



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/0xa98b7a3138ed616aa9ebb505affbbfb090f0056">https://bscscan.com/token/0xa98b7a3138ed616aa9ebb505affbbfb090f0056</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	-

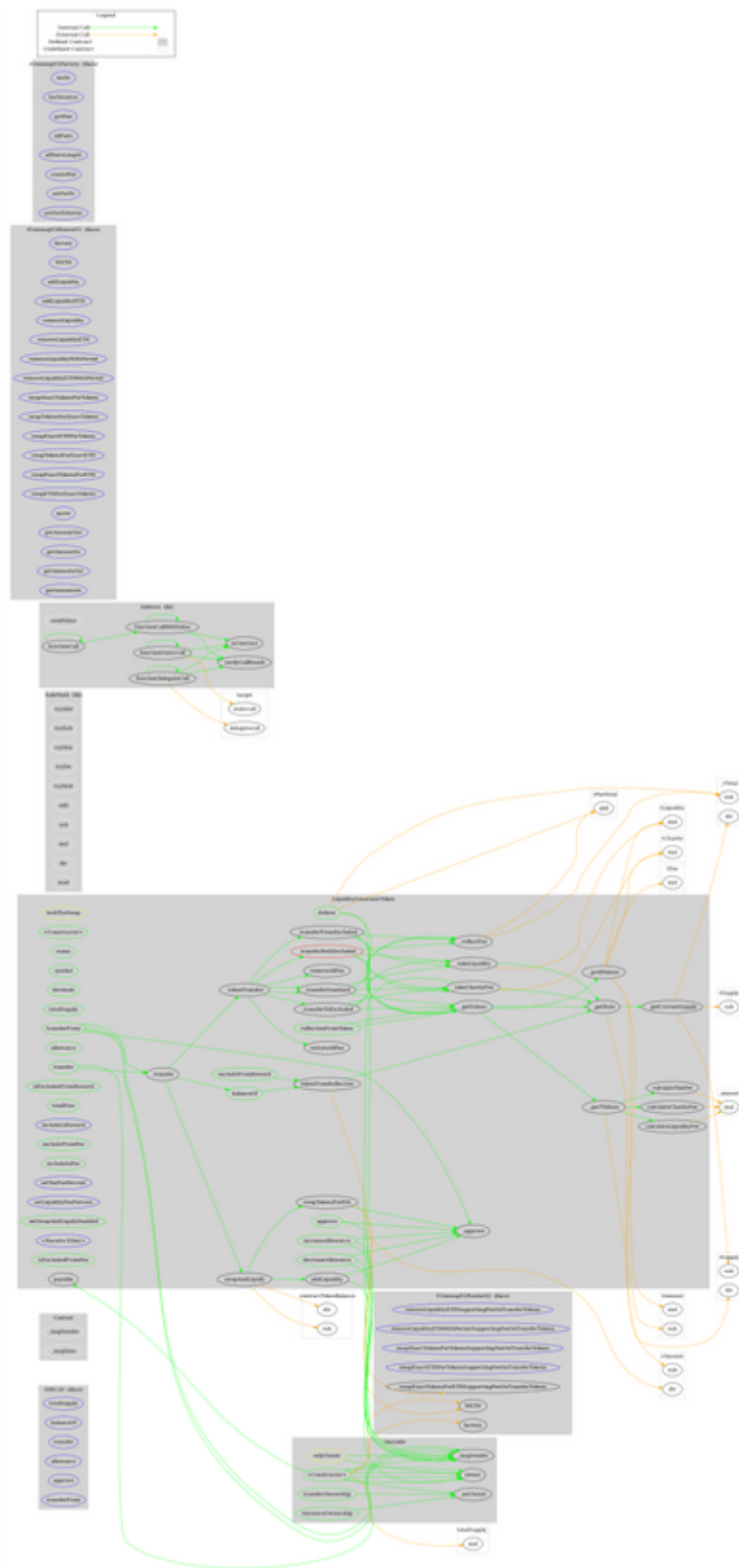
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
<b>IUniswapV2Router02</b>	Interface	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	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>	https://domains.google.com
<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.

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

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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>