

Smart Contract Security Audit

AUDIT RATE TECH

for

Happy Rabbit Inu Year



Ownership:

- *Owned*

Set fees:

- *Can set fees up to 20%*

Mint functions:

- *No found*

Max tx amount:

- *Can set > 0,1%*

Stop or pause trading:

- *Cannot set*

Blacklist

- *Can blacklist*

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Audit details:

Audited project: Happy Rabbit Inu Year

Total supply: 10,000,000,000

Token ticker: HRY

Decimals: 4

Contract address: 0xC27629fB38a0021e9aAc3C6f107b9Baec0E576eb

Languages: Solidity (Smart contract)

Platforms and Tools: Remix IDE, Truffle, Truffle Team, Ganache, Solhint, VScode, Mythril,

Contract Library

Compiler Version: v0.8.16+commit.07a7930e

Optimization Enabled: Yes with 200 runs

Contract Deployer Address: 0x0b94DE26b0C8B7f422D623a008863D7aF8321253

Blockchain: Binance Smart Chain

Project website: <http://www.happyrabbitinuyear.com/>

The audit items and results:

(Other unknown security vulnerabilities are not included in the audit responsibility scope)

Audit Result: Passed

Audit Date: August 20, 2022

Audit Team: AUDIT RATE TECH

<https://www.auditrate.tech/>

Introduction

This Audit Report mainly focuses on the overall security of Happy Rabbit Inu Year Smart Contract. With this report, we have tried to ensure the reliability and correctness of their smart contract by complete and rigorous assessment of their system's architecture and the smart contract codebase.

Auditing Approach and Methodologies applied

The AUDIT RATE TECH team has performed rigorous testing of the project starting with analyzing the code design patterns in which we reviewed the smart contract architecture to ensure it is structured and safe use of third-party smart contracts and libraries.

Our team then performed a formal line by line inspection of the Smart Contract to find any potential issue like race conditions, transaction-ordering dependence, timestamp dependence, and denial of service attacks.

In the Unit testing Phase, we coded/conducted custom unit tests written for each function in the contract to verify that each function works as expected.

In Automated Testing, we tested the Smart Contract with our in-house developed tools to identify vulnerabilities and security flaws.

The code was tested in collaboration of our multiple team members and this included -

- Testing the functionality of the Smart Contract to determine proper logic has been followed throughout the whole process.
- Analyzing the complexity of the code in depth and detailed, manual review of the code, lineby-line.
- Deploying the code on testnet using multiple clients to run live tests.
- Analyzing failure preparations to check how the Smart Contract performs in case of any bugs and vulnerabilities.
- Checking whether all the libraries used in the code are on the latest version.
- Analyzing the security of the on-chain data.

Audit Goals

The focus of the audit was to verify that the Smart Contract System is secure, resilient and working according to the specifications. The audit activities can be grouped in the following three categories:

Security

Identifying security related issues within each contract and the system of contract.

Sound Architecture

Evaluation of the architecture of this system through the lens of established smart contract best practices and general software best practices.

Code Correctness and Quality

A full review of the contract source code. The primary areas of focus include:

- Accuracy
- Readability
- Sections of code with high complexity
- Quantity and quality of test coverage

Issue Categories

Every issue in this report was assigned a severity level from the following:

High level severity issues

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

Medium level severity issues

Issues on this level could potentially bring problems and should eventually be fixed.

Low level severity issues

Issues on this level are minor details and warnings that can remain unfixed but would be better fixed at some point in the future.

Manual Audit:

For this section the code was tested/read line by line by our developers. We also used Remix IDE's JavaScript VM and Kovan networks to test the contract functionality.

Automated Audit

Remix Compiler Warnings

It throws warnings by Solidity's compiler. If it encounters any errors the contract cannot be compiled and deployed. No issues found.

Issues Checking Status

SWC ID	Description	Checking status
SWC-100	Function Default Visibility	Passed
SWC-101	Integer Overflow and Underflow	Passed
SWC-102	Outdated Compiler Version	Passed
SWC-103	Floating Pragma	Passed
SWC-104	Unchecked Call Return Value	Passed
SWC-105	Unprotected Ether Withdrawal	Passed
SWC-106	Unprotected SELFDESTRUCT Instruction	Passed
SWC-107	Reentrancy	Passed
SWC-108	State Variable Default Visibility	Passed
SWC-109	Uninitialized Storage Pointer	Passed
SWC-110	Assert Violation	Passed
SWC-111	Use of Deprecated Solidity Functions	Passed
SWC-112	Delegatecall to Untrusted Callee	Passed
SWC-113	DoS with Failed Call	Passed
SWC-114	Transaction Order Dependence	Passed
SWC-115	Authorization through tx.origin	Passed
SWC-116	Block values as a proxy for time	Passed
SWC-117	Signature Malleability	Passed
SWC-118	Incorrect Constructor Name	Passed
SWC-119	Shadowing State Variables	Passed
SWC-120	Weak Sources of Randomness from Chain Attributes	Passed
SWC-121	Missing Protection against Signature Replay Attacks	Passed
SWC-122	Lack of Proper Signature Verification	Passed
SWC-123	Requirement Violation	Passed
SWC-124	Write to Arbitrary Storage Location	Passed
SWC-125	Incorrect Inheritance Order	Passed
SWC-126	Insufficient Gas Griefing	Passed
SWC-127	Arbitrary Jump with Function Type Variable	Passed
SWC-128	DoS With Block Gas Limit	Passed
SWC-129	Typographical Error	Passed
SWC-130	Right-To-Left-Override control character (U+202E)	Passed
SWC-131	Presence of unused variables	Passed
SWC-132	Unexpected Ether balance	Passed
SWC-133	Hash Collisions With Multiple Variable Length Arguments	Passed
SWC-134	Message call with hardcoded gas amount	Passed
SWC-135	Code With No Effects	Passed
SWC-136	Unencrypted Private Data On-Chain	Passed

Owner privileges

631 Contract_Options_01__Deflationary_Burn
665 Contract_Options_02__No_Fee_Wallet_Transfers
705 Contract_SetUp_01__Fees_on_Buy
736 Contract_SetUp_02__Fees_on_Sell
784 Contract_SetUp_03__Wallet_Limits
822 Contract_SetUp_04__Set_Wallets
859 Contract_SetUp_05__Update_Socials
890 Contract_SetUp_06__PreSale_Wallet
925 Launch_Settings_01__Blacklist_Bots
970 Launch_Settings_02__Set_Launch_Limits
1031 Launch_Settings_03__OpenTrade
1081 Maintenance_01__Remove_Contract_Fee
1171 Maintenance_02__Add_Liquidity_Pair
1197 Maintenance_03__Transfer_Ownership
1223 Maintenance_04__Renounce_Ownership
1251 Processing_01__Auto_Process
1258 Processing_02__Process_Now
1268 Processing_03__Update_Swap_Trigger_Count
1275 Processing_04__Remove_Random_Tokens
1298 Wallet_Settings_01__PreLaunch_Access
1308 Wallet_Settings_02__Exempt_From_Limits
1318 Wallet_Settings_03__Exclude_From_Fees

Top Token Holders

At the time of the audit

The top 3 holders collectively own 100.00% (10,000,000,000.00 Tokens) of Happy Rabbit Inu Year

Token Total Supply: 10,000,000,000.00 Token | Total Token Holders: 1

Happy Rabbit Inu Year Top 3 Token Holders

Source: BscScan.com



(A total of 10,000,000,000.00 tokens held by the top 3 accounts from the total supply of 10,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0x8f06d740ef7b2e5128485039d8bfc2d365b5291b	10,000,000,000	100.0000%

KYC/Doxx

At the time of the audit, there is no information about the conduct of KYC / Doxx

Conclusion

Owner can set fees up to 20% for buy and 20% for sell

// Set Buy Fees

```
function Contract_SetUp_01__Fees_on_Buy( uint256 BNB_on_BUY, uint256 Liquidity_on_BUY,
uint256 Burn_on_BUY, uint256 Tokens_on_BUY) external onlyOwner {
    _Fee__Buy_Contract = ContractFee;
    // Buyer protection: max fee can not be set over 20% (including the 1% contract fee if applicable)
    require (BNB_on_BUY + Liquidity_on_BUY + Burn_on_BUY + Tokens_on_BUY +
    _Fee__Buy_Contract <= 20, "E02");
    // Update fees
    _Fee__Buy_BNB    = BNB_on_BUY;
    _Fee__Buy_Liquidity = Liquidity_on_BUY;
    _Fee__Buy_Burn    = Burn_on_BUY;
    _Fee__Buy_Tokens  = Tokens_on_BUY;
    // Fees that will need to be processed during swap and liquify
    _SwapFeeTotal_Buy = _Fee__Buy_BNB + _Fee__Buy_Liquidity + _Fee__Buy_Contract;
    emit updated_Buy_fees( _Fee__Buy_BNB, _Fee__Buy_Liquidity, _Fee__Buy_Burn, _Fee__Buy_Tokens,
    _Fee__Buy_Contract);}
```

// Set Sell Fees

```
function Contract_SetUp_02__Fees_on_Sell( uint256 BNB_on_SELL, uint256 Liquidity_on_SELL,
uint256 Burn_on_SELL, uint256 Tokens_on_SELL) external onlyOwner {
    _Fee__Sell_Contract = ContractFee;
    // Buyer protection: max fee can not be set over 20% (including the 1% contract fee if applicable)
    require (BNB_on_SELL + Liquidity_on_SELL + Burn_on_SELL + Tokens_on_SELL +
    _Fee__Sell_Contract <= 20, "E03");
    // Update fees
    _Fee__Sell_BNB    = BNB_on_SELL;
    _Fee__Sell_Liquidity = Liquidity_on_SELL;
    _Fee__Sell_Burn    = Burn_on_SELL;
    _Fee__Sell_Tokens  = Tokens_on_SELL;
    // Fees that will need to be processed during swap and liquify
    _SwapFeeTotal_Sell = _Fee__Sell_BNB + _Fee__Sell_Liquidity + _Fee__Sell_Contract;
    emit updated_Sell_fees( _Fee__Sell_BNB, _Fee__Sell_Liquidity, _Fee__Sell_Burn, _Fee__Sell_Tokens,
    _Fee__Sell_Contract);}
```

No mint function found

Owner can set max token per transaction > 0,1% of total supply

```
function Contract_SetUp_03__Wallet_Limits(
    uint256 Max_Tokens_Per_Transaction,
    uint256 Max_Total_Tokens_Per_Wallet
) external onlyOwner {
    // Buyer protection - Limits must be set to greater than 0.1% of total supply
    require(Max_Tokens_Per_Transaction >= _tTotal / 1000 / 10**_decimals, "E04");
    require(Max_Total_Tokens_Per_Wallet >= _tTotal / 1000 / 10**_decimals, "E05");
    max_Tran = Max_Tokens_Per_Transaction * 10**_decimals;
    max_Hold = Max_Total_Tokens_Per_Wallet * 10**_decimals;
    emit updated_Wallet_Limits(max_Tran, max_Hold);}
```

Owner cannot pause trading

Owner can blacklist

```
function Launch_Settings_01__Blacklist_Bots(  
    address Wallet,  
    bool true_or_false  
) external onlyOwner {  
    // Buyer Protection - Blacklisting can only be done before launch  
    if (true_or_false){require(LaunchTime == 0, "E08");}  
    _isBlacklisted[Wallet] = true_or_false;}
```

Note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner. The analysis of the contract does not give complete security and includes only the analysis that is indicated in the report. We do not analyze locked tokens or LP tokens, the presence of KYC in other companies, and so on. Also, our audit is not a recommendation for investment. All responsibility for the loss of investment lies with you!