Liquidity Provider FAQs

If you have questions related to trading, then please see Trader FAQs . If your question is not covered, please ask on Discord in #✍ | feedback .

What is Orca?

Orca is the easiest place to trade cryptocurrency on the Solana blockchain. On Orca, you can trade tokens cheaply, quickly, and confidently (thanks to the Fair Price Indicator) and with low slippage (thanks to the capital efficiency of Orca's CLAMM pools). Additionally, you can provide liquidity to Orca's concentrated liquidity (CLAMM) pools to earn trading fees and token emissions.

Does Orca have a governance token?

The ORCA governance token was launched on 9th August 2021. See the Tokenomics page for more details. For details of the governance process please see Governance .

Which wallets can I use with Orca?

To connect to Orca you will need a compatible wallet, a list of currently supported wallets can be found here .

Orca plans to integrate other wallets that support Solana program execution, as they are released.

Can I use Orca on my phone?

You can use Orca on the phone with mobile device compatible wallets, you can find a list here .

Has Orca been audited?

Orca's concentrated liquidity product has been double audited by Kudelski and Neodyme .

What are the risks of using Orca?

Orca is a relatively new application on a fairly new blockchain. There are a number of risks to using Orca:

1. Smart contract vulnerabilities:
2. The Solana Mainnet is still in beta, and there is always the possibility of an exploit in the smart contract. To mitigate this Orca's concentrated liquidity product is double audited
3. . Nevertheless, Orca strongly encourages taking the time to understand the risks before trading.
4. Divergence loss (impermanent loss):
5. As token prices diverge from their deposit values, liquidity value falls in comparison to holding the same tokens in a wallet. Through volatility, deposited liquidity can be worth less at withdraw than at deposit: price action can cause liquidity providers to lose money. For more information, this blog post from the Uniswap team
6. is a great primer. The risk of divergence loss is amplified in concentrated liquidity pools.
7. Divergence loss as a metric, is a comparison of value versus simple holding. Loss in value due to changes in underlying asset value is not
8. divergence loss.
9. Wallet providers:
10. Orca is compatible with a wide range of wallets (see compatible wallets
11.). A wallet exploit could affect users.
12. Orca cannot and does not endorse nor guarantee the security of compatible wallets. Podmates should exercise caution and do their own research
13. before interacting with or depositing to any wallet.
14.

What does "Not Enough SOL" mean?

SOL is required to pay network fees. It is recommended to maintain a balance of at least 0.05 SOL. Actual fees are typically far lower, but for simplicity, a small minimum balance of SOL is required to transact.

For more details, see: Pool network fees .

Why was I charged higher network fees than usual?

If your chosen range includes a lower and/or an upper price limit that is not close to the pool's current price and the selected range includes price ranges where no-one has previously created a position, it may incur additional network fees of 0.07SOL or 0.14SOL. This additional network fee is not refundable. Please check the quoted fees carefully before authorising the transaction and if you wish to avoid this cost, try adjusting your range.

The fee is part of Solana's network fees and is used as a rent for an account called a TickArray, which is necessary for an

Orca's pool operation. These fees are beyond Orca's control and may be subject to change if Solana changes its network fee structure.

See: Pool network fees for details of other fees.

Which curves does Orca use?

Orca's uses concentrated liquidity pools, similar to (but not identical to) Uniswap v3. Each liquidity provider chooses a range within which to provide liquidity: trades are executed using the combined liquidity of all individual in-range curves.

How does Orca decide which tokens to list?

Orca will add tokens to the Orca Token List based on information provided by the project and demonstrable community demand (e.g. volume or interest). Orca is a decentralized protocol that facilitates trades and aims to supports any asset that is tradable on Solana.

Permissionless listing allows advanced users to create initial pools for assets (see Orca for Asset Listers). While creating an initial pool is for expert and professional users, anyone can create a pool for a token already found on Orca using the simpler pool creation process .

Are tokens on Orca wrapped?

Many tokens on Orca are wrapped, Solana is witnessing an increasing number of projects bridging from other chains, like Ethereum. There are several bridges that can be used to wrap tokens, and it is critical you Do Your Own Research before trading for any token.

Why would I provide liquidity on Orca?

Whether you provide liquidity is entirely up to you. Users typically provide liquidity to Orca's pools to earn trading fees.

Example: you provide liquidity to a SOL/USDC pool and receive a pool position NFT in return, this acts like a receipt for your deposited tokens and is needed to withdraw.

Each time a trade routes through your selected SOL/USDC pool, a fee is paid by the trader (the taker), a part of which is shared amongst the liquidity providers (the makers), see Trading fees for details. These fees can be harvested at any time.

How do I earn fees on Orca?

When you provide liquidity in a pool you earn a maker fee from each trade executed against your liquidity, some pools also attract rewards. All earned yields are harvestable at any time.

Can I harvest yield from just one position?

It is not possible to harvest a single position through Orca's UI. However, external protocols provide facilities to harvest from a single position. Please see How to harvest yield , for more details.

Why doesn't Orca display APRs for pools?

Projecting an APR based on past activity is not a reliable way to project yields over a year. Orca displays the pool's 24hr Yield / TVL.

What is AFR?

AFR stands for Annualized Fee Rate. AFR is an annualized projection of fees based earnings based on fees earned by Liquidity Providers over the previous 24hrs.

Projecting an annualized rate using past activity is intended to be used for back testing and should not be viewed as a guarantee of future returns and should be viewed as illustrative only.

Can I change the settings to view the projected yield over a year?

Yes, under settings you can instruct the UI to multiply 24h Yield / TVL by your chosen timeframe. See the How to change explorer yield display settings guide.

As a liquidity provider do I get ORCA tokens as a reward?

Occasionally Orca may distribute ORCA token rewards to incentivize deeper liquidity for certain trading pairs. Pools eligible for ORCA rewards are clearly marked in the explorer. Pools not eligible for ORCA rewards will yield trading fees, composed of the asset pair provided.

How are the displayed yields calculated?

Yields displayed are based on the formula24h Yield / TVL.

How is the current price in a pool determined?

The current price for an existing pool is determined by market action alone, through trading, Orca cannot amend, change, nor interfere with a current price within a pool, even if the pool is empty.

The initial price in a new pool is set by the pool creator.

To avoid loss, it is critical that users check the current price matches their expectation before depositing liquidity to a pool, and that pool creators take care when setting the initial price.

Can I withdraw my liquidity at any time?

Yes, the Orca protocol allows you to withdraw liquidity at any time.

Can I yield farm / stake on Orca?

Some pools attract rewards in the form of token emissions, pools currently receiving emissions can be found here .

Trading fees and emission yields accrue continuously and can can be harvested any time with no lock-up.

Orca does not offer single-sided staking.

What are the risks and advantages of concentrated liquidity pools?

In Orca's concentrated liquidity pools liquidity providers compete for trading fees and token emissions, which are distributed according to the parameters of their positions. The effects of leverage , means that tighter positions receive higher yields than wide positions. However, a tight range is also more vulnerable to Divergence Loss (also known as Impermanent Loss or IL) and more likely to fall out-of-range . Out-of-range positions do not earn.

What token represents my deposit?

In traditional constant product pools, liquidity provider tokens (LP tokens) represent ownership of liquidity. As these pools have a fixed range and no multiplier, all LP tokens are the same, and therefore fungible.

In Orca's concentrated liquidity pools, liquidity provider set the parameters of their position. As each position is unique each LP token must also be unique, and therefore non-fungible.

Positions in Orca's pools are represented by an NFT (see What is a pool position NFT), these NFTs are your receipt for your liquidity,if they are burned or otherwise lost, the associated liquidity cannot be withdrawn.

What is a pool position NFT? Can I sell it?

The pool position NFT is an LP token that represents a position in a pool. If it is burned or otherwise lost, the associated liquidity cannot be withdrawn.

It is technically possible to trade a pool position NFT on secondary markets. However, if sold any associated liquidity is also sold and will no longer be held by the original owner.

How do price ranges work?

In traditional constant product pools liquidity is provided across the entire price range (from $0 - \infty$). In Orca's concentrated liquidity pools, users choose the min and max price for their liquidity. It is worth noting the limits are not arbitrary: users must choose between a set of evenly distributed discrete ticks .

Some pools offer full range deposits as an option - you can find an up-to-date list here .

How are preset price ranges calculated, and how do you create a custom range?

Orca offers several range options, price history is taken from CoinGecko and the following criteria is applied.

- Active:
- higher yields and divergence loss, may require more frequent management. The min and max limits are derived from the 24-hour low and high prices divided or multiplied by 1.1 respectively.
- Where no price history exists the min and max limits are derived from the current price divide or multiplied by 1.25 respectively.
- Passive:
- lower yields and divergence loss, may require less frequent management. The min and max limits are derived from the 30-day low and high prices divided or multiplied by 1.2 respectively.
- Where no price history exists the min and max limits are derived from the current price divide or multiplied by 1.5 respectively.

- Custom ranges:
- select your own parameters based on personal knowledge and requirements, such as: management frequency, expected price action and volatility, and risk-appetite.
- Full Range:
- lowest yields and risk of divergence loss, no management required,
- mimics constant product pools,
- deposits to the full range from 0 – ∞, see available pools,here
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What happens if the price goes above or below my limits?

Trading action causes a pool's current price and token balances to fluctuate continuously.

As the current price moves towards the max limit of a position, token-A is rising in value, in relative terms, against token-B and will be sold concurrently for token-B. At the max limit all of token-A will have been sold and the position will be made up entirely of token-B.

The opposite occurs as the current price moves towards the min limit of a position.

Once the current price has reached or passed the min or max limits the position becomes dormant, is no longer providing liquidity, and consequently will no longer earn incentives or trading fees. If the price subsequently moves within the position's range, liquidity, incentives and trading fees will recommence.

How can I provide liquidity if my position is out-of-range?

If your position is out-of-range , you can either wait for it to return to the price range (if expected) or provide liquidity in a new range.

Should you wish to set a new range, you will need to withdraw your liquidity and rebalance. Since the tokens withdrawn and deposited will not match the deposit ratio of an in-range position it will be necessary to trade in order to match the deposit ratio of the new range, you can do this using theMatch deposit ratio toggle in the deposit modal.

Does concentrated liquidity mitigate Divergence Loss?

No. The exposure to divergence loss increases relative to the leverage of the selected range.

However, concentrated liquidity, pools allow users to deposit less liquidity and get the same or higher yields, due to the multiplier effect ofleverage .

Why isn't the deposit ratio 50/50 for my range?

The deposit ratio is dependent on the selected price range and its relationship to the current price: the closer the current price is, to either of the min or max limits than it is to the other, the less balanced the deposit ratio will be.

How is the leverage shown in the UI calculated?

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In this formulaP_u is the max price, andP_l is the min price for the elected price range.

How do Orca's pools differ from Uniswap V3?

Beside the obvious advantages of Solana's low transaction fees and fast transactions, Orca's pools have:

- a simpler, more guided UX for concentrated liquidity provision;
- adouble audited
- , custom built, and open sourced smart contract designed for the Solana virtual machine;
- built-in yield farming—a first for any concentrated liquidity AM.
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How much of the emissions rewards will I earn?

Where emission based rewards apply, a fixed number of tokens are distributed every second based on the weekly emission rate. These rewards are shared proportionally between liquidity providers based on the share of in-range liquidity held in that pool.

For example, if 1% of the liquidity in the current tick was deposited by you, you will earn 1% of the rewards distributed every second.

What is the fee structure for using Orca's pools, and are there different fee rates for different pairs?

When creating a pool users can chose a fee rate, which will determine the taker fee paid by traders. How this fee is divided can be seen[here](#) .

How do I track PnL (profit and loss) after providing liquidity in pools?

First decide if PnL will be tracked in terms of the deposited tokens, or relative to a currency such as USD. Make a note of the values of the tokens during your initial deposit (if you did not do this, these can be retrieved from a blockchain explorer). You will also need to keep track of yield harvested and any further deposits.

Providing you have this data, the formula to calculate your PnL (Profit and Loss) is fairly simple:

PnL = Final Value of Position + Accumulated Fees and Rewards - Value of Deposits

Disclaimer: The content of this communication is not financial advice and should not be relied on by any persons as financial advice. This communication has not been provided in consideration of any recipient's financial needs. Orca has not conducted any financial assessment based on the personal circumstances of any recipients. Before using the protocol, carefully review all relevant documentation and consider risks including total loss of funds.

I burned my Pool Position NFT, can Orca help me retrieve my funds?

No. If a Pool Position NFT has been burned there is no way for Orca (or anyone else) to access the liquidity that was associated with it.

The NFT is the proof to the blockchain that your wallet owns the liquidity, if that proof is destroyed you can no longer interact with the liquidity it represented.

Because Orca's pools are non-custodial it is not possible for Orca to alter the ownership retrospectively, nor assign the ownership to a new NFT.

How can I report a bug?

Please report it in[#_____ | bug-reports](#) .

I have feedback or an idea for a feature, how can I share it with Orca?

Orca values your feedback! Share it directly using[#✍ | feedback](#) .