

USDC HOPPER

Arc DeFi Hackathon

Crafted by
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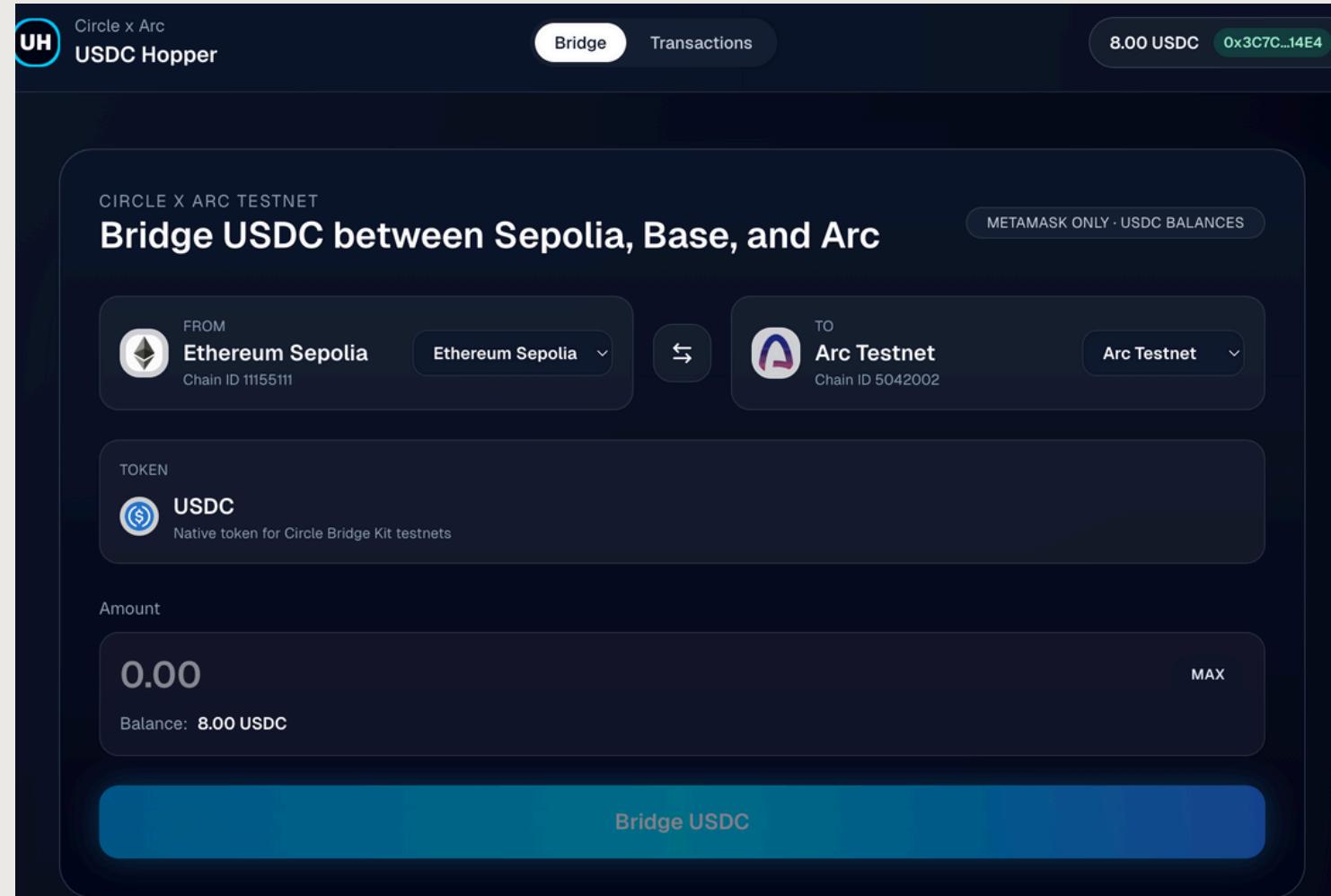
A QUICK INTRO



Student & Full-Stack Dev **Hayden Bradley**

Software Engineer with four years of industry experience building secure, scalable systems. Now pursing an MSc in Advanced Software Engineering at King's College London.

I built USDC hopper as an easy solution to move my stable coins across networks, an issue I commonly face.



THE SOLUTION

I am delivering the Best Cross Chain USDC Experience with Circle Bridge Kit and Arc by creating a simple, fast and clear way to move USDC across networks.

My approach hides all complexity and gives users a smooth and confident transfer experience, and I have designed it to be easy even for someone brand new to crypto.

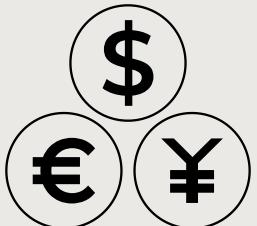
What I've Delivered

SIMPLICITY, FLEXIBILITY AND CONFIDENCE



A Simplistic Frontend

The interface keeps the entire process clear and easy to follow, with only the essential steps shown so anyone can move USDC without confusion.



Multi Chain Support

The tool works across several test networks, including Base Sepolia, Ethereum Sepolia and the Arc testnet, giving users freedom to move USDC wherever they need.



A History of Transactions

A clear transaction history page lets users see every past transfer, track progress and verify results, creating trust in the process.

INITIATING A TRANSACTION

The screenshot shows the Circle x Arc USDC Hopper interface for bridging USDC between Sepolia, Base, and Arc testnets. The top navigation bar includes the logo, 'Circle x Arc USDC Hopper', 'Bridge' (selected), 'Transactions', and a balance of '8.00 USDC' with address '0x3C7C...14E4'. The main section is titled 'CIRCLE X ARC TESTNET Bridge USDC between Sepolia, Base, and Arc'. It shows the 'FROM' chain as 'Ethereum Sepolia' (Chain ID 11155111) and the 'TO' chain as 'Arc Testnet' (Chain ID 5042002). The token being used is 'USDC' (Native token for Circle Bridge Kit testnets). The amount input field shows '0.00' with a 'MAX' button. Below it, a large blue button says 'Bridge USDC'. At the bottom, a 'LATEST TRANSFER' section shows a recent transfer of '0.55 USDC' from Sepolia to Base, which is marked as 'completed'.

CIRCLE X ARC TESTNET

Bridge USDC between Sepolia, Base, and Arc

FROM Ethereum Sepolia Chain ID 11155111

TO Arc Testnet Chain ID 5042002

TOKEN

USDC
Native token for Circle Bridge Kit testnets

Amount

0.00

Balance: **8.00 USDC**

Bridge USDC

LATEST TRANSFER

0.55 USDC

Sepolia → Base

Started 16 Nov 2025, 09:58

STATUS
completed

PENDING TRANSACTION

The screenshot shows the Circle x Arc USDC Hopper interface. At the top, it displays "Circle x Arc" and "USDC Hopper". Below that, there are tabs for "Bridge" and "Transactions", with "Bridge" being the active tab. It shows a balance of "8.00 USDC" and an address "0x3C7C..14E4".

The main area is titled "CIRCLE X ARC TESTNET" and "Bridge USDC between Sepolia, Base, and Arc". It features a large orange circular progress bar with a smaller orange circle inside, indicating the status. The text "BRIDGE IN PROGRESS" is displayed below the progress bar. A call-to-action "Bridge in progress" is present, along with the instruction "Approve the spend, transfer, and receive message transactions in MetaMask." A timer shows "00:28".

A "ROUTE" section shows "Sepolia → Arc".

At the bottom, a "LATEST TRANSFER" section shows a transfer of "3.00 USDC" from "Sepolia → Arc" started at "Started 16 Nov 2025, 10:43". The status of this transfer is "confirming".

COMPLETED TRANSACTION

The screenshot shows the Circle x Arc USDC Hopper web interface. At the top, there's a navigation bar with the logo "Circle x Arc USDC Hopper", tabs for "Bridge" and "Transactions", and a balance indicator "8.00 USDC 0x3C7C...14E4". Below the navigation, a main section is titled "CIRCLE X ARC TESTNET" and "Bridge USDC between Sepolia, Base, and Arc". It features a large green checkmark icon and the message "Bridge complete!". Below this, it says "Your USDC moved from Ethereum Sepolia to Base Sepolia." There are buttons for "View source tx" (with hash 0x04ef581a...) and "Bridge again". A "METAMASK ONLY · USDC BALANCES" button is also present. At the bottom, a "LATEST TRANSFER" section shows a transfer of "0.55 USDC" from "Sepolia → Base" started on "16 Nov 2025, 09:58" with a "STATUS Completed".

CIRCLE X ARC TESTNET

Bridge USDC between Sepolia, Base, and Arc

METAMASK ONLY · USDC BALANCES

Bridge complete!

Your USDC moved from Ethereum Sepolia to Base Sepolia.

View source tx 0x04ef581a...

Bridge again

LATEST TRANSFER

0.55 USDC

Sepolia → Base

Started 16 Nov 2025, 09:58

STATUS
Completed

TRANSACTION HISTORY

Circle x Arc
USDC Hopper

Bridge Transactions 8.00 USDC 0x3C7C...14E4

Activity Transactions Re-check pending Refresh Clear history

DATE	ROUTE	AMOUNT	STATUS	EXPLORER	DETAILS
16 Nov 2025, 09:58	Sepolia → Base Chain IDs 11155111 → 84532	0.55 USDC	COMPLETED	View tx	DETAILS
16 Nov 2025, 09:47	Sepolia → Arc Chain IDs 11155111 → 5042002	0.25 USDC	PENDING	N/A	DETAILS
16 Nov 2025, 09:47	Sepolia → Arc Chain IDs 11155111 → 5042002	0.25 USDC	FAILED	N/A	DETAILS
16 Nov 2025, 09:40	Sepolia → Arc Chain IDs 11155111 → 5042002	1.00 USDC	PENDING	N/A	DETAILS

SO HOW DOES IT WORK

/01

Initiating

- User selects from and to chains plus USDC amount.
- useBridge validates input, fetches balances via public RPC fallbacks, and ensures MetaMask is connected.
- If the wallet is on the wrong network, useBridge triggers a chain switch before proceeding.

/02

Transaction

- After switch, useBridge creates a Circle BridgeKit adapter from the MetaMask provider.
- BridgeKit orchestrates approval + burn (“send”) on the source chain; each MetaMask prompt updates state (switching-network → approving → signing-bridge).
- TX hashes from BridgeKit steps are persisted so the UI can link to explorers.

/03

Attestation

- Once burn succeeds, BridgeKit fetches Circle’s attestation; the hook now shows waiting-receive-message.
- Real-time event listeners (BridgeKit + useTransferWatcher) track step outcomes, retry pending receipts, and surface errors immediately.
- Local storage maintains transfer history and explorer links for resume/inspection.

/04

Mint

- After attestation, BridgeKit prompts the wallet to mint on the destination chain; state advances to success when mint finalises.
- UI displays elapsed time, both tx hashes, and allows “Bridge again”.
- Transfers are stored and monitored until all steps succeed; failures remain actionable with error messaging and history for support.

**USDC Hopper
on GitHub**

THANK YOU YOUR TIME

If you have any further questions or would like discuss this further, please don't hesitate to reach out to me.



LinkedIn

