



DEVNET WORKING PAPER · VERSION 2.0

CHART Whitepaper

An open market for every recording — with the people behind the music included.

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Abstract

What CHART is, in one paragraph.

CHART is a market for music. Every recording can have exactly one market on CHART, launched by the first person who believes in it and traded by anyone afterwards. Prices move only with buying and selling on CHART, which makes each market a live, public signal of conviction in a song.

Every trade carries a 1.25% fee. 0.75% funds CHART; 0.50% is set aside, on-chain and automatically, for the verified rightsholders of that recording — the Creator Reserve. Song tokens are market positions only: they do not confer ownership of music, royalties or any other right in a song.

This paper describes version 2.0 of CHART: the program and app built and tested on Solana Devnet and prepared for Solana Mainnet with USDC, including its limits. It is a working paper, not an offer, and it may change before Mainnet.

The problem

Fans shape culture but have no market for their conviction; creators rarely share in the activity around their music.

Fans decide which music matters long before charts do. They find songs early, share them and build the audiences that make careers. That conviction is valuable, but it has no public, persistent way to be expressed — a stream counts the same whether you found the song first or last.

At the same time, the activity that forms around music — commentary, fandom, speculation — rarely returns anything to the people who wrote, performed and own it.

CHART addresses both: an open market in which conviction can be expressed and seen, and a fee design in which part of every trade is reserved for the music's rightsholders.

CHART in one page

Find a song, launch or join its market, trade your conviction.

1. Find a song. CHART's catalogue covers real artists, albums and recordings, sourced from MusicBrainz.
2. Launch or join its market. If a recording has no market yet, anyone can launch it with a first buy of at least \$2. If it has one, you join that market — there is never a second.
3. Trade your conviction. Buy and sell the song's token. Prices follow a transparent bonding curve until the market graduates, then a constant-product pool.
4. Creators included. 0.50% of every trade accrues to that recording's Creator Reserve for its verified rightsholders.

PARAMETER	VALUE
Trading fee	1.25% per buy and per sell
Fee split	0.75% CHART · 0.50% Creator Reserve
Tokens per song	100,000 (fixed, 6 decimals)
Launch price	\$0.01 per token
Minimum trade	\$2 per buy, launch and sale; selling your whole balance is always allowed
Settlement	USDC (Circle), 6 decimals
Network fees	Paid by the user in SOL (network fee and one-time account rent)
Graduation	\$50,000 fully diluted market cap
Custody	Non-custodial — users sign with their own wallet
Audit	Not independently audited

One recording, one market

Markets are bound to a canonical recording identity, so a song can only be launched once.

Names are not unique: many different songs share a title, and the same recording appears on singles, albums and deluxe editions. CHART therefore identifies the recording itself, not its title.

- Each market is bound to a canonical recording identity: its MusicBrainz recording ID, together with the recording's ISRC codes where the catalogue provides them. (The ISRC — International Standard Recording Code — is the industry identifier for a specific recording.)
- On-chain identity locks: the launch creates one lock account per identifier (the MusicBrainz ID and each ISRC), all pointing to the new market. If any identifier is already locked, the launch fails and the app sends the user to the existing market. Identifiers found later are locked to the same market with a separate instruction.
- Only CHART's registrar key can attest the identifiers of a launch, so nobody can lock a famous song's ISRC to a fake market. The registrar cannot move funds and never pays fees; the multisig can replace it.
- Likely duplicates (same artist, same title, similar length) go to a manual review instead of launching.
- Before a launch, CHART resolves the recording. If an ISRC already belongs to a recording that has a market, the launch joins that market instead of creating a duplicate. Unrelated titles are never merged.
- The market address is derived from a hash of the canonical recording ID, so a second market for the same recording cannot be created: the address is already taken.
- Album editions and releases link to the same recording market.

Not every recording has an ISRC in public catalogues. Where none is available, the MusicBrainz recording ID alone defines the identity.

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Market mechanics

Launch, a bonding curve with a virtual floor, graduation to a constant-product pool.

Launch

A market is launched by a first buy of at least \$2. At launch the program mints the full supply of 100,000 tokens into the market's own vault and permanently revokes the mint authority. There is no pre-mine, no team allocation and no way to create more tokens later. The launcher buys from the curve at the same price as anyone else.

Bonding curve

Before graduation, prices follow a constant-product curve with a virtual quote reserve (the "virtual floor", V). Each market stores its own V at launch, copied from a global value that only the CHART multisig can change, for future markets only. The default is \$1,000, so the starting price is \$0.01 per token (a \$1,000 fully diluted value). Every buy moves the price up along the curve and every sell moves it down.

$$\text{price} = \text{quote reserve} \div \text{token reserve} \qquad \text{quote} \times \text{tokens} = \text{constant (before fees)}$$

The virtual floor only shapes the price; it is not money anyone can withdraw. Sells can never draw the real reserve below zero.

Graduation

A market graduates when its fully diluted market cap reaches \$50,000 — a price of \$0.50. On the reference curve that is reached after roughly \$6,148 of buying (85,858 tokens sold). At graduation the virtual floor is removed, the token reserve is scaled so that the price does not jump, and the surplus tokens — exactly $2 \times V$ worth of supply, 2,000 tokens at the default floor — are locked permanently. Trading continues on a constant-product pool backed only by real reserves. A buy that crosses the threshold is split inside one transaction: the part below graduation fills on the curve, the market graduates, and the rest fills on the pool, with one fee on the full amount and one minimum output for the total. Graduation happens once and is never reversed. It is a change of pricing mode inside CHART, not a listing on an external exchange.

Trading safeguards

- Every buy and launch is at least \$2, and every sale is at least \$2 gross unless it sells the whole balance — enforced by the program. Every trade must pay out more than zero.
- Every trade is quoted first: expected output, minimum output, price impact, fees and the SOL it needs. Slippage protection (default 1%) rejects a trade rather than settling at a worse price.

- Transactions are simulated before the wallet is asked to sign; if the quote changes, the user reviews it again.
- Balances, reserves and fee accounting are enforced by the program; the test suite checks that value is conserved across thousands of randomized trades.

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Fees and tokenomics

One 1.25% fee; 0.75% funds CHART, 0.50% funds the Creator Reserve.

Every buy and every sell pays a 1.25% fee. The program splits it in the same transaction: 0.75% to the CHART treasury and 0.50% to the recording's Creator Reserve account. The reserve therefore receives 40% of all trading fees.

ILLUSTRATIVE TRADE	AMOUNT	TO THE MARKET / TO YOU	CHART (0.75%)	CREATOR RESERVE (0.50%)
Buy	\$100.00	\$98.75 enters the market	\$0.75	\$0.50
Sell (gross proceeds)	\$100.00	\$98.75 paid to the seller	\$0.75	\$0.50
Launch (minimum)	\$2.00	\$1.975 enters the market	\$0.015	\$0.01

Where funds sit

- Market vault — the USDC reserve of each song market, controlled by that market's program address.
- Token vault — the unsold tokens of each market.
- CHART fee account — one per market, receiving that market's 0.75%. Its only way out is a collect instruction whose destination is fixed: the CHART Squads vault.
- Creator Reserve account — one per market, receiving that market's 0.50%. The current program has no instruction that moves funds out of it.
- No account is written by the trades of more than one market, so one market can never affect another.

How CHART earns

In song markets, CHART earns the 0.75% trading fee. CHART takes no allocation of song tokens, does not sell song tokens and does not earn from their price movements.

Network fees

Solana network fees and one-time account rent are separate from the trading fee and are always paid by the user, in SOL, from their own wallet: CHART is never the fee payer of a user's transaction and uses no relay. Launching a market also pays the rent for that market's accounts; the exact amount is shown before signing. The rent for your song token account comes back to you when you sell your whole balance.

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The Creator Reserve

0.50% of every trade accrues automatically to each recording's verified rightsholders.

The people behind the music should be rewarded when their music is traded. The Creator Reserve does this automatically: from the very first trade in a market, 0.50% of every trade accrues to an account dedicated to that recording. Rightsholders do not need to sign up in advance for the reserve to accrue.

1. Accrual — on-chain, per recording, in every trade.
2. Claim — rightsholders (artists, labels, publishers, songwriters, distributors or their representatives) submit a claim at chart.baby/rights/claim. No wallet is needed to claim.
3. Verification — CHART reviews evidence of rights. A recording can involve several parties; rights and splits are resolved before anything is distributed.
4. Payout — in a later, reviewed version of the program: after verification, the rightsholder confirms a payout wallet by signing with it.

The reserve is accruing and claims are reviewed, but nothing is paid out yet. The current program has no instruction that can move funds out of a Creator Reserve; distributions require a later, reviewed program version, subject to verification and final terms. On Devnet, reserves are test balances with no real value.

The reserve is not paid to token holders and does not depend on token prices. It depends only on trading activity.

What a song token is — and is not

A market position in CHART's market for a recording. Not ownership, not royalties.

A song token is a transferable position in CHART's independent market for one recording. It exists so that fans can express conviction in a song, and so that the market for that conviction can be public and transparent.

A SONG TOKEN IS	A SONG TOKEN IS NOT
A position in one recording's CHART market	Ownership of the song, its master or its publishing
Tradable on CHART at market prices	A right to royalties, revenue, dividends or streaming income
Held in your own wallet	Equity in an artist, label or CHART
A public signal of demand	A valuation of the song, its rights or its future income
	A sign that the artist has endorsed or joined CHART

Token prices are formed only by buying and selling on CHART. They are speculative: they reflect what participants are willing to pay for a position in the market, not what a song is worth, how it streams or what it will earn. The Creator Reserve is funded by fees, not by token prices, and token holders have no claim on it.

CHART is an independent market. It references recordings to identify markets; it does not own, license or distribute the music, and a market does not imply any relationship with the artist or rightsholders.

Custody, security and transparency

Non-custodial wallets, an on-chain program, public data.

- Non-custodial — users connect their own Solana wallet (for example Phantom, or MetaMask with Solana). CHART never holds or asks for private keys or recovery phrases.
- Sign-in uses a wallet message signature, which cannot move funds; every trade requires a separate transaction approval.
- On-chain program — program ID Fw8BKgBGS8B4nRzvdYVFFC6JnFuHJZHNCwjwJQ1BzUqX on Solana Devnet. Every CHART address is listed at chart.baby/contracts, with a link to the verified build once the deployed program has been verified against its source.
- Authorities — the program's upgrade authority, its configuration and the fee treasury are a Squads 2-of-3 multisig: every change needs two independent approvals. A separate guardian key can only pause launches and buys; only the multisig can unpause, pause sells, set a market to sell-only or change anything else. Sells stay open unless an active exploit makes them unsafe.
- Public data — market prices, history and reserve totals come from confirmed on-chain activity; CHART reconciles its database against on-chain balances every few minutes.
- Audit — the CHART program has not been independently audited by an outside security firm, so it could contain bugs or security flaws.

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Data sources

MusicBrainz for catalogue identity; artwork from third-party providers.

Recording, release and artist metadata comes from MusicBrainz. Artwork comes from the Cover Art Archive and other configured providers, and artist photos from Spotify. Attribution appears where available, and third-party rights remain with their owners.

CHART does not publish streaming counts or official chart positions, and a token price is not a forecast of listening activity.

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Roadmap and launch conditions

Beta today; what must be true before real money.

STAGE	STATUS
Version 2.0 on Solana Devnet	Built; full end-to-end test before Mainnet
Solana Mainnet with USDC	After the full Devnet test
Creator Reserve accrual and claims	Accruing; claims reviewed
Terms of Service and Risk Disclosure	Published
Verified Creator Reserve payouts	A later, reviewed program version, subject to verification and final terms
CHART Direct (artist projects and rights)	A separate product — coming soon, not part of the market

Real-money trading opens on Mainnet only after the full Devnet test passes. The CHART program has not been independently audited by an outside security firm.

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Risks

Prices are volatile, software can fail, the beta changes.

- Market risk — prices are driven by trading and can fall quickly; you may not be able to sell a position at the displayed price.
- Liquidity risk — thin markets have high price impact.
- Technical risk — wallets, networks, data providers and the program itself can fail or be delayed.
- Regulatory risk — rules for digital assets differ by country and may change, which can limit or change CHART's availability.
- Test network — Devnet balances have no real value; features and data may change before Mainnet.

See the full risk disclosure at chart.baby/risk.

Glossary

Key terms.

TERM	MEANING
Recording	A specific recorded performance of a song.
ISRC	International Standard Recording Code — the industry identifier of a recording.
Market	The single CHART market for one recording.
Song token	A transferable position in a market. Not a right in the music.
Bonding curve	The pricing rule used before graduation.
Virtual floor	A pricing parameter of the curve; not withdrawable money.
Graduation	The switch to a constant-product pool at a price of \$0.50 (\$50,000 fully diluted market cap), locking 2 × the virtual floor in tokens.
Identity lock	An on-chain account that ties one MusicBrainz ID or ISRC to exactly one market.
Squads vault	The 2-of-3 multisig that upgrades the program, changes its configuration and receives CHART's fees.
Guardian	A key that can only pause launches and buys.
FDV	Fully diluted value: price × total supply.
Creator Reserve	The 0.50% of each trade set aside for a recording's verified rightsholders.
Rightsholder	A person or company holding rights in a recording or its composition.

Disclaimers

Please read.

This whitepaper is a working paper for information only. It is not an offer or solicitation to buy or sell any asset, not investment, legal or tax advice and not a promise of any feature, return or availability. Nothing in it grants rights in any music.

This version runs on Solana Devnet for testing. Devnet balances have no real value and nothing is paid out. Parameters may change before Mainnet. Real-money trading is governed by the Terms of Service and the Risk Disclosure.