



Cyberscope

# Audit Report

## **Manta Ray**

September 2022

Type           BEP20

Network       BSC

Address       0xa98b7a3138ed616aa9ebb505afffbfb090f0056

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## Contract Review

|                         |                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contract Name</b>    | LiquidityGeneratorToken                                                                                                                               |
| <b>Compiler Version</b> | v0.8.4+commit.c7e474f2                                                                                                                                |
| <b>Optimization</b>     | 200 runs                                                                                                                                              |
| <b>Licence</b>          | MIT                                                                                                                                                   |
| <b>Explorer</b>         | <a href="https://bscscan.com/token/0xa98b7a3138ed616aa9ebb505afffbfb090f0056">https://bscscan.com/token/0xa98b7a3138ed616aa9ebb505afffbfb090f0056</a> |
| <b>Symbol</b>           | MREV                                                                                                                                                  |
| <b>Decimals</b>         | 9                                                                                                                                                     |
| <b>Total Supply</b>     | 250,000,000                                                                                                                                           |
| <b>Domain</b>           | <a href="https://www.mantaraydata.com">https://www.mantaraydata.com</a>                                                                               |

## Source Files

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| <b>Filename</b>     | <b>SHA256</b>                                                    |
| <b>contract.sol</b> | 69d66bbe11e8f0687c87de70a01b42f9fe6e6fdcd5e8d45002fc7b6dff31e378 |

## Audit Updates

|                      |                    |
|----------------------|--------------------|
| <b>Initial Audit</b> | 6th September 2022 |
| <b>Corrected</b>     |                    |

# Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

| Severity | Code | Description                        | Status |
|----------|------|------------------------------------|--------|
| ●        | ST   | Stops Transactions                 | Passed |
| ●        | OCTD | Transfers Contract's Tokens        | Passed |
| ●        | OTUT | Transfers User's Tokens            | Passed |
| ●        | ELFM | Exceeds Fees Limit                 | Passed |
| ●        | ULTW | Transfers Liquidity to Team Wallet | Passed |
| ●        | MT   | Mints Tokens                       | Passed |
| ●        | BT   | Burns Tokens                       | Passed |
| ●        | BC   | Blacklists Addresses               | Passed |

# Contract Diagnostics

● Critical   ● Medium   ● Minor / Informative

| Severity | Code | Description                                | Status     |
|----------|------|--------------------------------------------|------------|
| ●        | L01  | Public Function could be Declared External | Unresolved |
| ●        | L04  | Conformance to Solidity Naming Conventions | Unresolved |
| ●        | L07  | Missing Events Arithmetic                  | Unresolved |
| ●        | L08  | Tautology or Contradiction                 | Unresolved |
| ●        | L09  | Dead Code Elimination                      | Unresolved |

## L01 - Public Function could be Declared External

|                    |                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Criticality</b> | minor / informative                                                                                                  |
| <b>Location</b>    | contract.sol#L1123,1045,1187,1234,165,1093,1139,1049,1238,1261,1147,1084,1053,173,1075,1435,1159,1143,1110,1066,1057 |
| <b>Status</b>      | Unresolved                                                                                                           |

### Description

Public functions that are never called by the contract should be declared external to save gas.

```
decreaseAllowance
name
excludeFromReward
excludeFromFee
renounceOwnership
transferFrom
isExcludedFromReward
symbol
includeInFee
...
```

### Recommendation

Use the external attribute for functions never called from the contract.

## L04 - Conformance to Solidity Naming Conventions

|                    |                                                       |
|--------------------|-------------------------------------------------------|
| <b>Criticality</b> | minor / informative                                   |
| <b>Location</b>    | contract.sol#L940,943,946,951,1408,1261,641,1400,1396 |
| <b>Status</b>      | Unresolved                                            |

### Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow `_` at the beginning of the `mixed_case` match for private variables and unused parameters.

```
_taxFee  
_liquidityFee  
_charityFee  
_charityAddress  
_amount  
_enabled  
WETH
```

### Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>.

## L07 - Missing Events Arithmetic

|                    |                         |
|--------------------|-------------------------|
| <b>Criticality</b> | minor / informative     |
| <b>Location</b>    | contract.sol#L1250,1242 |
| <b>Status</b>      | Unresolved              |

### Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
_liquidityFee = liquidityFeeBps  
_taxFee = taxFeeBps
```

### Recommendation

Emit an event for critical parameter changes.

## L08 - Tautology or Contradiction

|                    |                     |
|--------------------|---------------------|
| <b>Criticality</b> | minor / informative |
| <b>Location</b>    | contract.sol#L972   |
| <b>Status</b>      | Unresolved          |

### Description

Detects expressions that are tautologies or contradictions. For instance, an uint variable will always be greater than or equal to zero.

```
require(bool,string)(liquidityFeeBps_ >= 0,Invalid liquidity fee)
require(bool,string)(charityFeeBps_ >= 0,Invalid charity fee)
require(bool,string)(taxFeeBps_ >= 0,Invalid tax fee)
```

### Recommendation

Fix the incorrect comparison by changing the value type or the comparison.

## L09 - Dead Code Elimination

|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| <b>Criticality</b> | minor / informative                                       |
| <b>Location</b>    | contract.sol#L610,469,523,593,583,537,556,441,504,566,494 |
| <b>Status</b>      | Unresolved                                                |

### Description

Functions that are not used in the contract, and make the code's size bigger.

```
verifyCallResult  
sendValue  
functionCallWithValue  
functionDelegateCall  
functionStaticCall  
isContract  
functionCall  
...
```

### Recommendation

Remove unused functions.

# Contract Functions

| Contract        | Type              | Bases      |            |           |
|-----------------|-------------------|------------|------------|-----------|
|                 | Function Name     | Visibility | Mutability | Modifiers |
|                 |                   |            |            |           |
| <b>IERC20</b>   | Interface         |            |            |           |
|                 | totalSupply       | External   |            | -         |
|                 | balanceOf         | External   |            | -         |
|                 | transfer          | External   | ✓          | -         |
|                 | allowance         | External   |            | -         |
|                 | approve           | External   | ✓          | -         |
|                 | transferFrom      | External   | ✓          | -         |
|                 |                   |            |            |           |
| <b>Context</b>  | Implementation    |            |            |           |
|                 | _msgSender        | Internal   |            |           |
|                 | _msgData          | Internal   |            |           |
|                 |                   |            |            |           |
| <b>Ownable</b>  | Implementation    | Context    |            |           |
|                 | <Constructor>     | Public     | ✓          | -         |
|                 | owner             | Public     |            | -         |
|                 | renounceOwnership | Public     | ✓          | onlyOwner |
|                 | transferOwnership | Public     | ✓          | onlyOwner |
|                 | _setOwner         | Private    | ✓          |           |
|                 |                   |            |            |           |
| <b>SafeMath</b> | Library           |            |            |           |
|                 | tryAdd            | Internal   |            |           |
|                 | trySub            | Internal   |            |           |
|                 | tryMul            | Internal   |            |           |
|                 | tryDiv            | Internal   |            |           |
|                 | tryMod            | Internal   |            |           |
|                 | add               | Internal   |            |           |
|                 | sub               | Internal   |            |           |
|                 | mul               | Internal   |            |           |

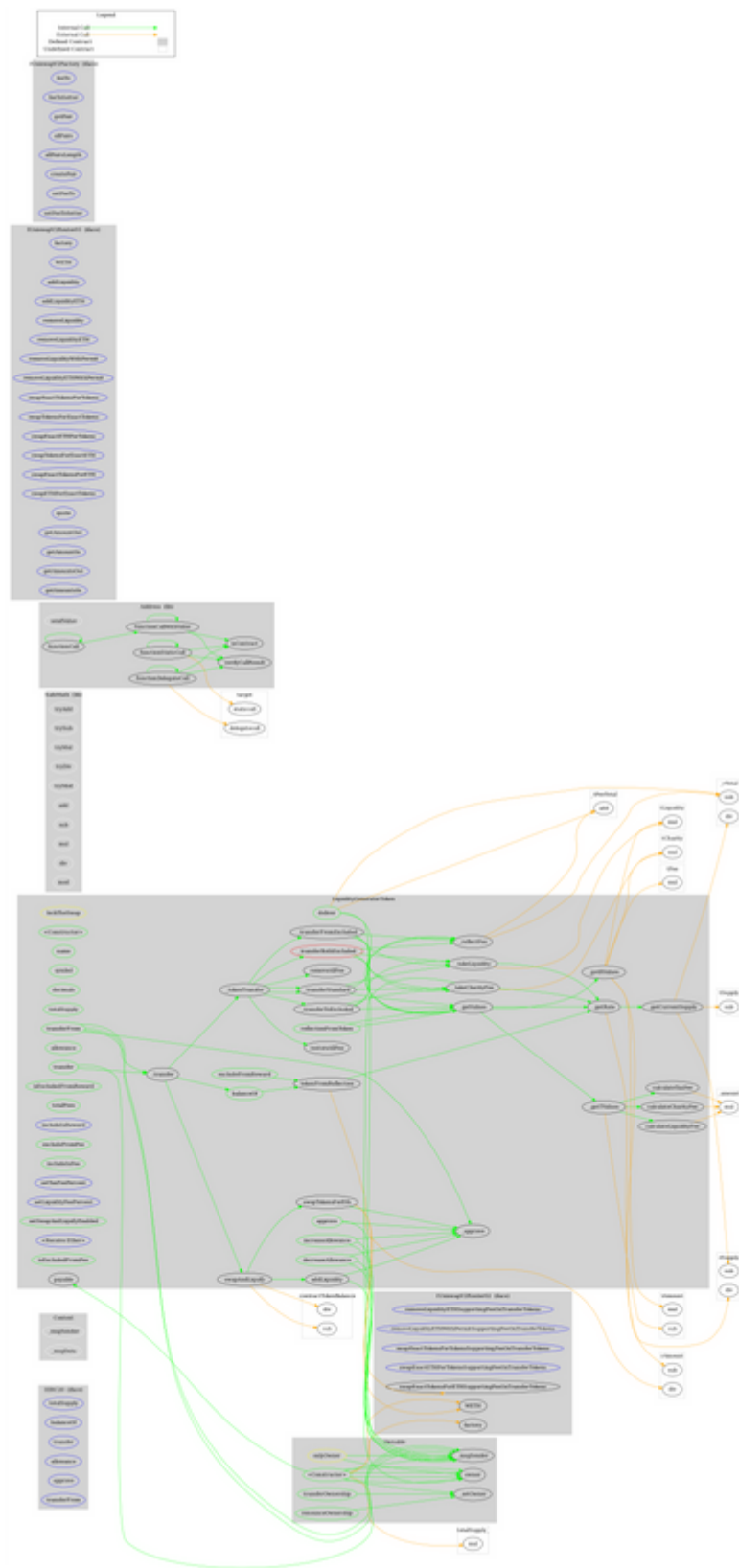
|                           |                              |          |         |   |
|---------------------------|------------------------------|----------|---------|---|
|                           | div                          | Internal |         |   |
|                           | mod                          | Internal |         |   |
|                           | sub                          | Internal |         |   |
|                           | div                          | Internal |         |   |
|                           | mod                          | Internal |         |   |
|                           |                              |          |         |   |
| <b>Address</b>            | Library                      |          |         |   |
|                           | isContract                   | Internal |         |   |
|                           | sendValue                    | Internal | ✓       |   |
|                           | functionCall                 | Internal | ✓       |   |
|                           | functionCall                 | Internal | ✓       |   |
|                           | functionCallWithValue        | Internal | ✓       |   |
|                           | functionCallWithValue        | Internal | ✓       |   |
|                           | functionStaticCall           | Internal |         |   |
|                           | functionStaticCall           | Internal |         |   |
|                           | functionDelegateCall         | Internal | ✓       |   |
|                           | functionDelegateCall         | Internal | ✓       |   |
|                           | verifyCallResult             | Internal |         |   |
|                           |                              |          |         |   |
| <b>IUniswapV2Router01</b> | Interface                    |          |         |   |
|                           | factory                      | External |         | - |
|                           | WETH                         | External |         | - |
|                           | addLiquidity                 | External | ✓       | - |
|                           | addLiquidityETH              | External | Payable | - |
|                           | removeLiquidity              | External | ✓       | - |
|                           | removeLiquidityETH           | External | ✓       | - |
|                           | removeLiquidityWithPermit    | External | ✓       | - |
|                           | removeLiquidityETHWithPermit | External | ✓       | - |
|                           | swapExactTokensForTokens     | External | ✓       | - |
|                           | swapTokensForExactTokens     | External | ✓       | - |
|                           | swapExactETHForTokens        | External | Payable | - |
|                           | swapTokensForExactETH        | External | ✓       | - |
|                           | swapExactTokensForETH        | External | ✓       | - |
|                           | swapETHForExactTokens        | External | Payable | - |

|                                |                                                           |                            |         |   |
|--------------------------------|-----------------------------------------------------------|----------------------------|---------|---|
|                                | quote                                                     | External                   |         | - |
|                                | getAmountOut                                              | External                   |         | - |
|                                | getAmountIn                                               | External                   |         | - |
|                                | getAmountsOut                                             | External                   |         | - |
|                                | getAmountsIn                                              | External                   |         | - |
|                                |                                                           |                            |         |   |
| <b>IUniswapV2Router02</b>      | Interface                                                 | IUniswapV2Router01         |         |   |
|                                | removeLiquidityETHSupportingFeeOnTransferTokens           | External                   | ✓       | - |
|                                | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External                   | ✓       | - |
|                                | swapExactTokensForTokensSupportingFeeOnTransferTokens     | External                   | ✓       | - |
|                                | swapExactETHForTokensSupportingFeeOnTransferTokens        | External                   | Payable | - |
|                                | swapExactTokensForETHSupportingFeeOnTransferTokens        | External                   | ✓       | - |
|                                |                                                           |                            |         |   |
| <b>IUniswapV2Factory</b>       | Interface                                                 |                            |         |   |
|                                | feeTo                                                     | External                   |         | - |
|                                | feeToSetter                                               | External                   |         | - |
|                                | getPair                                                   | External                   |         | - |
|                                | allPairs                                                  | External                   |         | - |
|                                | allPairsLength                                            | External                   |         | - |
|                                | createPair                                                | External                   | ✓       | - |
|                                | setFeeTo                                                  | External                   | ✓       | - |
|                                | setFeeToSetter                                            | External                   | ✓       | - |
|                                |                                                           |                            |         |   |
| <b>BaseToken</b>               | Implementation                                            |                            |         |   |
|                                |                                                           |                            |         |   |
| <b>LiquidityGeneratorToken</b> | Implementation                                            | IERC20, Ownable, BaseToken |         |   |
|                                | <Constructor>                                             | Public                     | Payable | - |
|                                | name                                                      | Public                     |         | - |
|                                | symbol                                                    | Public                     |         | - |

|  |                          |          |         |           |
|--|--------------------------|----------|---------|-----------|
|  | decimals                 | Public   |         | -         |
|  | totalSupply              | Public   |         | -         |
|  | balanceOf                | Public   |         | -         |
|  | transfer                 | Public   | ✓       | -         |
|  | allowance                | Public   |         | -         |
|  | approve                  | Public   | ✓       | -         |
|  | transferFrom             | Public   | ✓       | -         |
|  | increaseAllowance        | Public   | ✓       | -         |
|  | decreaseAllowance        | Public   | ✓       | -         |
|  | isExcludedFromReward     | Public   |         | -         |
|  | totalFees                | Public   |         | -         |
|  | deliver                  | Public   | ✓       | -         |
|  | reflectionFromToken      | Public   |         | -         |
|  | tokenFromReflection      | Public   |         | -         |
|  | excludeFromReward        | Public   | ✓       | onlyOwner |
|  | includeInReward          | External | ✓       | onlyOwner |
|  | _transferBothExcluded    | Private  | ✓       |           |
|  | excludeFromFee           | Public   | ✓       | onlyOwner |
|  | includeInFee             | Public   | ✓       | onlyOwner |
|  | setTaxFeePercent         | External | ✓       | onlyOwner |
|  | setLiquidityFeePercent   | External | ✓       | onlyOwner |
|  | setSwapAndLiquifyEnabled | Public   | ✓       | onlyOwner |
|  | <Receive Ether>          | External | Payable | -         |
|  | _reflectFee              | Private  | ✓       |           |
|  | _getValues               | Private  |         |           |
|  | _getTValues              | Private  |         |           |
|  | _getRValues              | Private  |         |           |
|  | _getRate                 | Private  |         |           |
|  | _getCurrentSupply        | Private  |         |           |
|  | _takeLiquidity           | Private  | ✓       |           |
|  | _takeCharityFee          | Private  | ✓       |           |
|  | calculateTaxFee          | Private  |         |           |
|  | calculateLiquidityFee    | Private  |         |           |
|  | calculateCharityFee      | Private  |         |           |
|  | removeAllFee             | Private  | ✓       |           |

|  |                       |         |   |             |
|--|-----------------------|---------|---|-------------|
|  | restoreAllFee         | Private | ✓ |             |
|  | isExcludedFromFee     | Public  |   | -           |
|  | _approve              | Private | ✓ |             |
|  | _transfer             | Private | ✓ |             |
|  | swapAndLiquify        | Private | ✓ | lockTheSwap |
|  | swapTokensForEth      | Private | ✓ |             |
|  | addLiquidity          | Private | ✓ |             |
|  | _tokenTransfer        | Private | ✓ |             |
|  | _transferStandard     | Private | ✓ |             |
|  | _transferToExcluded   | Private | ✓ |             |
|  | _transferFromExcluded | Private | ✓ |             |

# Contract Flow



## Domain Info

|                               |                                                                     |
|-------------------------------|---------------------------------------------------------------------|
| <b>Domain Name</b>            | mantaraydata.com                                                    |
| <b>Registry Domain ID</b>     | 2712426925_DOMAIN_COM-VRSN                                          |
| <b>Creation Date</b>          | 2022-07-20T13:03:32Z                                                |
| <b>Updated Date</b>           | 2022-08-05T10:30:48Z                                                |
| <b>Registry Expiry Date</b>   | 2023-07-20T13:03:32Z                                                |
| <b>Registrar WHOIS Server</b> | whois.google.com                                                    |
| <b>Registrar URL</b>          | <a href="https://domains.google.com">https://domains.google.com</a> |
| <b>Registrar</b>              | Google LLC                                                          |
| <b>Registrar IANA ID</b>      | 895                                                                 |

The domain was created 2 months before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.

## Summary

Manta Ray Token is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 25% fees.

## Disclaimer

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The Cyberscope team disclaims any liability for the resulting losses.

# About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provide all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>