

Audit Report SincereBat

May 2022

Type BEP20

Network BSC

Address 0x48ebb7cb09F1D4753C1d3A35c55d2507c64D34cb

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Contract Review

Contract Name	SINCEREBAT
Compiler Version	v0.8.3+commit.8d00100c
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x48ebb7cb09F1D4753C1 d3A35c55d2507c64D34cb
Symbol	SBAT
Decimals	9
Total Supply	1,000,000,000
Domain	sincerebat.com

Source Files

Filename	SHA256
contract.sol	003e8820333340a34650fe14318f3e5aa1ca78144bbe4 97ecd6576335c722f34

Audit Updates

Initial Audit	6th May 2022
Corrected	10th May 2022

Contract Analysis

CriticalMediumMinorPass

Severity	Code	Description	Status
•	ST	Contract Owner is not able to stop or pause transactions	Resolved
•	OCTD	Contract Owner is not able to transfer tokens from specific address	
•	OTUT	Owner Transfer User's Tokens	
•	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)	Resolved
•	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent	
•	MT	Contract Owner is not able to mint new tokens	
•	ВТ	Contract Owner is not able to burn tokens from specific wallet	Resolved
•	ВС	Contract Owner is not able to blacklist wallets from selling	



ST - Stop Transactions

Criticality	medium
Location	contract.sol#L1183
Status	Resolved

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner may take advantage of it by setting the _maxTxAmount to zero.

```
if(from != owner() && to != owner())
    require(amount <= _maxTxAmount, "Transfer amount exceeds the maxTxAmount.");</pre>
```

Recommendation

The contract could embody a check for not allowing setting the _maxTxAmount less than a reasonable amount. A suggested implementation could check that the maximum amount should be more than a fixed percentage of the total supply.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Updated 10 May 2022



ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	contract.sol#L1011
Status	Resolved

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the setTaxFeePercent function with a high percentage value.

```
function setTaxFeePercent(uint256 taxFee) external onlyOwner() {
    _taxFee = taxFee;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Updated 10 May 2022



BT - Burn Tokens

Criticality	critical
Location	contract.sol#L850
Status	Resolved

Description

The contract owner has the authority to decrease the total supply without limit. The owner may take advantage of it by calling the burn function.

```
function _burn(address account, uint256 amount) public virtual onlyOwner{
    require(account != address(0), "ERC20: burn from the zero address");

    // _beforeTokenTransfer(account, address(0), amount);

    _tTotal -= amount;

    // require(accountBalance >= amount, "ERC20: burn amount exceeds balance");

    //_balances[account] = accountBalance - amount;

    // _totalSupply -= amount;
}
```

Recommendation

The owner should carefully manage the credentials of the owner's account. We advised considering an extra-strong security mechanism that the actions may be quarantined by many users instead of one. The owner could also renounce the contract ownership for a period of time or pass the access to the zero address.

Updated 10 May 2022

Contract Diagnostics

CriticalMediumMinor

Severity	Code	Description
•	L01	Public Function could be Declared External
•	L02	State Variables could be Declared Constant
•	L04	Conformance to Solidity Naming Conventions
•	L07	Missing Events Arithmetic
•	L09	Dead Code Elimination



L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L566,575,850,883,887,891,895,904,909,913,918,924,929,934,938,94 2,951,968,1003,1007,1033,1162

Description

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

```
isExcludedFromFee
setSwapAndLiquifyEnabled
includeInFee
excludeFromFee
excludeFromReward
reflectionFromToken
deliver
totalFees
isExcludedFromReward
...
```

Recommendation

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



L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L807,816,806,814,815,835

Description

Constant state variables should be declared constant to save gas.

```
numTokensSellToAddToLiquidity
_symbol
_name
_developerWalletAddress
_decimals
_charityAddress
```

Recommendation

Add the constant attribute to state variables that never change.



L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L613,614,631,651,850,1033,1117,1123,1129,1135,834

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.

```
_maxTxAmount
_amount
_enabled
_burn
WETH
MINIMUM_LIQUIDITY
PERMIT_TYPEHASH
DOMAIN_SEPARATOR
...
```

Recommendation

Follow the Solidity naming convention.

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



L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L850,1011,1015,1019,1023,1027

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.

```
_maxTxAmount = _tTotal.mul(maxTxPercent).div(10 ** 2)
_liquidityFee = liquidityFee
_charityFee = charityFee
_developerFee = developerFee
_taxFee = taxFee
_tTotal -= amount
```

Recommendation

Emit an event for critical parameter changes.



L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L499,407,417,432,442,481,491,457,467,354,381

Description

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

sendValue
isContract
functionStaticCall
functionDelegateCall
functionCallWithValue
functionCall
_verifyCallResult

Recommendation

Remove unused functions.



Contract Functions

Contract	Туре	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
ILNO20	totalSupply	External		_
	balanceOf	External		-
	transfer	External	√	-
	allowance	External	V	_
		External	✓	-
	approve transferFrom	External	✓ ✓	
	transierrioni	External	V	-
SafeMath	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		
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Address	Library			
	isContract	Internal		



	sendValue	Internal	✓	
	functionCall	Internal	1	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	1	
	functionStaticCall	Internal		
	functionStaticCall	Internal		
	functionDelegateCall	Internal	✓	
	functionDelegateCall	Internal	1	
	_verifyCallResult	Private		
Ownable	Implementation	Context		
	<constructor></constructor>	Public	✓	-
	owner	Public		_
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
IUniswapV2Fa ctory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	√	-
	setFeeToSetter	External	✓	-
IUniswapV2Pai r	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-



	1			
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	1	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	1	-
	burn	External	1	-
	swap	External	1	-
	skim	External	√	-
	sync	External	1	-
	initialize	External	√	-
IUniswapV2Ro uter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	√	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	1	-
	removeLiquidityETH	External	1	-
	removeLiquidityWithPermit	External	√	-
	removeLiquidityETHWithPermit	External	1	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	1	_



	swapExactTokensForETH	External	√	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Ro uter02	Interface	IUniswapV2 Router01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	✓	-
	removeLiquidityETHWithPermitSuppor tingFeeOnTransferTokens	External	√	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	1	-
SINCEREBAT	Implementation	Context, IERC20, Ownable		
	_burn	Public	✓	onlyOwner
	<constructor></constructor>	Public	1	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	1	-
	allowance	Public		-
	approve	Public	1	-
	transferFrom	Public	1	-
	increaseAllowance	Public	1	-
	decreaseAllowance	Public	1	-
	isExcludedFromReward	Public		-



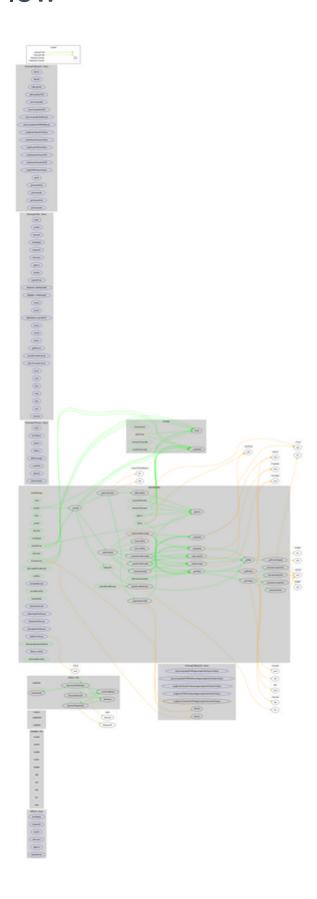
totalFees	Public		-
deliver	Public	✓	-
reflectionFromToken	Public		-
tokenFromReflection	Public		-
excludeFromReward	Public	1	onlyOwner
includeInReward	External	1	onlyOwner
_transferBothExcluded	Private	1	
excludeFromFee	Public	1	onlyOwner
includeInFee	Public	1	onlyOwner
setTaxFeePercent	External	1	onlyOwner
setdeveloperFeePercent	External	1	onlyOwner
setcharityFeePercent	External	1	onlyOwner
setLiquidityFeePercent	External	1	onlyOwner
setMaxTxPercent	External	1	onlyOwner
setSwapAndLiquifyEnabled	Public	1	onlyOwner
<receive ether=""></receive>	External	Payable	-
_reflectFee	Private	1	
_getValues	Private		
_getTValues	Private		
_getRValues	Private		
_getRate	Private		
_getCurrentSupply	Private		
_takeLiquidity	Private	1	
_takedeveloper	Private	1	
_takecharity	Private	1	
calculateTaxFee	Private		
calculatedeveloperFee	Private		
calculatecharityFee	Private		
calculateLiquidityFee	Private		
removeAllFee	Private	✓	
restoreAllFee	Private	1	
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

Domain Name	sincerebat.com
Registry Domain ID	2693120327_DOMAIN_COM-VRSN
Creation Date	2022-05-01T05:07:20Z
Updated Date	2022-05-01T05:07:22Z
Registry Expiry Date	2023-05-01T05:07:20Z
Registrar WHOIS Server	whois.publicdomainregistry.com
Registrar URL	www.publicdomainregistry.com
Registrar	PDR Ltd. d/b/a PublicDomainRegistry.com
Registrar IANA ID	303

The domain has been created 5 days 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

There are some functions that can be abused by the owner like stopping transactions and manipulating fees. The contract owner has the ability to decrease the total supply without limit. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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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 provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

https://www.cyberscope.io