

# Simplified coin control with presets

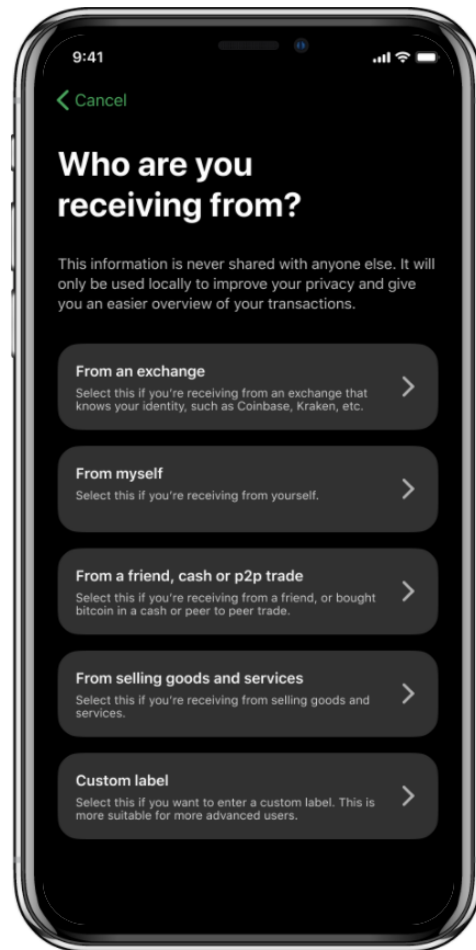
Going from fully automatic coin selection with no labelling or references added, to custom labelling and manual coin selection is a big ask for new users.

This document provides a potential solution for a simplified coin control for people who needn't know what coin control is, with the hope of gaining a good chunk of the privacy benefits while not introducing the full UX friction and just general education it'd take for a non-advanced user to get used to full coin control and manual selection. Classic 80/20 rule utilization, hopefully.

The proposed solution is to use presets for both receiving and sending and then match UTXOs for sending where presets match. Additionally, to explain to user why this extra “work” is needed, both point out improved privacy potentially and easier overview of your transactions (“From Kraken, +1 BTC” vs “14n...94U + 1 BTC”) (not shown is a simple onboarding/welcome screen to display to user first time they'd try to receive to explain why they're going to be asked for preset-selection + enter reference; and, as noted, here suggest primary value prop is easier overview first, more privacy second (this hard to understand for new users then)

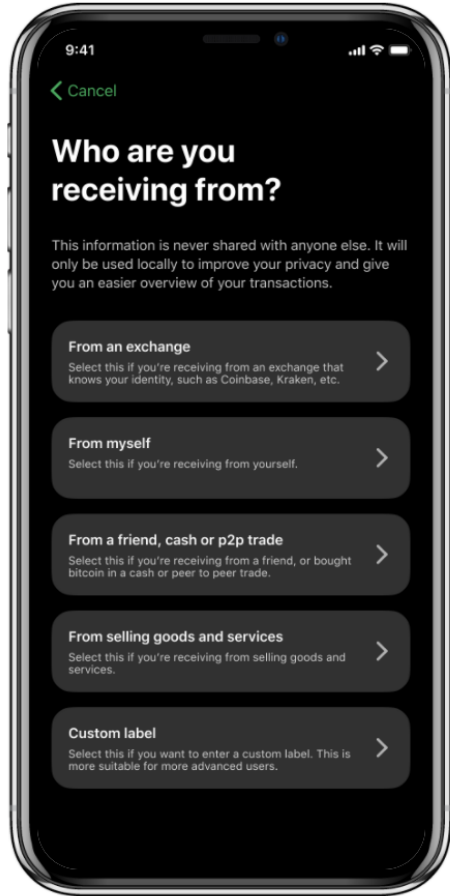
Some caveats:

- The potential design for the concept is using the Blockstream Green wallet app as example.
- The exact text copy of the explainer texts, the exact presets – not a lot of thought have gone into these. A lot of the work on this kind of concept is work on the text copy; not a lot of work have gone into this yet.
- In the shown design, ability to do full custom labelling and manual utxo selection is shown as well.

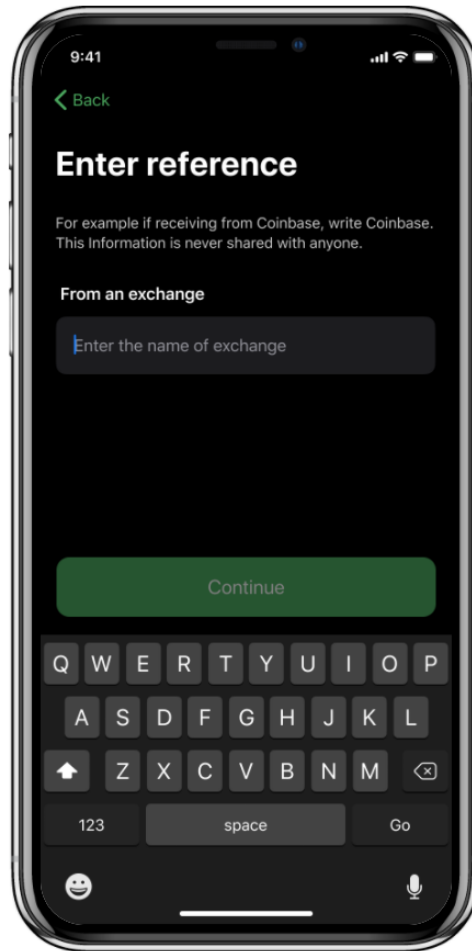


*Receive (generate address), first step. Full run-through shown in next slides.*

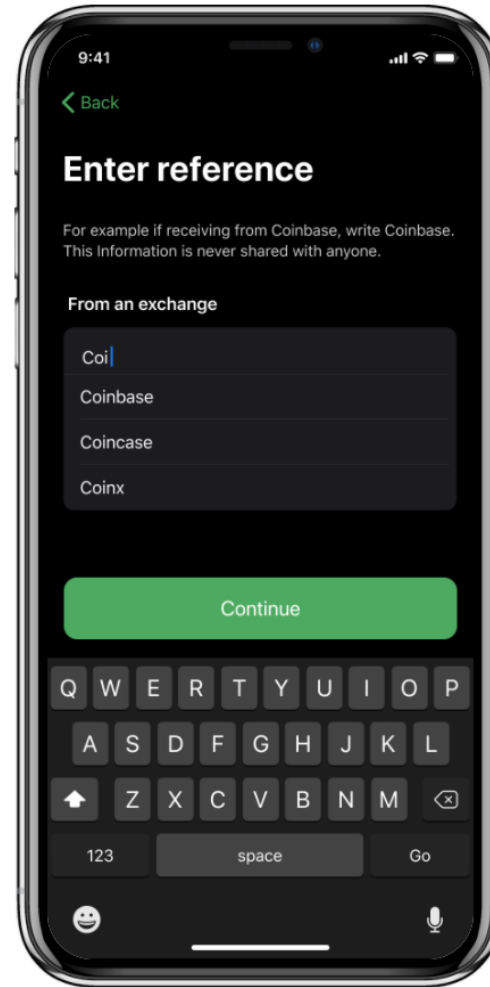
## Receive (get address) flow



1. Select preset. Custom label option included



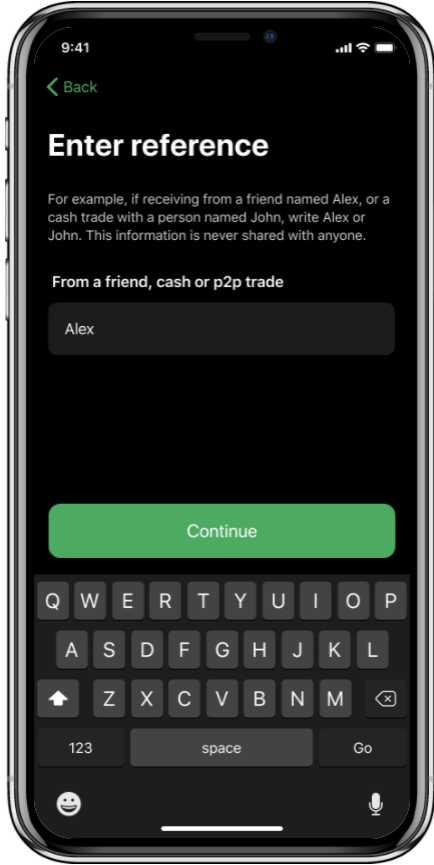
2. Enter reference for selected preset. This doing the same as a fully custom labelling. Perhaps reference should be optional, as preset is already selected.



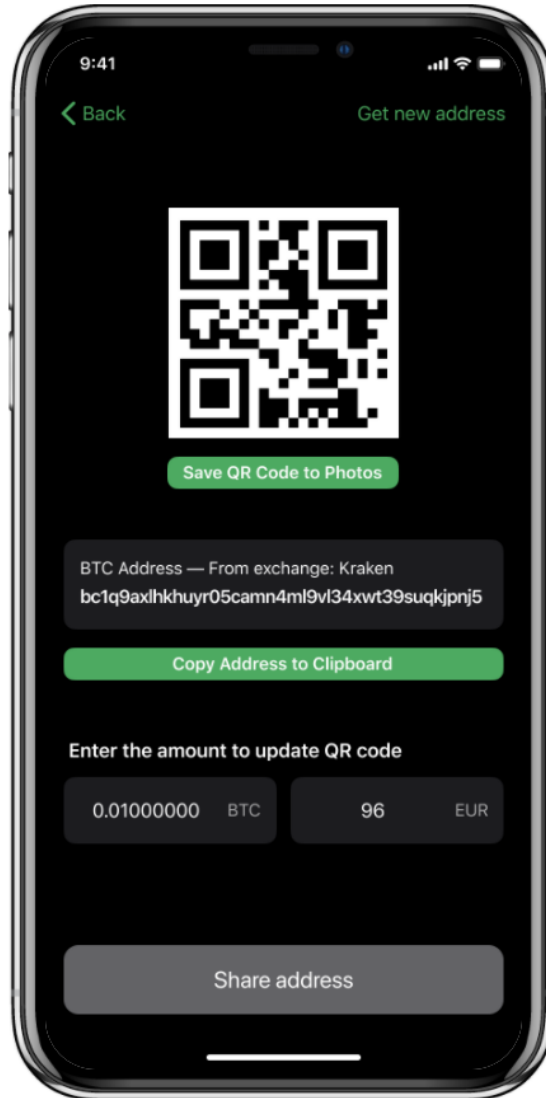
3. When entering the manual reference, provide autocomplete options based on prior entries. Will help with automatic coin selection later on be even more privacy-preserving. E.g., a send to exchange, with entered reference "Coinbase", utilizing an UTXO with From exchange: Coinbase as input

*Using "reference" as the term for custom labelling on the assumption that users more familiar with this than label or demo, as seen, eg, in banking apps.*

## Receive (get address) flow



*If selected different preset, explainer text & reference input field title changed*



4. Finally, the actual receive screen with the address.

The preset: reference (*From exchange: Kraken*) displayed above the QR code.

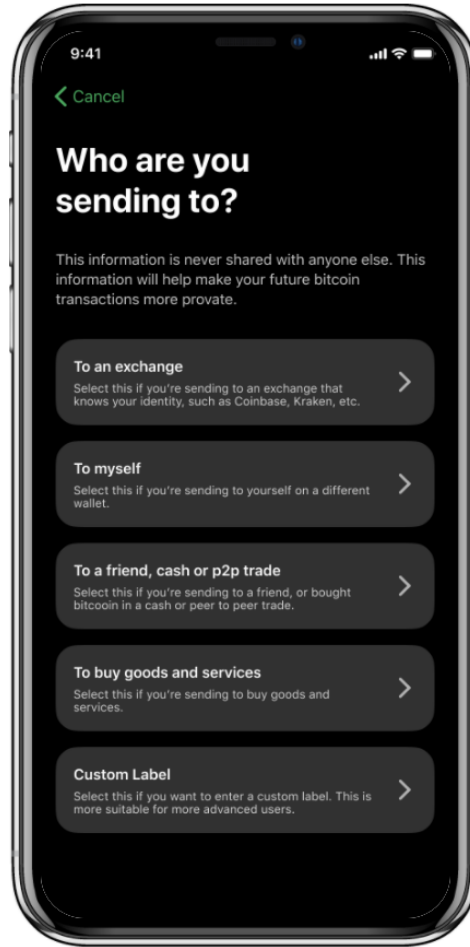
Unrelated to this concept, minor tweaks to the Blockstream Green receive screen:

- More accessible “Copy address to Clipboard” functionality;
- Ability to save QR code to Photos;
- Enter amount field displaying fiat-input as well, both give user fiat enter amount option & verify the fiat-value of the entered BTC amount by automatically displaying the equivalent in EUR when entering BTC amount and vice versa.

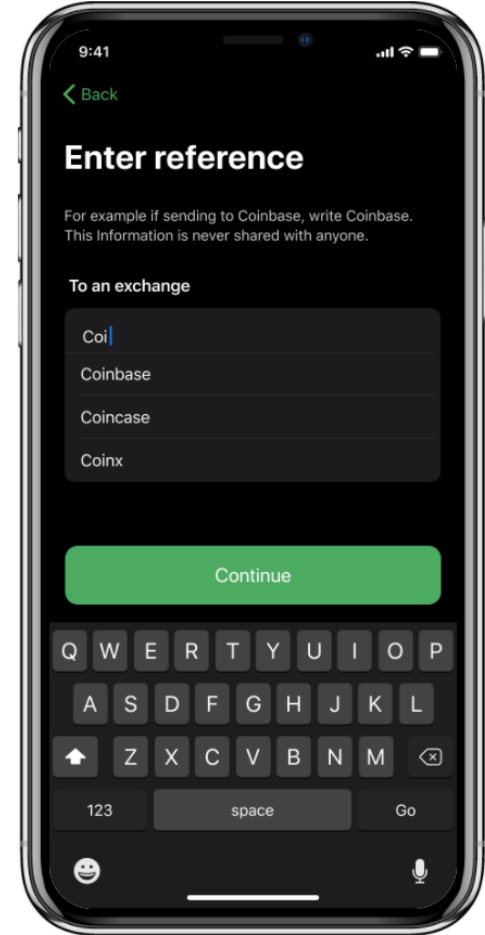
## Send flow



1. Enter or paste address, or scan QR code

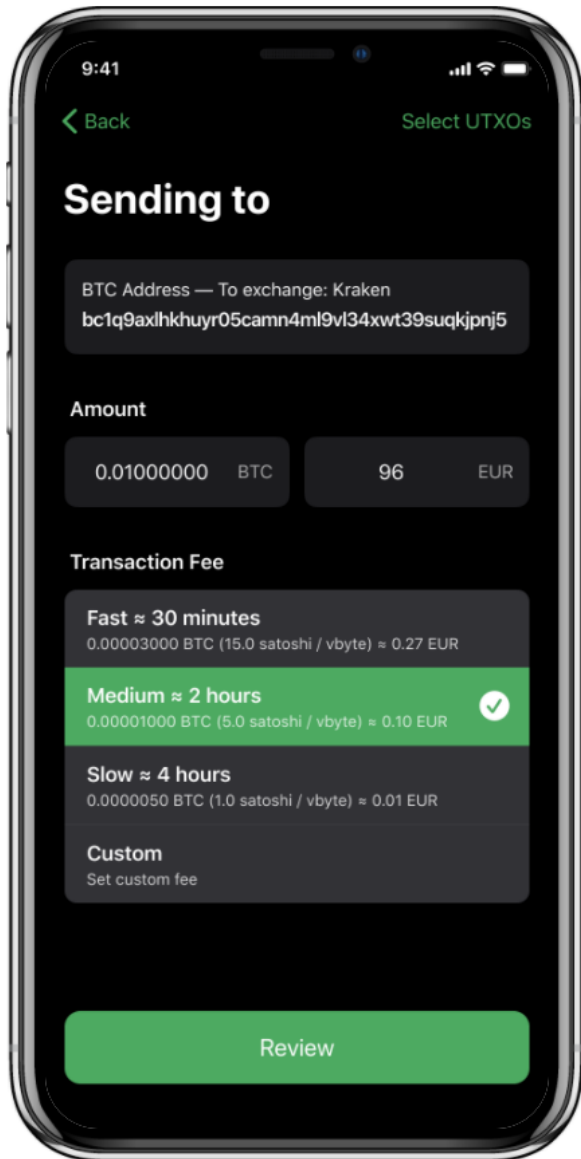


2. Same as on receive flow: Select preset.



3. Same as on receive flow: Enter reference.

## Send flow



4. User now at the screen where they'd enter amount to send and fee.

The user has at this point already select a preset (“To exchange”) and entered a custom reference (“Kraken”).

Based on this, the automatic coin selection would then look for most suitable UTXOs as inputs, first within the From exchange preset, and then trying to match references, so that, ideally, the UTXO that'd be used as input in the transaction sending to Kraken is the very same UTXO the user had previously received from Kraken.

As on Receive screen, both BTC + FIAT input fields, to give user both options for inputting amount & also verify an amount of BTC is circa the fiat amount they think it is.

Manual selection of UTXOs also available top right corner, shown on next slide how it'd work.

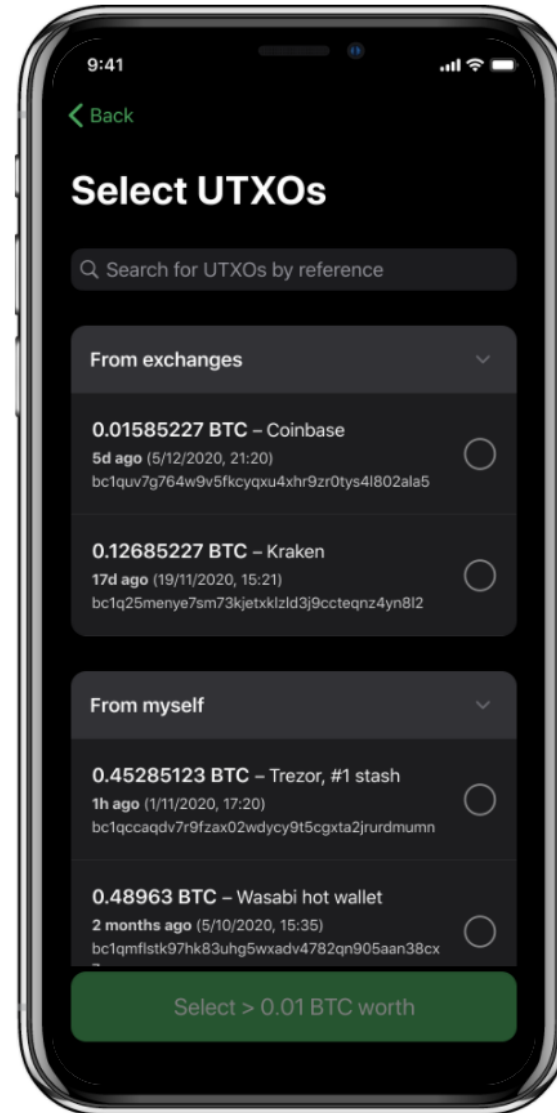
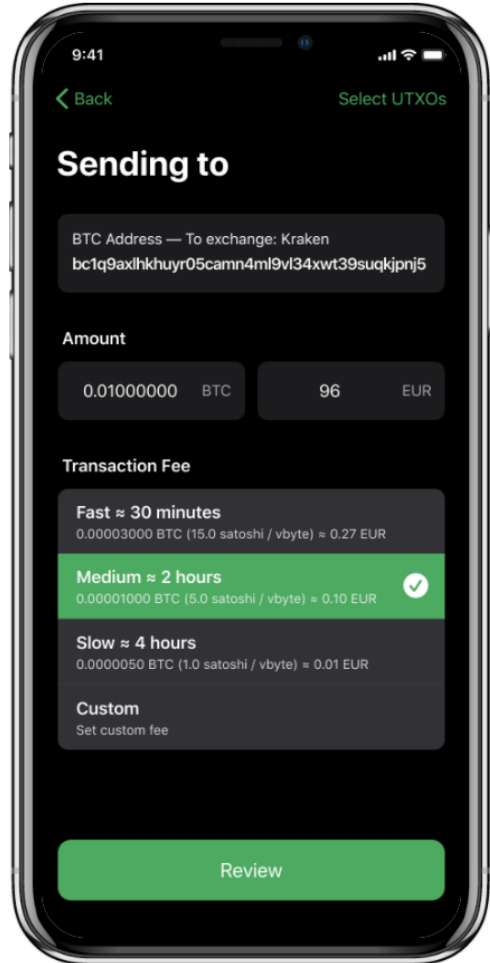


5. Final sending screen, again displaying preset:reference (To exchange:Kraken) above the destination address.

## Manual coin selection option

While the prior slides show a system where automatic coin selection still happens, but with utilizing presets and matching references to select more privacy-preserving inputs for transactions, still do think it's table stakes for any decent wallet app to also provide full manual coin selection option.

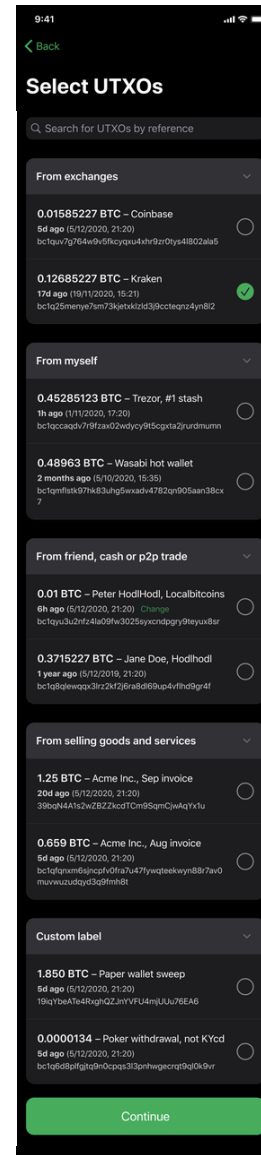
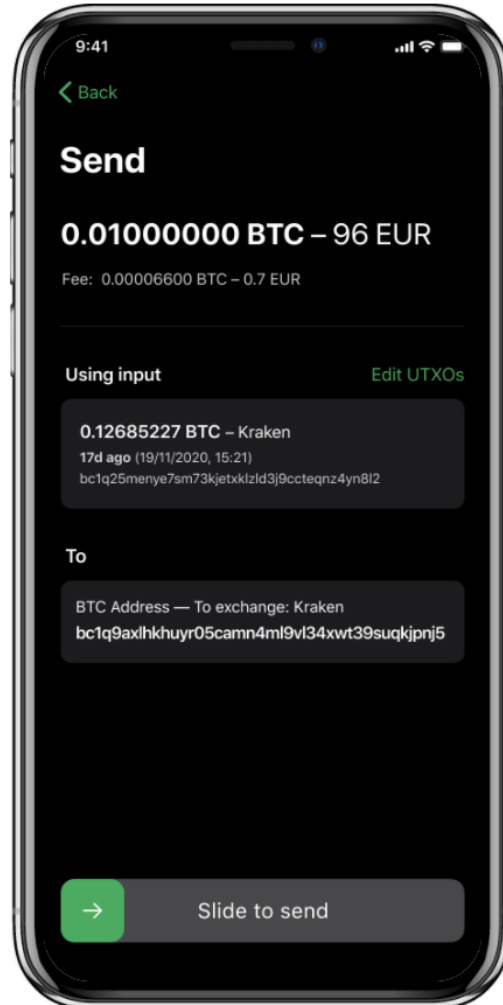
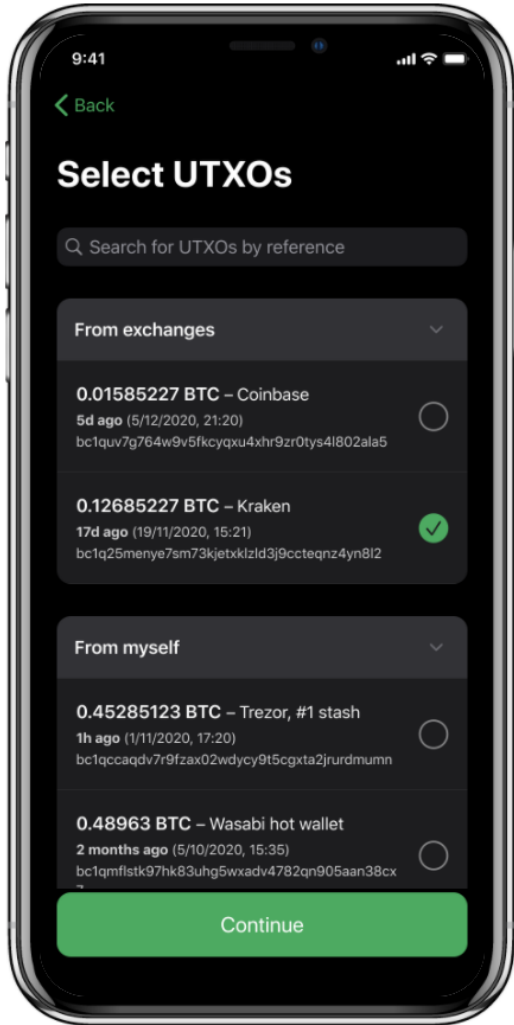
In this case, for Blockstream Green, suggested is to on amount/tx fee screen to add ability to select specific UTXOs (top right corner).



Screen to select specific UTXOs for input to a transaction.

- All UTXOs still listed within categories (presets).
- Each UTXO, display BTC value, reference (label), relative date, exact date, and address, and change indication (tooltip etc to explain this could be nice for users)
- Ability to search for UTXOs by reference
- Primary button with dynamic text to display UTXOs in BTC value needed to select (intended destination address amount + some ceiling tx fee)

## Custom labelling/reference & manual coin selection option



While the manual coin selection (“Select UTXOs” screen) gives the user full ability to select exactly the UTXOs they want, we can still make this screen easier to navigate than the standard long, uninterrupted list of UTXOs:

- Display UTXOs inside a category (the preset)
- Display the matching preset category at top for the given transaction, i.e., if user is sending to an exchange (i.e., selected To exchange preset), and want to manually select the UTXOs for this transaction, display the From exchanges preset/category at top, so faster to find the most relevant UTXOs.

Because of this, in my personal preference as a user used to full custom labelling and manual selection of UTXOs, selecting a suitable preset (and then of course also entering the reference) just makes it tad bit easier to navigate UTXOs than using the custom option from start on Receive flow)

# UTXO preset+reference information storage

What to do if the user moves from one device using the wallet app to another? How to display the UTXO labelling (in this solution's case: presets + references) on a new device?

For wallet apps with no third party involved in some part (contrary to Blockstream Green), ability to export a file with the information to local phone storage and import anew when restored wallet on new device would probably work.

For wallet apps with a third party involved like Blockstream Green, perhaps some secret from the user could be used to end to end encrypt the content and it could thus be retrieved when the wallet is setup on a new device, with no export from old device and import on new device needed.