeToSetter to the zero address, protecting against accidental protocol parameter lockout.

LOW RISK FINDING

pragma solidity = 0.5.16;

Severity: Low

Status: Open

Description:

The contract uses Solidity 0.5.16, which lacks important safety features available in newer versions. Solidity 0.8.x provides built-in overflow/underflow protection and custom error types that could improve contract security and gas efficiency without relying on external libraries.

```
pragma solidity =0.5.16;
```

Recommendation: Update to a more recent Solidity version (0.8.x) to benefit from built-in safety features and optimizations, reducing reliance on SafeMath and improving overall code quality

ABOUT EXPELEE

Expelee is a product-based aspirational Web3 start-up. Coping up with numerous solutions for blockchain security and constructing a Web3 ecosystem from deal making platform to developer hosting open platform, while also developing our own commercial and sustainable blockchain.

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Under no circumstances did Expelee receive a payment to manipulate those results or change the awarding badge that we will be adding in our website. Alway do your own research and protect yourselves from scams.

This document should not be presented as a reason to buy or not buy any particular token. The Expelee team disclaims any liability for the resulting losses.

The logo for Expelee, featuring the word "expelee" in a stylized font. The "ex" is in white, and "pelee" is in orange. The letters are bold and modern.

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