

# ABIs

## AMM

```
Router [  
  {  
    "inputs" :  
    [  
      {  
        "internalType" :  
        "address" ,  
        "name" :  
        "_factory" ,  
        "type" :  
        "address"  
      },  
      {  
        "internalType" :  
        "address" ,  
        "name" :  
        "_weth" ,  
        "type" :  
        "address"  
      }  
    ],  
    "stateMutability" :  
    "nonpayable" ,  
    "type" :  
    "constructor"  
  },  
  {  
    "stateMutability" :  
    "payable" ,  
    "type" :  
    "fallback"  
  },  
  {  
    "inputs" :
```

```
[,
  "name" :
  "WETH" ,
  "outputs" :
  [
    {
      "internalType" :
      "address" ,
      "name" :
      "" ,
      "type" :
      "address"
    }
  ],
  "stateMutability" :
  "view" ,
  "type" :
  "function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "address" ,
      "name" :
      "tokenA" ,
      "type" :
      "address"
    },
    {
      "internalType" :
      "address" ,
      "name" :
      "tokenB" ,
      "type" :
      "address"
    }
  ]
}
```

```
},  
  
{  
  "internalType" :  
    "uint256",  
  "name" :  
    "amountADesired",  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "uint256",  
  "name" :  
    "amountBDesired",  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "uint256",  
  "name" :  
    "amountAMin",  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "uint256",  
  "name" :  
    "amountBMin",  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "address",  
  "name" :
```

```
"to" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"deadline" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"feeType" ,
"type" :
"uint256"
},
{
"internalType" :
"bool" ,
"name" :
"stable" ,
"type" :
"bool"
}
],
"name" :
"addLiquidity" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
```

```
"amountA" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amountB" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"liquidity" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"token" ,  
"type" :  
"address"  
},  

```

```
{
  "internalType" :
    "uint256" ,
  "name" :
    "amountTokenDesired" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "amountTokenMin" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "amountETHMin" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "address" ,
  "name" :
    "to" ,
  "type" :
    "address"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "deadline" ,
```

```
"type" :  
"uint256"  
,  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "feeType" ,  
  "type" :  
    "uint256"  
},  
{  
  "internalType" :  
    "bool" ,  
  "name" :  
    "stable" ,  
  "type" :  
    "bool"  
}  
],  
"name" :  
  "addLiquidityETH" ,  
"outputs" :  
[  
  {  
    "internalType" :  
      "uint256" ,  
    "name" :  
      "amountToken" ,  
    "type" :  
      "uint256"  
},  
  {  
    "internalType" :  
      "uint256" ,  
    "name" :  
      "amountETH" ,
```

```
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"liquidity" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"payable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"factory" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"
```



```
},  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
        "uint256" ,  
      "name" :  
        "amountIn" ,  
      "type" :  
        "uint256"  
    },  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "tokenIn" ,  
      "type" :  
        "address"  
    },  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "tokenOut" ,  
      "type" :  
        "address"  
    }  
  ],  
  "name" :  
    "getAmountOut" ,  
  "outputs" :  
  [  
    {  
      "internalType" :  
        "uint256" ,  
      "name" :
```

```
"amountOut" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"bool" ,  
"name" :  
"stable" ,  
"type" :  
"bool"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"fee" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amountIn" ,  
"type" :  
"uint256"  
},
```

```
{
  "internalType" :
    "address[]" ,
  "name" :
    "path" ,
  "type" :
    "address[]"
},
{
  "internalType" :
    "bool[]" ,
  "name" :
    "stable" ,
  "type" :
    "bool[]"
}
],
"name" :
  "getAmountsOut" ,
"outputs" :
[
  {
    "internalType" :
      "uint256[]" ,
    "name" :
      "amounts" ,
    "type" :
      "uint256[]"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
```

```
[
{
  "internalType" :
  "uint256" ,
  "name" :
  "amountIn" ,
  "type" :
  "uint256"
},
{
  "internalType" :
  "address[]" ,
  "name" :
  "path" ,
  "type" :
  "address[]"
}
],
"name" :
"getAmountsOutExpanded" ,
"outputs" :
[
{
  "internalType" :
  "uint256[]" ,
  "name" :
  "amounts" ,
  "type" :
  "uint256[]"
},
{
  "internalType" :
  "bool[]" ,
  "name" :
  "stable" ,
  "type" :
  "bool[]"
}
```

```
},  
{  
  "internalType" :  
    "uint256[]",  
  "name" :  
    "fees",  
  "type" :  
    "uint256[]"  
}  
],  
  "stateMutability" :  
    "view",  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address[]",  
        "name" :  
          "path",  
        "type" :  
          "address[]"  
      },  
      {  
        "internalType" :  
          "bool",  
        "name" :  
          "stable",  
        "type" :  
          "bool"  
      }  
    ],  
  "name" :  
    "getPairInfo",
```

"outputs" :

[

{

"internalType" :

"address" ,

"name" :

"tokenA" ,

"type" :

"address"

},

{

"internalType" :

"address" ,

"name" :

"tokenB" ,

"type" :

"address"

},

{

"internalType" :

"address" ,

"name" :

"pair" ,

"type" :

"address"

},

{

"internalType" :

"uint256" ,

"name" :

"reserveA" ,

"type" :

"uint256"

},

{

"internalType" :

"uint256" ,

```
"name" :  
"reserveB" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"fee" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"tokenA" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"tokenB" ,  
"type" :  
"address"
```

```
},  
{  
  "internalType" :  
    "bool" ,  
  "name" :  
    "stable" ,  
  "type" :  
    "bool"  
}  
],  
  "name" :  
    "getReserves" ,  
  "outputs" :  
    [  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "reserveA" ,  
        "type" :  
          "uint256"  
      },  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "reserveB" ,  
        "type" :  
          "uint256"  
      }  
    ],  
  "stateMutability" :  
    "view" ,  
  "type" :  
    "function"  
},  
{
```



```
"inputs" :
```

[

 $\{$ 

```
"internalType" :
```

"address" ,

```
"name" :
```

"tokenA" ,

```
"type" :
```

"address"

 $\},$  $\{$ 

```
"internalType" :
```

"address" ,

```
"name" :
```

"tokenB" ,

```
"type" :
```

"address"

 $\},$  $\{$ 

```
"internalType" :
```

```
"bool" ,
```

"name" :

"stable" ,

```
"type" :
```

"bool"

}

],

```
"name" :
```

"pairFor" ,

"outputs" :

[

 $\{$ 

```
"internalType" :
```

"address" ,

```
"name" :
```

"pair" ,

```
"type" :
```

```
"address"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountA" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"reserveA" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"reserveB" ,
"type" :
"uint256"
}
],
"name" :
```

```
"quote" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountB" ,
"type" :
"uint256"
}
],
"stateMutability" :
"pure" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"tokenA" ,
"type" :
"address"
}
],
{
"internalType" :
"address" ,
"name" :
"tokenB" ,
"type" :
"address"
}
},
{
```

"internalType" :

"uint256" ,

"name" :

"liquidity" ,

"type" :

"uint256"

},

{

"internalType" :

"uint256" ,

"name" :

"amountAMin" ,

"type" :

"uint256"

},

{

"internalType" :

"uint256" ,

"name" :

"amountBMin" ,

"type" :

"uint256"

},

{

"internalType" :

"address" ,

"name" :

"to" ,

"type" :

"address"

},

{

"internalType" :

"uint256" ,

"name" :

"deadline" ,

"type" :

```
"uint256"
},
{
  "internalType" :
    "bool" ,
    "name" :
      "stable" ,
      "type" :
        "bool"
    }
  ],
  "name" :
    "removeLiquidity" ,
    "outputs" :
      [
        {
          "internalType" :
            "uint256" ,
            "name" :
              "amountA" ,
              "type" :
                "uint256"
          },
        {
          "internalType" :
            "uint256" ,
            "name" :
              "amountB" ,
              "type" :
                "uint256"
          }
        ],
        "stateMutability" :
          "nonpayable" ,
          "type" :
            "function"
      },
```

```
{
  "inputs" :
  [
    {
      "internalType" :
      "address" ,
      "name" :
      "token" ,
      "type" :
      "address"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "liquidity" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "amountTokenMin" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "amountETHMin" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
```

```
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"deadline" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"bool" ,  
"name" :  
"stable" ,  
"type" :  
"bool"  
}  
],  
"name" :  
"removeLiquidityETH" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amountToken" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :
```

```
"uint256" ,
"name" :
"amountETH" ,
"type" :
"uint256"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"token" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"liquidity" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"amountTokenMin" ,
"type" :
```



```
"uint256"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "amountETHMin" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "address" ,
  "name" :
    "to" ,
  "type" :
    "address"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "deadline" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "bool" ,
  "name" :
    "stable" ,
  "type" :
    "bool"
}
],
"name" :
  "removeLiquidityETHSupportingFeeOnTransferTokens" ,
```

```
"outputs" :  
[  
  {  
    "internalType" :  
      "uint256" ,  
    "name" :  
      "amountETH" ,  
    "type" :  
      "uint256"  
  }  
],  
"stateMutability" :  
  "nonpayable" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "tokenA" ,  
        "type" :  
          "address"  
      },  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "tokenB" ,  
        "type" :  
          "address"  
      }  
    ],  
    "name" :
```

```
"sortTokens" ,
"outputs" :
[
{
"internalType" :
"address" ,
"name" :
"token0" ,
"type" :
"address"
},
{
"internalType" :
"address" ,
"name" :
"token1" ,
"type" :
"address"
}
],
"stateMutability" :
"pure" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountOutMin" ,
"type" :
"uint256"
},
{
```

```
"internalType" :  
"address[]" ,  
"name" :  
"path" ,  
"type" :  
"address[]"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"deadline" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"bool[]" ,  
"name" :  
"stable" ,  
"type" :  
"bool[]"  
}  
],  
"name" :  
"swapExactETHForTokens" ,  
"outputs" :  
[  
{
```

```
"internalType" :
"uint256[]" ,
"name" :
"amounts" ,
"type" :
"uint256[]"
}
],
"stateMutability" :
"payable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountOutMin" ,
"type" :
"uint256"
},
{
"internalType" :
"address[]" ,
"name" :
"path" ,
"type" :
"address[]"
},
{
"internalType" :
"address" ,
"name" :
"to" ,
```

```
"type" :  
"address"  
,  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "deadline" ,  
  "type" :  
    "uint256"  
},  
{  
  "internalType" :  
    "bool[]" ,  
  "name" :  
    "stable" ,  
  "type" :  
    "bool[]"  
}  
],  
"name" :  
  "swapExactETHForTokensSupportingFeeOnTransferTokens" ,  
"outputs" :  
  [],  
"stateMutability" :  
  "payable" ,  
"type" :  
  "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "amountIn" ,
```

```
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amountOutMin" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"address[]" ,  
"name" :  
"path" ,  
"type" :  
"address[]"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"deadline" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :
```

```
"bool[]" ,
"name" :
"stable" ,
"type" :
"bool[]"
}
],
"name" :
"swapExactTokensForETH" ,
"outputs" :
[
{
"internalType" :
"uint256[]" ,
"name" :
"amounts" ,
"type" :
"uint256[]"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountIn" ,
"type" :
"uint256"
}
],
{
```



```
"internalType" :  
"uint256" ,  
"name" :  
"amountOutMin" ,  
"type" :  
"uint256"
```

```
},  
{  
"internalType" :  
"address[]" ,  
"name" :  
"path" ,  
"type" :  
"address[]"
```

```
},  
{  
"internalType" :  
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"
```

```
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"deadline" ,  
"type" :  
"uint256"
```

```
},  
{  
"internalType" :  
"bool[]" ,  
"name" :  
"stable" ,  
"type" :
```

```
"bool[]"
}
],
"name" :
"swapExactTokensForETHSupportingFeeOnTransferTokens" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountIn" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"amountOutMin" ,
"type" :
"uint256"
},
{
"internalType" :
"address[]" ,
"name" :
"path" ,
"type" :
```

```
"address[]"
},
{
  "internalType" :
    "address" ,
    "name" :
      "to" ,
      "type" :
        "address"
    },
    {
      "internalType" :
        "uint256" ,
        "name" :
          "deadline" ,
          "type" :
            "uint256"
        },
        {
          "internalType" :
            "bool[]" ,
            "name" :
              "stable" ,
              "type" :
                "bool[]"
          }
        ],
        "name" :
          "swapExactTokensForTokens" ,
          "outputs" :
            [
              {
                "internalType" :
                  "uint256[]" ,
                  "name" :
                    "amounts" ,
                    "type" :
```

```
"uint256[]"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amountIn" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"amountOutMin" ,
"type" :
"uint256"
},
{
"internalType" :
"address[]" ,
"name" :
"path" ,
"type" :
"address[]"
},
{
"internalType" :
```

```
"address" ,
"name" :
"to" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"deadline" ,
"type" :
"uint256"
},
{
"internalType" :
"bool[]" ,
"name" :
"stable" ,
"type" :
"bool[]"
}
],
"name" :
"swapExactTokensForTokensSupportingFeeOnTransferTokens" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
}} Factory [
{
"inputs" :
[],
"stateMutability" :
"nonpayable" ,
```

```
"type" :  
"constructor"  
,  
{  
  "anonymous" :  
    false ,  
  "inputs" :  
    [  
      {  
        "indexed" :  
          true ,  
        "internalType" :  
          "address" ,  
        "name" :  
          "token0" ,  
        "type" :  
          "address"  
      },  
      {  
        "indexed" :  
          true ,  
        "internalType" :  
          "address" ,  
        "name" :  
          "token1" ,  
        "type" :  
          "address"  
      },  
      {  
        "indexed" :  
          false ,  
        "internalType" :  
          "bool" ,  
        "name" :  
          "stable" ,  
        "type" :  
          "bool"
```

```
},  
  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "address" ,  
  "name" :  
    "pair" ,  
  "type" :  
    "address"  
},  
  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "" ,  
  "type" :  
    "uint256"  
},  
  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "fee" ,  
  "type" :  
    "uint256"  
}  
],  
  
"name" :  
  "PairCreated" ,  
  "type" :  
    "event"  
},
```

```
{
  "anonymous" :
  false ,
  "inputs" :
  [
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "_protocolFeeDynamic" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "ProtocolFeeDynamicChange" ,
  "type" :
  "event"
},
{
  "anonymous" :
  false ,
  "inputs" :
  [
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "_protocolFeeFixed" ,
      "type" :
      "uint256"
    }
  ],
```



```
"name" :  
"ProtocolFeeFixedChange" ,  
"type" :  
"event"  
},  
{  
"anonymous" :  
false ,  
"inputs" :  
[  
{  
"indexed" :  
false ,  
"internalType" :  
"address" ,  
"name" :  
"_feeTo" ,  
"type" :  
"address"  
}  
],  
"name" :  
"ProtocolFeeToChange" ,  
"type" :  
"event"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
]
```

```
],  
"name" :  
"allPairs" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"allPairsLength" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,
```

```
"type" :  
"function"  
,  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "tokenA" ,  
      "type" :  
        "address"  
    },  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "tokenB" ,  
      "type" :  
        "address"  
    },  
    {  
      "internalType" :  
        "uint256" ,  
      "name" :  
        "feeType" ,  
      "type" :  
        "uint256"  
    },  
    {  
      "internalType" :  
        "bool" ,  
      "name" :  
        "stable" ,  
      "type" :  
        "bool"
```

```
}  
],  
"name" :  
"createPair" ,  
"outputs" :  
[  
{  
  "internalType" :  
    "address" ,  
  "name" :  
    "pair" ,  
  "type" :  
    "address"  
}  
],  
"stateMutability" :  
  "nonpayable" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [],  
  "name" :  
    "feeTo" ,  
  "outputs" :  
    [  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "" ,  
        "type" :  
          "address"  
      }  
    ],  
  "stateMutability" :
```

```
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"bool" ,  
"name" :  
"" ,  
"type" :  
"bool"  
}  
],  
"name" :  
"getPair" ,  
"outputs" :  
[  
{
```

```
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"protocolFeeDynamic" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],
```

```
"name" :  
"protocolFeeFixed" ,  
"outputs" :  
[  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "" ,  
  "type" :  
    "uint256"  
}  
],  
"stateMutability" :  
  "view" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "_feeTo" ,  
        "type" :  
          "address"  
      }  
    ],  
  "name" :  
    "setFeeTo" ,  
  "outputs" :  
    [],  
  "stateMutability" :  
    "nonpayable" ,  
  "type" :
```

```
"function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "_protocolFeeDynamic" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "setProtocolFeeDynamic" ,
  "outputs" :
  [],
  "stateMutability" :
  "nonpayable" ,
  "type" :
  "function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "_protocolFeeFixed" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "setProtocolFeeFixed" ,
```



```
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
}] Pair [  
{  
"inputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"constructor"  
},  
{  
"anonymous" :  
false ,  
"inputs" :  
[  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"owner" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"spender" ,
```

```
"type" :  
"address"  
,  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "value" ,  
  "type" :  
    "uint256"  
}  
,  
"name" :  
  "Approval" ,  
  "type" :  
    "event"  
},  
{  
  "anonymous" :  
    false ,  
  "inputs" :  
    [  
      {  
        "indexed" :  
          true ,  
        "internalType" :  
          "address" ,  
        "name" :  
          "sender" ,  
        "type" :  
          "address"  
      }  
    ],  
  "indexed" :  
    false ,
```

"internalType" :

"uint256" ,

"name" :

"amount0" ,

"type" :

"uint256"

},

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"amount1" ,

"type" :

"uint256"

},

{

"indexed" :

true ,

"internalType" :

"address" ,

"name" :

"to" ,

"type" :

"address"

}

],

"name" :

"Burn" ,

"type" :

"event"

},

{

"anonymous" :

false ,

"inputs" :

```
[
{
  "indexed" :
false ,
  "internalType" :
"uint256" ,
  "name" :
"pairFee" ,
  "type" :
"uint256"
},
{
  "indexed" :
false ,
  "internalType" :
"uint256" ,
  "name" :
"liqFee" ,
  "type" :
"uint256"
}
],
"name" :
"ChangeFee" ,
"type" :
"event"
},
{
  "anonymous" :
false ,
  "inputs" :
[
{
  "indexed" :
true ,
  "internalType" :
"address" ,
```

```
"name" :  
"sender" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"recipient" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
false ,  
"internalType" :  
"uint256" ,  
"name" :  
"amount0" ,  
"type" :  
"uint256"  
},  
{  
"indexed" :  
false ,  
"internalType" :  
"uint256" ,  
"name" :  
"amount1" ,  
"type" :  
"uint256"  
}  
],  
"name" :
```

```
"Claim" ,
"type" :
"event"

},

{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"delegator" ,
"type" :
"address"
},
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"fromDelegate" ,
"type" :
"address"
},
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"toDelegate" ,
"type" :
```

```
"address"
}
],
"name" :
"DelegateChanged" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"delegate" ,
"type" :
"address"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"previousBalance" ,
"type" :
"uint256"
},
{
"indexed" :
false ,
"internalType" :
```

```
"uint256" ,
"name" :
"newBalance" ,
"type" :
"uint256"
}
],
"name" :
"DelegateVotesChanged" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"sender" ,
"type" :
"address"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"amount0" ,
"type" :
"uint256"
},
```



```
{
  "indexed" :
  false ,
  "internalType" :
  "uint256" ,
  "name" :
  "amount1" ,
  "type" :
  "uint256"
},
{
  "indexed" :
  false ,
  "internalType" :
  "uint256" ,
  "name" :
  "pAmount0" ,
  "type" :
  "uint256"
},
{
  "indexed" :
  false ,
  "internalType" :
  "uint256" ,
  "name" :
  "pAmount1" ,
  "type" :
  "uint256"
}
],
"name" :
"Fees" ,
"type" :
"event"
},
{
```

"anonymous" :

false ,

"inputs" :

[

{

"indexed" :

true ,

"internalType" :

"address" ,

"name" :

"sender" ,

"type" :

"address"

},

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"amount0" ,

"type" :

"uint256"

},

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"amount1" ,

"type" :

"uint256"

}

],

"name" :

"Mint" ,

```
"type" :  
"event"  
,  
{  
  "anonymous" :  
    false ,  
  "inputs" :  
    [  
      {  
        "indexed" :  
          true ,  
        "internalType" :  
          "address" ,  
        "name" :  
          "sender" ,  
        "type" :  
          "address"  
      },  
      {  
        "indexed" :  
          false ,  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "amount0In" ,  
        "type" :  
          "uint256"  
      },  
      {  
        "indexed" :  
          false ,  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "amount1In" ,  
        "type" :  
          "uint256"
```

```
},  
  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "amount0Out" ,  
  "type" :  
    "uint256"  
},  
  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "amount1Out" ,  
  "type" :  
    "uint256"  
},  
  
{  
  "indexed" :  
    true ,  
  "internalType" :  
    "address" ,  
  "name" :  
    "to" ,  
  "type" :  
    "address"  
}  
],  
  
"name" :  
  "Swap" ,  
"type" :  
  "event"  
},
```

```
{
  "anonymous" :
  false ,
  "inputs" :
  [
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "reserve0" ,
      "type" :
      "uint256"
    },
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "reserve1" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "Sync" ,
  "type" :
  "event"
},
{
  "anonymous" :
  false ,
  "inputs" :
  [
    {
```

```
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"from" ,
"type" :
"address"
},
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"to" ,
"type" :
"address"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"value" ,
"type" :
"uint256"
}
],
"name" :
"Transfer" ,
"type" :
"event"
},
{
"stateMutability" :
```

```
"payable" ,
"type" :
"fallback"
},
{
"inputs" :
[],
"name" :
"DOMAIN_SEPARATOR" ,
"outputs" :
[
{
"internalType" :
"bytes32" ,
"name" :
"",
"type" :
"bytes32"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"MINIMUM_LIQUIDITY" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"" ,
```

```
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view",  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address",  
"name" :  
"",  
"type" :  
"address"  
},  
{  
"internalType" :  
"address",  
"name" :  
"",  
"type" :  
"address"  
}  
],  
"name" :  
"allowance",  
"outputs" :  
[  
{  
"internalType" :  
"uint256",  
"name" :
```



```
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"spender" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"value" ,
"type" :
"uint256"
}
],
"name" :
"approve" ,
"outputs" :
[
{
"internalType" :
"bool" ,
```

```
"name" :  
"" ,  
"type" :  
"bool"  
}  
],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"name" :  
"balanceOf" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :
```

```
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"to" ,
"type" :
"address"
}
],
"name" :
"burn" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amount0" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"amount1" ,
"type" :
"uint256"
}
],
```

"stateMutability" :

"nonpayable" ,

"type" :

"function"

},

{

"inputs" :

[

{

"internalType" :

"uint256" ,

"name" :

"\_fee" ,

"type" :

"uint256"

}

],

"name" :

"changeFeeType" ,

"outputs" :

[],

"stateMutability" :

"nonpayable" ,

"type" :

"function"

},

{

"inputs" :

[

{

"internalType" :

"address" ,

"name" :

"" ,

"type" :

"address"

},

```
{
  "internalType" :
    "uint32" ,
  "name" :
    "" ,
  "type" :
    "uint32"
}
],
"name" :
  "checkpoints" ,
"outputs" :
[
  {
    "internalType" :
      "uint32" ,
    "name" :
      "fromBlock" ,
    "type" :
      "uint32"
  },
  {
    "internalType" :
      "uint256" ,
    "name" :
      "votes" ,
    "type" :
      "uint256"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
```

```
[,
  "name" :
  "claimFees" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "claimed0" ,
      "type" :
      "uint256"
    },
    {
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    }
  ],
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  "type" :
  "function"
},
{
  "inputs" :
  [
    {
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      "address" ,
      "name" :
      "" ,
      "type" :
      "address"
```

```
}  
],  
"name" :  
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"outputs" :  
[  
{  
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"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
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"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"name" :  
"claimable1" ,  
"outputs" :  
[  
{
```

```
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"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
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[  
{  
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"address" ,  
"name" :  
"tokenIn" ,  
"type" :  
"address"  
},  
{  
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"uint256" ,  
"name" :  
"amountIn" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"current" ,  
"outputs" :  
[
```



```
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      "type" :
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  }
],
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},
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    "name" :
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      "outputs" :
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              "name" :
                "reserve0Cumulative" ,
                "type" :
                  "uint256"
            },
          {
            "internalType" :
              "uint256" ,
              "name" :
                "reserve1Cumulative" ,
                "type" :
                  "uint256"
            },

```

```
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    "uint256"
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},
{
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    "decimals" ,
  "outputs" :
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        "name" :
          "" ,
        "type" :
          "uint8"
      }
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  "stateMutability" :
    "view" ,
  "type" :
    "function"
},
{
  "inputs" :
```

```
[
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  "delegatee" ,
  "type" :
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}
],
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[],
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"type" :
"function"
},
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    {
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      "name" :
      "delegator" ,
      "type" :
      "address"
    }
  ],
  "name" :
  "delegates" ,
  "outputs" :
  [
    {
      "internalType" :
```

```
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
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"view" ,  
"type" :  
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},  
{  
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[],  
"name" :  
"factory" ,  
"outputs" :  
[  
{  
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"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :
```

```
"fees" ,
"outputs" :
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{
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"address" ,
"name" :
"" ,
"type" :
"address"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
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"name" :
"amountIn" ,
"type" :
"uint256"
}
,
{
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"name" :
"tokenIn" ,
"type" :
"address"
}
]
,
```

```
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"" ,
"type" :
"uint256"
}
],
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"type" :
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},
{
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[
{
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"name" :
"account" ,
"type" :
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}
],
"name" :
"getCurrentVotes" ,
"outputs" :
[
{
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"uint256" ,
```

```
"name" :  
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"type" :  
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}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
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"name" :  
"account" ,  
"type" :  
"address"  
},  
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"name" :  
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"type" :  
"uint256"  
}  
],  
"name" :  
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"outputs" :  
[  
{  
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```
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"type" :
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}
],
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"type" :
"function"
},
{
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[],
"name" :
"getReserves" ,
"outputs" :
[
{
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"name" :
"_reserve0" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"_reserve1" ,
"type" :
"uint256"
},
{
"internalType" :
```



```
"uint256" ,
"name" :
"_blockTimestampLast" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
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[],
"name" :
"index0" ,
"outputs" :
[
{
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"name" :
"",
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
```

```
"index1" ,  
"outputs" :  
[  
  {  
    "internalType" :  
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    "name" :  
      "" ,  
    "type" :  
      "uint256"  
  }  
],  
"stateMutability" :  
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  "type" :  
    "function"  
},  
{  
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      {  
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          "address" ,  
        "name" :  
          "_token0" ,  
        "type" :  
          "address"  
      },  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "_token1" ,  
        "type" :  
          "address"  
      },  
    ],  
  {
```

```
"internalType" :
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"name" :
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"type" :
"uint256"
},
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"name" :
"_stable" ,
"type" :
"bool"
}
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"name" :
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"outputs" :
[],
"stateMutability" :
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"type" :
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},
{
"inputs" :
[],
"name" :
"lastObservation" ,
"outputs" :
[
{
"components" :
[
{
"internalType" :
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```
"uint256" ,
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"type" :
"uint256"
},
{
"internalType" :
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"name" :
"reserve0Cumulative" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"reserve1Cumulative" ,
"type" :
"uint256"
}
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"struct MuteSwitchPairDynamic.Observation" ,
"name" :
"" ,
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}
],
"stateMutability" :
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"type" :
"function"
},
{
```

```
"inputs" :  
[],  
"name" :  
"metadata" ,  
"outputs" :  
[  
  {  
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    "name" :  
      "dec0" ,  
    "type" :  
      "uint256"  
  },  
  {  
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    "name" :  
      "dec1" ,  
    "type" :  
      "uint256"  
  },  
  {  
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      "uint256" ,  
    "name" :  
      "r0" ,  
    "type" :  
      "uint256"  
  },  
  {  
    "internalType" :  
      "uint256" ,  
    "name" :  
      "r1" ,  
    "type" :  
      "uint256"
```

```
},  
  
{  
  "internalType" :  
    "bool",  
  "name" :  
    "st",  
  "type" :  
    "bool"  
},  
  
{  
  "internalType" :  
    "address",  
  "name" :  
    "t0",  
  "type" :  
    "address"  
},  
  
{  
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    "address",  
  "name" :  
    "t1",  
  "type" :  
    "address"  
}  
],  
  
"stateMutability" :  
  "view",  
  "type" :  
    "function"  
},  
  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address",
```

```
"name" :  
"to" ,  
"type" :  
"address"  
}  
],  
"name" :  
"mint" ,  
"outputs" :  
[  
{  
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"name" :  
"liquidity" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"name" ,  
"outputs" :  
[  
{  
"internalType" :  
"string" ,  
"name" :  
"" ,  
"type" :
```

```
"string"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
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"address" ,
"name" :
"" ,
"type" :
"address"
}
],
"name" :
"nonces" ,
"outputs" :
[
{
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"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
```



```
},  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "" ,  
      "type" :  
        "address"  
    }  
  ],  
  "name" :  
    "numCheckpoints" ,  
  "outputs" :  
  [  
    {  
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        "uint32" ,  
      "name" :  
        "" ,  
      "type" :  
        "uint32"  
    }  
  ],  
  "stateMutability" :  
    "view" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
  [],  
  "name" :  
    "observationLength" ,  
  "outputs" :
```

```
[
{
  "internalType" :
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  "name" :
  "" ,
  "type" :
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}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "observations" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "timestamp" ,
      "type" :
```

```
"uint256"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "reserve0Cumulative" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "uint256" ,
  "name" :
    "reserve1Cumulative" ,
  "type" :
    "uint256"
}
],
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  "function"
},
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  "inputs" :
    [],
  "name" :
    "pairFee" ,
  "outputs" :
    [
      {
        "internalType" :
          "uint256" ,
        "name" :
          "" ,
        "type" :
```

```
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"owner" ,
"type" :
"address"
},
{
"internalType" :
"address" ,
"name" :
"spender" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"value" ,
"type" :
"uint256"
},
{
"internalType" :
```

```
"uint256" ,  
"name" :  
"deadline" ,  
"type" :  
"uint256"  
},  
{  
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"bytes" ,  
"name" :  
"sig" ,  
"type" :  
"bytes"  
}  
],  
"name" :  
"permit" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"tokenIn" ,  
"type" :  
"address"  
},  
{  
"internalType" :
```

```
"uint256" ,
"name" :
"amountIn" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"points" ,
"type" :
"uint256"
}
],
"name" :
"prices" ,
"outputs" :
[
{
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"uint256[]" ,
"name" :
"",
"type" :
"uint256[]"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
```

"internalType" :

"address" ,

"name" :

"tokenIn" ,

"type" :

"address"

},

{

"internalType" :

"uint256" ,

"name" :

"amountIn" ,

"type" :

"uint256"

},

{

"internalType" :

"uint256" ,

"name" :

"granularity" ,

"type" :

"uint256"

}

],

"name" :

"quote" ,

"outputs" :

[

{

"internalType" :

"uint256" ,

"name" :

"amountOut" ,

"type" :

"uint256"

}

],

```
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"reserve0CumulativeLast" ,  
"outputs" :  
[  
{  
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"name" :  
"" ,  
"type" :  
"uint256"  
}  
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"stateMutability" :  
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"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"reserve1CumulativeLast" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :
```



```
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
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"name" :  
"tokenIn" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amountIn" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"points" ,  
"type" :  
"uint256"  
},
```

```
{
  "internalType" :
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  "name" :
    "window" ,
  "type" :
    "uint256"
}
],
"name" :
  "sample" ,
"outputs" :
[
  {
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      "uint256[]" ,
    "name" :
      "" ,
    "type" :
      "uint256[]"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
    [
      {
        "internalType" :
          "address" ,
        "name" :
          "to" ,
        "type" :
          "address"
```

```
}  
],  
"name" :  
"skim" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"stable" ,  
"outputs" :  
[  
{  
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"bool" ,  
"name" :  
"" ,  
"type" :  
"bool"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :
```

```
"address" ,
"name" :
"" ,
"type" :
"address"
}
],
"name" :
"supplyIndex0" ,
"outputs" :
[
{
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"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"" ,
"type" :
"address"
}
],
```

```

"name" :
"supplyIndex1" ,
"outputs" :
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{
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"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"amount0Out" ,
"type" :
"uint256"
}
,
{
"internalType" :
"uint256" ,
"name" :
"amount1Out" ,
"type" :
"uint256"
}
,

```

```
{
  "internalType" :
    "address" ,
  "name" :
    "to" ,
  "type" :
    "address"
},
{
  "internalType" :
    "bytes" ,
  "name" :
    "data" ,
  "type" :
    "bytes"
}
],
"name" :
  "swap" ,
"outputs" :
  [],
"stateMutability" :
  "nonpayable" ,
"type" :
  "function"
},
{
  "inputs" :
    [],
  "name" :
    "symbol" ,
  "outputs" :
    [
      {
        "internalType" :
          "string" ,
        "name" :
```

```
"" ,
"type" :
"string"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"sync" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"token0" ,
"outputs" :
[
{
"internalType" :
"address" ,
"name" :
"" ,
"type" :
"address"
}
]
```

```
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"token1" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"tokens" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,
```



```
"name" :  
"" ,  
"type" :  
"address"  
},  
{  
  "internalType" :  
    "address" ,  
  "name" :  
    "" ,  
  "type" :  
    "address"  
}  
],  
"stateMutability" :  
  "view" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [],  
  "name" :  
    "totalSupply" ,  
  "outputs" :  
    [  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "" ,  
        "type" :  
          "uint256"  
      }  
    ],  
  "stateMutability" :  
    "view" ,
```

```
"type" :  
"function"  
,  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
      "address" ,  
      "name" :  
      "to" ,  
      "type" :  
      "address"  
    },  
    {  
      "internalType" :  
      "uint256" ,  
      "name" :  
      "value" ,  
      "type" :  
      "uint256"  
    }  
  ],  
  "name" :  
  "transfer" ,  
  "outputs" :  
  [  
    {  
      "internalType" :  
      "bool" ,  
      "name" :  
      "" ,  
      "type" :  
      "bool"  
    }  
  ],  
  "stateMutability" :
```

"nonpayable" ,

"type" :

"function"

},

{

"inputs" :

[

{

"internalType" :

"address" ,

"name" :

"from" ,

"type" :

"address"

},

{

"internalType" :

"address" ,

"name" :

"to" ,

"type" :

"address"

},

{

"internalType" :

"uint256" ,

"name" :

"value" ,

"type" :

"uint256"

}

],

"name" :

"transferFrom" ,

"outputs" :

[

{

```
"internalType" :
```

```
"bool" ,
```

```
"name" :
```

```
"" ,
```

```
"type" :
```

```
"bool"
```

```
}
```

```
],
```

```
"stateMutability" :
```

```
"nonpayable" ,
```

```
"type" :
```

```
"function"
```

```
}}
```

## Amplifier

```
MuteAmplifier (v1) [{ "inputs" : [{ "internalType" : "address", "name" : "_lpToken", "type" : "address" }, { "internalType" : "uint256", "name" : "percentageMin", "type" : "uint256" }, { "internalType" : "uint256", "name" : "_mgmt_fee", "type" : "uint256" }, { "internalType" : "address", "name" : "_treasury", "type" : "address" }, { "internalType" : "uint256", "name" : "_ampRatio", "type" : "uint256" }, { "internalType" : "address", "name" : "_rewardToken", "type" : "address" } ], "stateMutability" : "nonpayable", "type" : "constructor" }, { "anonymous" : false, "inputs" : [{ "indexed" : false, "internalType" : "uint256", "name" : "totalRewards", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "startTime", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "endTime", "type" : "uint256" } ], "name" : "Deposit", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : true, "internalType" : "address", "name" : "staker", "type" : "address" }, { "indexed" : false, "internalType" : "uint256", "name" : "fee0", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "fee1", "type" : "uint256" } ], "name" : "FeePayout", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : true, "internalType" : "address", "name" : "previousOwner", "type" : "address" }, { "indexed" : true, "internalType" : "address", "name" : "newOwner", "type" : "address" } ], "name" : "OwnershipTransferred", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : true, "internalType" : "address", "name" : "staker", "type" : "address" }, { "indexed" : false, "internalType" : "uint256", "name" : "reward", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "remainder", "type" : "uint256" } ], "name" : "Payout", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : false, "internalType" : "uint256", "name" : "totalRewards", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "startTime", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "endTime", "type" : "uint256" } ], "name" : "Refresh", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : true, "internalType" : "address", "name" : "staker", "type" : "address" }, { "indexed" : false, "internalType" : "uint256", "name" : "lpTokenIn", "type" : "uint256" } ], "name" : "Stake", "type" : "event" }, { "anonymous" : false, "inputs" : [{ "indexed" : true, "internalType" : "address", "name" : "staker", "type" : "address" }, { "indexed" : false, "internalType" : "uint256", "name" : "lpTokenOut", "type" : "uint256" }, { "indexed" : false, "internalType" : "uint256", "name" : "remainder", "type" : "uint256" } ], "name" : "Withdraw", "type" : "event" }, { "inputs" : [], "name" : "_percentageMin", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "address[]", "name" : "_allow", "type" : "address[]" } ], "name" : "addToAllowList", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" : "", "type" : "address" } ], "name" : "allowListPools", "outputs" : [{ "internalType" : "bool", "name" : "", "type" : "bool" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "ampRatio", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" : "account", "type" : "address" }, { "internalType" : "bool", "name" : "enforce", "type" : "bool" } ], "name" : "calculateMultiplier", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "uint256", "name" : "min", "type" : "uint256" }, { "internalType" : "uint256", "name" : "max", "type" : "uint256" } ], "name" : "clamp_value", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" } ], "stateMutability" : "pure", "type" : "function" }, { "inputs" : [], "name" : "dToken", "outputs" : [{ "internalType" : "address", "name" : "", "type" : "address" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "dTokenLegacy", "outputs" : [{ "internalType" : "address", "name" : "", "type" : "address" } ], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" : "user", "type" : "address" } ], "name" : "driplInfo", "outputs" : [{ "components" : [{ "internalType" : "uint256", "name" : "perSecondReward", "type" : "uint256" }, { "internalType" : "uint256", "name" : "totalLP", "type" : "uint256" }, { "internalType" : "uint256", "name" : "multiplier_current", "type" : "uint256" }, { "internalType" : "uint256", "name" : "multiplier_last", "type" : "uint256" }, { "internalType" : "uint256", "name" : "currentReward", "type" : "uint256" }, { "internalType" : "uint256", "name" : "fee0", "type" : "uint256" }, { "internalType" : "uint256", "name" : "fee1", "type" : "uint256" } ] }, { "internalType" : "struct MuteAmplifier.DriplInfo", "name" : "info", "type" : "tuple" } ], "stateMutability" : "view",
```

```

"type" : "function" }, { "inputs" : [], "name" : "endTime", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256"
}], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "firstStakeTime", "outputs" : [{ "internalType" :
"uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" :
"uint256", "name" : "_startTime", "type" : "uint256" }, { "internalType" : "uint256", "name" : "_endTime", "type" : "uint256" }],
"name" : "initializeDeposit", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [], "name" :
"lpToken", "outputs" : [{ "internalType" : "address", "name" : "", "type" : "address" }], "stateMutability" : "view", "type" :
"function" }, { "inputs" : [], "name" : "management_fee", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256"
}], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "muteToken", "outputs" : [{ "internalType" : "address"
, "name" : "", "type" : "address" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "owner", "outputs" : [{
"internalType" : "address", "name" : "", "type" : "address" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [],
"name" : "payout", "outputs" : [{ "internalType" : "uint256", "name" : "reward", "type" : "uint256" }], "stateMutability" :
"nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" : "address[]", "name" : "_allow", "type" : "address[]" }],
"name" : "removeFromAllowList", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [], "name" :
"renounceOwnership", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" :
"address", "name" : "tokenToRescue", "type" : "address" }, { "internalType" : "address", "name" : "to", "type" : "address" }, {
"internalType" : "uint256", "name" : "amount", "type" : "uint256" }], "name" : "rescueTokens", "outputs" : [], "stateMutability" :
"nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" : "uint256", "name" : "lpTokenIn", "type" : "uint256" }],
"name" : "stake", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" : "uint256",
"name" : "lpTokenIn", "type" : "uint256" }, { "internalType" : "address", "name" : "_to", "type" : "address" }], "name" :
"stakeTo", "outputs" : [], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [], "name" : "startTime", "outputs" :
[{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [],
"name" : "totalClaimedFees0", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" :
"view", "type" : "function" }, { "inputs" : [], "name" : "totalClaimedFees1", "outputs" : [{ "internalType" : "uint256", "name" : "",
"type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "totalClaimedRewards", "outputs" :
[{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [],
"name" : "totalFees0", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view",
"type" : "function" }, { "inputs" : [], "name" : "totalFees1", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" :
"uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "totalReclaimed", "outputs" : [{
"internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [],
"name" : "totalRewards", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view",
"type" : "function" }, { "inputs" : [], "name" : "totalStake", "outputs" : [{ "internalType" : "uint256", "name" : "total", "type" :
"uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [], "name" : "totalStakers", "outputs" : [{ "internalType" :
"uint256", "name" : "", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" :
"address", "name" : "user", "type" : "address" }], "name" : "totalUserStake", "outputs" : [{ "internalType" : "uint256", "name" :
"total", "type" : "uint256" }], "stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" :
"newOwner", "type" : "address" }], "name" : "transferOwnership", "outputs" : [], "stateMutability" : "nonpayable", "type" :
"function" }, { "inputs" : [], "name" : "treasury", "outputs" : [{ "internalType" : "address", "name" : "", "type" : "address" }],
"stateMutability" : "view", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" : "", "type" : "address" }],
"name" : "userClaimedRewards", "outputs" : [{ "internalType" : "uint256", "name" : "", "type" : "uint256" }], "stateMutability" :
"view", "type" : "function" }, { "inputs" : [{ "internalType" : "address", "name" : "user", "type" : "address" }], "name" :
"userStakedBlock", "outputs" : [{ "internalType" : "uint256", "name" : "num", "type" : "uint256" }], "stateMutability" : "view",
"type" : "function" }, { "inputs" : [], "name" : "withdraw", "outputs" : [{ "internalType" : "uint256", "name" : "lpTokenOut", "type" :
"uint256" }, { "internalType" : "uint256", "name" : "reward", "type" : "uint256" }, { "internalType" : "uint256", "name" :
"remainder", "type" : "uint256" }, { "internalType" : "uint256", "name" : "fee0", "type" : "uint256" }, { "internalType" : "uint256",
"name" : "fee1", "type" : "uint256" }], "stateMutability" : "nonpayable", "type" : "function" }, { "inputs" : [{ "internalType" :
"address", "name" : "_pool", "type" : "address" }], "name" : "zap", "outputs" : [{ "internalType" : "uint256", "name" :
"lpTokenOut", "type" : "uint256" }, { "internalType" : "uint256", "name" : "reward", "type" : "uint256" }, { "internalType" :
"uint256", "name" : "remainder", "type" : "uint256" }, { "internalType" : "uint256", "name" : "fee0", "type" : "uint256" }, {
"internalType" : "uint256", "name" : "fee1", "type" : "uint256" }], "stateMutability" : "nonpayable", "type" : "function" ]

```

MuteAmplifierRedux (v2) [

```
{
```

```
"inputs" :
```

```
[
```

```
{
```

```
"internalType" :
```

```
"address" ,
```

```
"name" :
```

```
"_customTreasury" ,
```

```
"type" :
```

```
"address"
```

```
},  
  
{  
  "internalType" :  
    "address" ,  
  "name" :  
    "_lpToken" ,  
  "type" :  
    "address"  
},  
  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "_rewardBase" ,  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "address" ,  
  "name" :  
    "_oracle" ,  
  "type" :  
    "address"  
},  
  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "_mgmt_fee" ,  
  "type" :  
    "uint256"  
},  
  
{  
  "internalType" :  
    "uint256" ,  
  "name" :
```

```
"_percentageMulti" ,
"type" :
"uint256"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"constructor"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"_duration" ,
"type" :
"uint256"
}
],
"name" :
"EpochDurationChanged" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
```

```
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"_fee" ,
"type" :
"uint256"
}
],
"name" :
"ManagementFeeChanged" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
false ,
"internalType" :
"address" ,
"name" :
"_oracle" ,
"type" :
"address"
}
],
"name" :
"OracleChanged" ,
"type" :
"event"
},
{
```



```
"anonymous" :  
false ,  
"inputs" :  
[  
{  
  "indexed" :  
false ,  
  "internalType" :  
"uint256" ,  
  "name" :  
"_pMulti" ,  
  "type" :  
"uint256"  
}  
],  
"name" :  
"PercentageMultiChanged" ,  
"type" :  
"event"  
},  
{  
  "anonymous" :  
false ,  
  "inputs" :  
[  
{  
  "indexed" :  
false ,  
  "internalType" :  
"uint256" ,  
  "name" :  
"_rewardBase" ,  
  "type" :  
"uint256"  
}  
],  
"name" :
```

"RewardBaseChanged" ,

"type" :

"event"

},

{

"anonymous" :

false ,

"inputs" :

[

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"deposit" ,

"type" :

"uint256"

},

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"payout" ,

"type" :

"uint256"

},

{

"indexed" :

false ,

"internalType" :

"address" ,

"name" :

"depositor" ,

"type" :

```
"address"
},
{
  "indexed" :
false ,
  "internalType" :
  "uint256" ,
  "name" :
  "time" ,
  "type" :
  "uint256"
}
],
"name" :
"StakeCreated" ,
"type" :
"event"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256[]" ,
      "name" :
      "ids" ,
      "type" :
      "uint256[]"
    }
  ],
  "name" :
  "GetUsedVeInfo" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256[]" ,
```

```
"name" :  
"" ,  
"type" :  
"uint256[]"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"account" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"_index" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"GetUserStake" ,  
"outputs" :  
[  
{  
"components" :
```

```
[
{
  "internalType" :
  "uint256" ,
  "name" :
  "stakeAmount" ,
  "type" :
  "uint256"
},
{
  "internalType" :
  "uint256" ,
  "name" :
  "stakedTime" ,
  "type" :
  "uint256"
},
{
  "internalType" :
  "uint256" ,
  "name" :
  "rewardAmount" ,
  "type" :
  "uint256"
},
{
  "internalType" :
  "uint256" ,
  "name" :
  "rewardClaimed" ,
  "type" :
  "uint256"
},
{
  "internalType" :
  "uint256" ,
  "name" :
```

```
"epochDuration" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"lastRedeem" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"supplyIndex0" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"supplyIndex1" ,  
"type" :  
"uint256"  
}  
},  
{  
"internalType" :  
"struct MuteAmplifierRedux.StakeTerms" ,  
"name" :  
"stake" ,  
"type" :  
"tuple"  
}  
},
```

```
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"account" ,  
"type" :  
"address"  
}  
],  
"name" :  
"GetUserStakeLength" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :
```

```
[
{
  "internalType" :
  "address" ,
  "name" :
  "account" ,
  "type" :
  "address"
}
],
"name" :
"GetUserStakes" ,
"outputs" :
[
{
  "components" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "stakeAmount" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "stakedTime" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
```



```
"rewardAmount" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"rewardClaimed" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"epochDuration" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"lastRedeem" ,  
"type" :  
"uint256"  
,  
{  
"internalType" :  
"uint256" ,  
"name" :  
"supplyIndex0" ,  
"type" :  
"uint256"  
,  
{
```

```
"internalType" :
"uint256" ,
"name" :
"supplyIndex1" ,
"type" :
"uint256"
}
],
"internalType" :
"struct MuteAmplifierRedux.StakeTerms[]" ,
"name" :
"",
"type" :
"tuple[]"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"account" ,
"type" :
"address"
},
{
"internalType" :
"uint256" ,
"name" :
"amount" ,
```

```
"type" :
"uint256"
},
{
"internalType" :
"uint256[]",
"name" :
"vlds",
"type" :
"uint256[]"
}
],
"name" :
"calculateMultiplier",
"outputs" :
[
{
"internalType" :
"uint256",
"name" :
"",
"type" :
"uint256"
}
],
"stateMutability" :
"view",
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256",
"name" :
```

```
"min" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"max" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"clamp_value" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"pure" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"currentEpoch" ,  
"outputs" :
```

```
[
{
  "internalType" :
  "uint256" ,
  "name" :
  "" ,
  "type" :
  "uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "value" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256[]" ,
      "name" :
      "vlds" ,
      "type" :
      "uint256[]"
    }
  ],
  "name" :
  "deposit" ,
```

```
"outputs" :  
[  
  {  
    "internalType" :  
      "uint256" ,  
    "name" :  
      "" ,  
    "type" :  
      "uint256"  
  }  
],  
"stateMutability" :  
  "nonpayable" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [],  
  "name" :  
    "epoch" ,  
  "outputs" :  
    [  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "" ,  
        "type" :  
          "uint256"  
      }  
    ],  
  "stateMutability" :  
    "view" ,  
  "type" :  
    "function"  
},
```

```
{
  "inputs" :
  [],
  "name" :
  "epochDuration" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
    }
  ],
  "stateMutability" :
  "view" ,
  "type" :
  "function"
},
{
  "inputs" :
  [],
  "name" :
  "management_fee" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
    }
  ],
}
```

"stateMutability" :

"view" ,

"type" :

"function"

},

{

"inputs" :

[],

"name" :

"maxDeposit" ,

"outputs" :

[

{

"internalType" :

"uint256" ,

"name" :

"" ,

"type" :

"uint256"

}

],

"stateMutability" :

"view" ,

"type" :

"function"

},

{

"inputs" :

[

{

"internalType" :

"address" ,

"name" :

"account" ,

"type" :

"address"

},



```
{
  "internalType" :
    "uint256" ,
  "name" :
    "_am" ,
  "type" :
    "uint256"
},
{
  "internalType" :
    "uint256[]" ,
  "name" :
    "velds" ,
  "type" :
    "uint256[]"
}
],
"name" :
  "payoutFor" ,
"outputs" :
[
  {
    "internalType" :
      "uint256" ,
    "name" :
      "" ,
    "type" :
      "uint256"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
```

```
[,
  "name" :
  "percentageMulti" ,
  "outputs" :
  [
  {
    "internalType" :
    "uint256" ,
    "name" :
    "" ,
    "type" :
    "uint256"
  }
  ],
  "stateMutability" :
  "view" ,
  "type" :
  "function"
},
{
  "inputs" :
  [],
  "name" :
  "redeemRewards" ,
  "outputs" :
  [],
  "stateMutability" :
  "nonpayable" ,
  "type" :
  "function"
},
{
  "inputs" :
  [
  {
    "internalType" :
    "address" ,
```

```
"name" :  
"account" ,  
"type" :  
"address"  
}  
],  
"name" :  
"redeemRewardsView" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"rewardBase" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :
```

```
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"_duration" ,
"type" :
"uint256"
}
],
"name" :
"setEpochDuration" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"_fee" ,
```

```
"type" :  
"uint256"  
}  
],  
"name" :  
"setManagementFee" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"_oracle" ,  
"type" :  
"address"  
}  
],  
"name" :  
"setOracle" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[
```

```
{
  "internalType" :
    "uint256" ,
  "name" :
    "_pMulti" ,
  "type" :
    "uint256"
}
],
"name" :
  "setPercentageMulti" ,
"outputs" :
  [],
"stateMutability" :
  "nonpayable" ,
"type" :
  "function"
},
{
  "inputs" :
    [
      {
        "internalType" :
          "uint256" ,
        "name" :
          "_rewardBase" ,
        "type" :
          "uint256"
      }
    ],
  "name" :
    "setRewardBase" ,
  "outputs" :
    [],
  "stateMutability" :
    "nonpayable" ,
  "type" :
```

```
"function"
},
{
  "inputs" :
  [],
  "name" :
  "totalDebt" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
    }
  ],
  "stateMutability" :
  "view" ,
  "type" :
  "function"
},
{
  "inputs" :
  [],
  "name" :
  "totalPayoutGiven" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
```

```
}  
],  
"stateMutability" :  
"view",  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256",  
"name" :  
"",  
"type" :  
"uint256"  
}  
],  
"name" :  
"usedVelds",  
"outputs" :  
[  
{  
"internalType" :  
"uint256",  
"name" :  
"",  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view",  
"type" :  
"function"  
},
```



```
{
  "inputs" :
  [
    {
      "internalType" :
      "address" ,
      "name" :
      "" ,
      "type" :
      "address"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
  "userStakes" ,
  "outputs" :
  [
    {
      "internalType" :
      "uint256" ,
      "name" :
      "stakeAmount" ,
      "type" :
      "uint256"
    },
    {
      "internalType" :
      "uint256" ,
      "name" :
      "stakedTime" ,
```

```
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"rewardAmount" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"rewardClaimed" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"epochDuration" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"lastRedeem" ,
"type" :
"uint256"
},
{
"internalType" :
```

```
"uint256" ,
"name" :
"supplyIndex0" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"supplyIndex1" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"withdraw" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"withdrawEmergency" ,
```

```
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
}  
]
```

## DAO & Governance

```
veMUTE [  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"_muteToken" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"address[]" ,  
"name" :  
"dmute_legacy" ,  
"type" :  
"address[]"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"_metadata" ,  
"type" :  
"address"  
}  
}
```

```
],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"constructor"  
},  
{  
"inputs" :  
[],  
"name" :  
"InvalidShortString" ,  
"type" :  
"error"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"string" ,  
"name" :  
"str" ,  
"type" :  
"string"  
}  
],  
"name" :  
"StringTooLong" ,  
"type" :  
"error"  
},  
{  
"anonymous" :  
false ,  
"inputs" :  
[  
{
```

```
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"owner" ,
"type" :
"address"
},
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"approved" ,
"type" :
"address"
},
{
"indexed" :
true ,
"internalType" :
"uint256" ,
"name" :
"tokenId" ,
"type" :
"uint256"
}
],
"name" :
"Approval" ,
"type" :
"event"
},
{
"anonymous" :
```

```
false ,  
"inputs" :  
[  
  {  
    "indexed" :  
true ,  
    "internalType" :  
"address" ,  
    "name" :  
"owner" ,  
    "type" :  
"address"  
  },  
  {  
    "indexed" :  
true ,  
    "internalType" :  
"address" ,  
    "name" :  
"operator" ,  
    "type" :  
"address"  
  },  
  {  
    "indexed" :  
false ,  
    "internalType" :  
"bool" ,  
    "name" :  
"approved" ,  
    "type" :  
"bool"  
  }  
],  
"name" :  
"ApprovalForAll" ,  
"type" :
```

```
"event"
},
{
  "anonymous" :
false ,
  "inputs" :
[
  {
    "indexed" :
false ,
    "internalType" :
"uint256" ,
    "name" :
"_fromTokenId" ,
    "type" :
"uint256"
  },
  {
    "indexed" :
false ,
    "internalType" :
"uint256" ,
    "name" :
"_toTokenId" ,
    "type" :
"uint256"
  }
],
  "name" :
"BatchMetadataUpdate" ,
  "type" :
"event"
},
{
  "anonymous" :
false ,
  "inputs" :
```



```
[  
  {  
    "indexed" :  
    true ,  
    "internalType" :  
    "address" ,  
    "name" :  
    "delegator" ,  
    "type" :  
    "address"  
  },  
  {  
    "indexed" :  
    true ,  
    "internalType" :  
    "uint256" ,  
    "name" :  
    "fromDelegate" ,  
    "type" :  
    "uint256"  
  },  
  {  
    "indexed" :  
    true ,  
    "internalType" :  
    "address" ,  
    "name" :  
    "toDelegate" ,  
    "type" :  
    "address"  
  }  
],  
  "name" :  
  "DelegateChanged" ,  
  "type" :  
  "event"  
},
```

```
{
  "anonymous" :
  false ,
  "inputs" :
  [
    {
      "indexed" :
      true ,
      "internalType" :
      "address" ,
      "name" :
      "delegate" ,
      "type" :
      "address"
    },
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "previousBalance" ,
      "type" :
      "uint256"
    },
    {
      "indexed" :
      false ,
      "internalType" :
      "uint256" ,
      "name" :
      "newBalance" ,
      "type" :
      "uint256"
    }
  ],
  "name" :
```

"DelegateVotesChanged" ,

"type" :

"event"

},

{

"anonymous" :

false ,

"inputs" :

[],

"name" :

"EIP712DomainChanged" ,

"type" :

"event"

},

{

"anonymous" :

false ,

"inputs" :

[

{

"indexed" :

true ,

"internalType" :

"address" ,

"name" :

"sender" ,

"type" :

"address"

},

{

"indexed" :

false ,

"internalType" :

"uint256" ,

"name" :

"\_tokenId" ,

"type" :

```
"uint256"
},
{
  "indexed" :
false ,
  "internalType" :
"uint256" ,
  "name" :
"oldTime" ,
  "type" :
"uint256"
},
{
  "indexed" :
false ,
  "internalType" :
"uint256" ,
  "name" :
"newTime" ,
  "type" :
"uint256"
}
],
"name" :
"IncreaseLockEvent" ,
"type" :
"event"
},
{
  "anonymous" :
false ,
  "inputs" :
[
  {
    "indexed" :
true ,
    "internalType" :
```

```
"address" ,  
"name" :  
"from" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
false ,  
"internalType" :  
"uint256" ,  
"name" :  
"lockAmount" ,  
"type" :  
"uint256"  
},  
{  
"indexed" :  
false ,  
"internalType" :  
"uint256" ,  
"name" :  
"mintedAmount" ,  
"type" :  
"uint256"  
},  
{
```

```
"indexed" :  
false ,  
"internalType" :  
"uint256" ,  
"name" :  
"totalTime" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"LockEvent" ,  
"type" :  
"event"  
},  
{  
"anonymous" :  
false ,  
"inputs" :  
[  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"sender" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"owner_0" ,
```

```
"type" :  
"address"  
,  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "address" ,  
  "name" :  
    "owner_1" ,  
  "type" :  
    "address"  
},  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "_tokenId0" ,  
  "type" :  
    "uint256"  
},  
{  
  "indexed" :  
    false ,  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "_tokenId1" ,  
  "type" :  
    "uint256"  
},  
{  
  "indexed" :  
    false ,  
  "internalType" :
```

```
"uint256" ,
"name" :
"_newTokenId" ,
"type" :
"uint256"
}
],
"name" :
"MergeEvent" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"_tokenId" ,
"type" :
"uint256"
}
],
"name" :
"MetadataUpdate" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
```



```
[
{
  "indexed" :
true ,
  "internalType" :
  "address" ,
  "name" :
  "previousOwner" ,
  "type" :
  "address"
},
{
  "indexed" :
true ,
  "internalType" :
  "address" ,
  "name" :
  "newOwner" ,
  "type" :
  "address"
}
],
  "name" :
  "OwnershipTransferStarted" ,
  "type" :
  "event"
},
{
  "anonymous" :
false ,
  "inputs" :
  [
  {
    "indexed" :
    true ,
    "internalType" :
    "address" ,
```

```
"name" :  
"previousOwner" ,  
"type" :  
"address"  
},  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"newOwner" ,  
"type" :  
"address"  
}  
],  
"name" :  
"OwnershipTransferred" ,  
"type" :  
"event"  
},  
{  
"anonymous" :  
false ,  
"inputs" :  
[  
{  
"indexed" :  
true ,  
"internalType" :  
"address" ,  
"name" :  
"from" ,  
"type" :  
"address"  
},  
{
```

```
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"to" ,
"type" :
"address"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"unlockedAmount" ,
"type" :
"uint256"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"burnAmount" ,
"type" :
"uint256"
}
],
"name" :
"RedeemEvent" ,
"type" :
"event"
},
{
"anonymous" :
```

```
false ,  
"inputs" :  
[  
  {  
    "indexed" :  
true ,  
    "internalType" :  
"address" ,  
    "name" :  
"sender" ,  
    "type" :  
"address"  
  },  
  {  
    "indexed" :  
true ,  
    "internalType" :  
"address" ,  
    "name" :  
"owner" ,  
    "type" :  
"address"  
  },  
  {  
    "indexed" :  
false ,  
    "internalType" :  
"uint256" ,  
    "name" :  
"_oldTokenId" ,  
    "type" :  
"uint256"  
  },  
  {  
    "indexed" :  
false ,  
    "internalType" :
```

```
"uint256" ,
"name" :
"_tokenId1" ,
"type" :
"uint256"
},
{
"indexed" :
false ,
"internalType" :
"uint256" ,
"name" :
"_tokenId2" ,
"type" :
"uint256"
}
],
"name" :
"SplitEvent" ,
"type" :
"event"
},
{
"anonymous" :
false ,
"inputs" :
[
{
"indexed" :
true ,
"internalType" :
"address" ,
"name" :
"from" ,
"type" :
"address"
}
],
```

```
{
  "indexed" :
  true ,
  "internalType" :
  "address" ,
  "name" :
  "to" ,
  "type" :
  "address"
},
{
  "indexed" :
  true ,
  "internalType" :
  "uint256" ,
  "name" :
  "tokenId" ,
  "type" :
  "uint256"
}
],
"name" :
"Transfer" ,
"type" :
"event"
},
{
  "inputs" :
  [],
  "name" :
  "CLOCK_MODE" ,
  "outputs" :
  [
    {
      "internalType" :
      "string" ,
      "name" :
```

```
"" ,
"type" :
"string"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"DELEGATION_TYPEHASH" ,
"outputs" :
[
{
"internalType" :
"bytes32" ,
"name" :
"" ,
"type" :
"bytes32"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"DOMAIN_SEPARATOR" ,
"outputs" :
```

```
[
{
  "internalType" :
  "bytes32" ,
  "name" :
  "" ,
  "type" :
  "bytes32"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
  "inputs" :
  [],
  "name" :
  "DOMAIN_TYPEHASH" ,
  "outputs" :
  [
  {
    "internalType" :
    "bytes32" ,
    "name" :
    "" ,
    "type" :
    "bytes32"
  }
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
```



```
"inputs" :  
[  
  {  
    "internalType" :  
      "address" ,  
    "name" :  
      "from" ,  
    "type" :  
      "address"  
  }  
],  
"name" :  
"GetLegacyUpgraded" ,  
"outputs" :  
[  
  {  
    "internalType" :  
      "bool" ,  
    "name" :  
      "valid" ,  
    "type" :  
      "bool"  
  }  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "uint256" ,  
        "name" :  
          "_id" ,
```

```
"type" :  
  "uint256"  
},  
],  
"name" :  
  "GetLockInfo" ,  
"outputs" :  
  [  
    {  
      "components" :  
        [  
          {  
            "internalType" :  
              "uint256" ,  
            "name" :  
              "amount" ,  
            "type" :  
              "uint256"  
          },  
          {  
            "internalType" :  
              "uint256" ,  
            "name" :  
              "time" ,  
            "type" :  
              "uint256"  
          },  
          {  
            "internalType" :  
              "uint256" ,  
            "name" :  
              "vote_weight" ,  
            "type" :  
              "uint256"  
          },  
          {  
            "internalType" :
```

```
"bool" ,
"name" :
"legacy" ,
"type" :
"bool"
}
],
"internalType" :
"struct veMUTEV2.UserLockInfo" ,
"name" :
"_info" ,
"type" :
"tuple"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"GetMintCount" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"_count" ,
"type" :
"uint256"
}
],
"stateMutability" :
```

```
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"account" ,  
"type" :  
"address"  
}  
],  
"name" :  
"GetUnderlyingTokens" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"amount" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[
```

```
{
  "internalType" :
    "address" ,
  "name" :
    "account" ,
  "type" :
    "address"
}
],
"name" :
  "GetVotingTokens" ,
"outputs" :
[
  {
    "internalType" :
      "uint256" ,
    "name" :
      "amount" ,
    "type" :
      "uint256"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
    [
      {
        "internalType" :
          "uint256" ,
        "name" :
          "_tokenId" ,
        "type" :
          "uint256"
```

```
},  
{  
  "internalType" :  
    "uint256",  
  "name" :  
    "_time",  
  "type" :  
    "uint256"  
}  
],  
  "name" :  
    "IncreaseLockTime",  
  "outputs" :  
    [],  
  "stateMutability" :  
    "nonpayable",  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "uint256",  
        "name" :  
          "_amount",  
        "type" :  
          "uint256"  
      },  
      {  
        "internalType" :  
          "uint256",  
        "name" :  
          "_lock_time",  
        "type" :  
          "uint256"
```

```
}  
],  
"name" :  
"Lock" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"LockLegacy" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256[][]" ,  
"name" :  
"locks" ,  
"type" :  
"uint256[][]"  
}  
],  
"name" :  
"LockLegacyIndex" ,
```

```
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"_amount" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"uint256" ,  
"name" :  
"_lock_time" ,  
"type" :  
"uint256"  
},  
{  
"internalType" :  
"address" ,  
"name" :  
"to" ,  
"type" :  
"address"  
}  
],  
"name" :  
"LockTo" ,
```



```
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"MAX_LOCK" ,  
"outputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"  
}  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"MAX_LOCK_LEGACY" ,  
"outputs" :  
[  
{  
"internalType" :
```

```
"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"MIN_LOCK" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
```

```
"internalType" :
"uint256" ,
"name" :
"_tokenId0" ,
"type" :
"uint256"
},
{
"internalType" :
"uint256" ,
"name" :
"_tokenId1" ,
"type" :
"uint256"
}
],
"name" :
"Merge" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"_newTokenId" ,
"type" :
"uint256"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[],
```

```
"name" :  
"MuteToken",  
"outputs" :  
[  
{  
  "internalType" :  
    "address",  
  "name" :  
    "",  
  "type" :  
    "address"  
}  
],  
"stateMutability" :  
  "view",  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "uint256[]",  
        "name" :  
          "lock_index",  
        "type" :  
          "uint256[]"br/>      }  
    ],  
    "name" :  
      "Redeem",  
    "outputs" :  
      [],  
    "stateMutability" :  
      "nonpayable",  
    "type" :
```

```
"function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256[]",
      "name" :
      "ids",
      "type" :
      "uint256[]"
    },
    {
      "internalType" :
      "address",
      "name" :
      "to",
      "type" :
      "address"
    }
  ],
  "name" :
  "RedeemTo",
  "outputs" :
  [],
  "stateMutability" :
  "nonpayable",
  "type" :
  "function"
},
{
  "inputs" :
  [
    {
      "internalType" :
      "uint256",
```

```
"name" :
  "_tokenId" ,
  "type" :
    "uint256"
  },
  {
    "internalType" :
      "uint256" ,
      "name" :
        "_amount" ,
        "type" :
          "uint256"
    }
  ],
  "name" :
    "Split" ,
    "outputs" :
      [
        {
          "internalType" :
            "uint256" ,
            "name" :
              "_tokenId1" ,
              "type" :
                "uint256"
          },
          {
            "internalType" :
              "uint256" ,
              "name" :
                "_tokenId2" ,
                "type" :
                  "uint256"
            }
          ],
          "stateMutability" :
            "nonpayable" ,
```

```
"type" :  
"function"  
,  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
      "uint256" ,  
      "name" :  
      "_tokenId" ,  
      "type" :  
      "uint256"  
    },  
    {  
      "internalType" :  
      "uint256" ,  
      "name" :  
      "_vote_amount" ,  
      "type" :  
      "uint256"  
    }  
  ],  
  "name" :  
  "SplitLegacy" ,  
  "outputs" :  
  [  
    {  
      "internalType" :  
      "uint256" ,  
      "name" :  
      "_tokenId1" ,  
      "type" :  
      "uint256"  
    },  
    {  
      "internalType" :
```

```
"uint256" ,
"name" :
"_tokenId2" ,
"type" :
"uint256"
}
],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"acceptOwnership" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"to" ,
"type" :
"address"
},
{
"internalType" :
```



```
"uint256" ,
"name" :
"tokenId" ,
"type" :
"uint256"
}
],
"name" :
"approve" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"owner" ,
"type" :
"address"
}
],
"name" :
"balanceOf" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"" ,
```

```
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256[]" ,
"name" :
"_ids" ,
"type" :
"uint256[]"
}
],
"name" :
"burnLegacy" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
```

```
"_metadata" ,
"type" :
"address"
}
],
"name" :
"changeMetadataProxy" ,
"outputs" :
[],
"stateMutability" :
"nonpayable" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"clock" ,
"outputs" :
[
{
"internalType" :
"uint48" ,
"name" :
"",
"type" :
"uint48"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
```

```
[
{
  "internalType" :
  "uint256" ,
  "name" :
  "" ,
  "type" :
  "uint256"
}
],
"name" :
"dMuteLegacy" ,
"outputs" :
[
{
  "internalType" :
  "address" ,
  "name" :
  "" ,
  "type" :
  "address"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
  "inputs" :
  [
  {
    "internalType" :
    "uint256" ,
    "name" :
    "tokenId" ,
    "type" :
```

```
"uint256"
},
{
  "internalType" :
    "address" ,
    "name" :
      "delegatee" ,
      "type" :
        "address"
    }
  ],
  "name" :
    "delegate" ,
    "outputs" :
      [],
      "stateMutability" :
        "nonpayable" ,
        "type" :
          "function"
    },
    {
      "inputs" :
        [
          {
            "internalType" :
              "uint256" ,
              "name" :
                "delegator" ,
                "type" :
                  "uint256"
            },
            {
              "internalType" :
                "address" ,
                "name" :
                  "delegatee" ,
                  "type" :
```

"address"

},

{

"internalType" :

"uint256" ,

"name" :

"nonce" ,

"type" :

"uint256"

},

{

"internalType" :

"uint256" ,

"name" :

"expiry" ,

"type" :

"uint256"

},

{

"internalType" :

"uint8" ,

"name" :

"v" ,

"type" :

"uint8"

},

{

"internalType" :

"bytes32" ,

"name" :

"r" ,

"type" :

"bytes32"

},

{

"internalType" :

"bytes32" ,

```
"name" :  
"s" ,  
"type" :  
"bytes32"  
}  
],  
"name" :  
"delegateBySig" ,  
"outputs" :  
[],  
"stateMutability" :  
"nonpayable" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[  
{  
"internalType" :  
"uint256" ,  
"name" :  
"tokenId" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"delegates" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :
```

```
"address"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"eip712Domain" ,
"outputs" :
[
{
"internalType" :
"bytes1" ,
"name" :
"fields" ,
"type" :
"bytes1"
},
{
"internalType" :
"string" ,
"name" :
"name" ,
"type" :
"string"
},
{
"internalType" :
"string" ,
"name" :
"version" ,
"type" :
```



```
"string"
},
{
  "internalType" :
    "uint256" ,
    "name" :
    "chainId" ,
    "type" :
    "uint256"
  },
  {
    "internalType" :
      "address" ,
      "name" :
      "verifyingContract" ,
      "type" :
      "address"
    },
    {
      "internalType" :
        "bytes32" ,
        "name" :
        "salt" ,
        "type" :
        "bytes32"
      },
      {
        "internalType" :
          "uint256[]" ,
          "name" :
          "extensions" ,
          "type" :
          "uint256[]"
        }
      ],
      "stateMutability" :
        "view" ,
```

```
"type" :  
"function"  
,  
{  
  "inputs" :  
  [  
    {  
      "internalType" :  
        "uint256" ,  
      "name" :  
        "tokenId" ,  
      "type" :  
        "uint256"  
    }  
  ],  
  "name" :  
    "getApproved" ,  
  "outputs" :  
  [  
    {  
      "internalType" :  
        "address" ,  
      "name" :  
        "" ,  
      "type" :  
        "address"  
    }  
  ],  
  "stateMutability" :  
    "view" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
  [  
    {
```

```
"internalType" :
"uint256" ,
"name" :
"timepoint" ,
"type" :
"uint256"
}
],
"name" :
"getPastTotalSupply" ,
"outputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"address" ,
"name" :
"account" ,
"type" :
"address"
}
],
```

```
{
  "internalType" :
    "uint256" ,
  "name" :
    "timepoint" ,
  "type" :
    "uint256"
}
],
"name" :
  "getPastVotes" ,
"outputs" :
[
  {
    "internalType" :
      "uint256" ,
    "name" :
      "" ,
    "type" :
      "uint256"
  }
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
    [
      {
        "internalType" :
          "address" ,
        "name" :
          "account" ,
        "type" :
          "address"
      }
    ]
  ,
  "name" :
    "getPastVotes" ,
  "outputs" :
    [
      {
        "internalType" :
          "uint256" ,
        "name" :
          "" ,
        "type" :
          "uint256"
      }
    ]
  ,
  "stateMutability" :
    "view"
}
]
```

```
}  
],  
"name" :  
"getVotes" ,  
"outputs" :  
[  
{  
  "internalType" :  
    "uint256" ,  
  "name" :  
    "" ,  
  "type" :  
    "uint256"  
}  
],  
"stateMutability" :  
  "view" ,  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "owner" ,  
        "type" :  
          "address"  
      },  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "operator" ,  
        "type" :
```

```
"address"
}
],
"name" :
"isApprovedForAll" ,
"outputs" :
[
{
"internalType" :
"bool" ,
"name" :
"" ,
"type" :
"bool"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
"internalType" :
"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"name" :
"legacyNFTs" ,
"outputs" :
[
```

```
{
  "internalType" :
    "uint256" ,
  "name" :
    "" ,
  "type" :
    "uint256"
}
],
"stateMutability" :
  "view" ,
  "type" :
    "function"
},
{
  "inputs" :
    [],
  "name" :
    "metaProxy" ,
  "outputs" :
    [
      {
        "internalType" :
          "address" ,
        "name" :
          "" ,
        "type" :
          "address"
      }
    ],
  "stateMutability" :
    "view" ,
  "type" :
    "function"
},
{
  "inputs" :
```

```
[,
  "name" :
  "name" ,
  "outputs" :
  [
  {
    "internalType" :
    "string" ,
    "name" :
    "" ,
    "type" :
    "string"
  }
  ],
  "stateMutability" :
  "view" ,
  "type" :
  "function"
},
{
  "inputs" :
  [
  {
    "internalType" :
    "address" ,
    "name" :
    "owner" ,
    "type" :
    "address"
  }
  ],
  "name" :
  "nonces" ,
  "outputs" :
  [
  {
    "internalType" :
```



```
"uint256" ,
"name" :
"" ,
"type" :
"uint256"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[],
"name" :
"owner" ,
"outputs" :
[
{
"internalType" :
"address" ,
"name" :
"" ,
"type" :
"address"
}
],
"stateMutability" :
"view" ,
"type" :
"function"
},
{
"inputs" :
[
{
```

```
"internalType" :  
"uint256" ,  
"name" :  
"tokenId" ,  
"type" :  
"uint256"  
}  
],  
"name" :  
"ownerOf" ,  
"outputs" :  
[  
{  
"internalType" :  
"address" ,  
"name" :  
"" ,  
"type" :  
"address"  
}  
],  
"stateMutability" :  
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{  
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"outputs" :  
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{  
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"name" :
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```
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"function"  
},  
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"type" :  
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},  
{  
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[  
{  
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"address" ,  
"name" :  
"from" ,  
"type" :  
"address"  
},  
{  
"internalType" :  
"address" ,  
"name" :
```

```
"to" ,
"type" :
"address"
},
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"uint256" ,
"name" :
"tokenId" ,
"type" :
"uint256"
}
],
"name" :
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[],
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"type" :
"function"
},
{
"inputs" :
[
{
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"address" ,
"name" :
"from" ,
"type" :
"address"
},
{
"internalType" :
"address" ,
"name" :
```

```
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},
{
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"uint256" ,
"name" :
"tokenId" ,
"type" :
"uint256"
},
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"bytes" ,
"name" :
"data" ,
"type" :
"bytes"
}
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"function"
},
{
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{
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"address" ,
"name" :
```

```
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},
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"bool"
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},
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"bytes4"
}
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"outputs" :
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```
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    "function"
},
{
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  "outputs" :
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      "name" :
        "" ,
      "type" :
        "string"
    }
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  "stateMutability" :
    "view" ,
  "type" :
    "function"
},
{
```

```
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"tokenByIndex" ,  
"outputs" :  
[  
  {  
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    "name" :  
      "" ,  
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  }  
],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
  "inputs" :  
    [  
      {  
        "internalType" :  
          "address" ,  
        "name" :  
          "owner" ,
```



```
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"address"  
,  
{  
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  "name" :  
    "index",  
  "type" :  
    "uint256"  
}  
,  
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  "tokenOfOwnerByIndex",  
"outputs" :  
[  
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    "name" :  
      "",  
    "type" :  
      "uint256"  
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,  
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    "view",  
  "type" :  
    "function"  
},  
{  
  "inputs" :  
[  
  {  
    "internalType" :  
      "uint256",  
    "name" :
```

```
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],  
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"tokenURI" ,  
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"name" :  
"" ,  
"type" :  
"string"  
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],  
"stateMutability" :  
"view" ,  
"type" :  
"function"  
},  
{  
"inputs" :  
[],  
"name" :  
"totalSupply" ,  
"outputs" :  
[  
{  
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"uint256" ,  
"name" :  
"" ,  
"type" :  
"uint256"
```

```
}  
],  
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"view",  
"type" :  
"function"  
},  
{  
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{  
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"name" :  
"from",  
"type" :  
"address"  
},  
{  
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"address",  
"name" :  
"to",  
"type" :  
"address"  
},  
{  
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"name" :  
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"type" :  
"uint256"  
}  
],  
"name" :  
"transferFrom",
```

```
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"outputs" :  
[  
{  
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"uint256" ,

"name" :

"" ,

"type" :

"uint256"

}

],

"stateMutability" :

"view" ,

"type" :

"function"

}

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"internalType" : "uint256" , "name" : "" , "type" : "uint256" }}, "stateMutability" : "view" , "type" : "function" }]} Koi Contracts - Previous Contracts Next - Koi Contracts Router Last modified 3mo ago Was this page helpful?
```

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