SENTINEL
WALLET

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Wallet Setup | Android version

Introduction

Cryptocurrency wallets are digital solutions that allow users to securely store and manage their blockchain assets and cryptocurrencies. They also enable users to send, receive, and trade cryptocurrencies. Some users, however, prefer custodial wallets for their ease of use, but this comes at the cost of sacrificing control over their private keys, which can put their entire cryptocurrency portfolio at risk.

To address this issue, Sentinel has developed the first practical, biometrically-secured, non-custodial cold storage crypto wallet. The Sentinel Wallet is a significant leap forward in comparison to existing solutions, as it uses a biometrically protected smartcard that is much less vulnerable to physical tampering. It is integrated securely with its Android or iOS Sentinel Wallet application for an intuitive and easy-to-use solution.
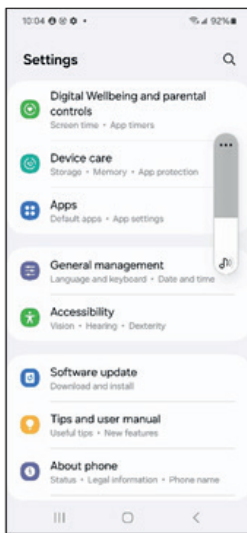
The Sentinel Wallet is powered by proven hardware and software and has been certified by an independent third-party security lab. This ensures that the wallet delivers a uniquely attractive and highly secure cryptocurrency ecosystem that can be used either as standalone or a "security upgrade" for any deployed wallets.

2 The Sentinel Wallet Application

The Sentinel Wallet application is designed to connect with various cryptocurrency exchanges. It provides an intuitive interface, allowing users to check their crypto balances, send and receive currency, and even trade between different exchanges. In the following sections, you will find detailed instructions on how to launch the app, create your Sentinel Wallet, and conduct transactions.

3 Installing the Sentinel Wallet application on an Android Phone

1. Request the Sentinel Wallet application .apk file from your administrator.
2. Save this file onto your PC.
3. Tap Settings.

4. Tap About phone, and then tap Software information.

5. Tap Build number seven times in rapid succession until the phones displays a popup message alerting that you are close to enabling the Developer mode.
6. Tap the back button twice to return to the main Settings screen. Scroll to the end of the screen to ensure that the Developer options menu is available, below About phone.
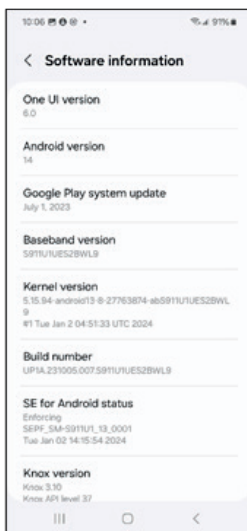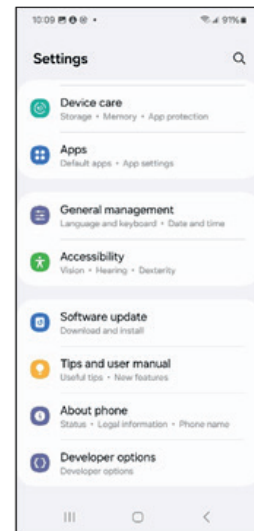

7. Connect the Android phone to a PC. Select to allow file transfers between the phone and the PC.
8. You may be prompted to allow access to the PC from your phone. Tap to allow.
9. Open the File Explorer on your PC and locate the folder that contains the Sentinel Wallet .apk file.

3

10.   Open another instance of File Explorer and navigate to your phone listed under This PC. Then, expand the file structure under the phone. Note: different Android phones will be listed according the name and model of the phone. Use the image below as a reference:
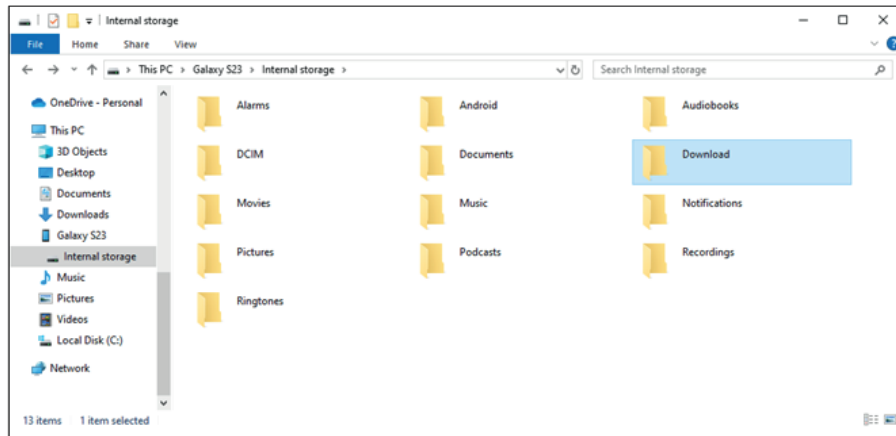
11.   Navigate to a folder labeled "Download, "/sdcard/download," or an equivalent directory specific to your phone.
12.   Move the .apk file from your PC into the appropriate directory on your Android phone.
13.   Navigate to the file explorer app on your Android phone (for example: My Files, Files, or an equivalent).
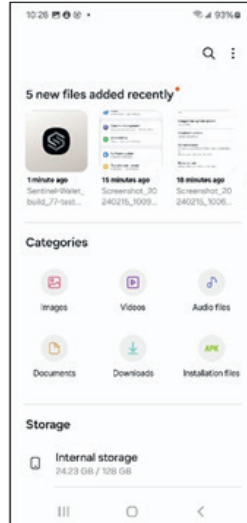
14.   Tap the Sentinel Wallet to install the application your Android phone.
15.   Refer to the Sentinel Wallet User's Guide for instructions on configuring and using your Sentinel Wallet.

4 Configuring the Sentinel Wallet Application

After downloading and installing the Sentinel Wallet App on your smartphone, open the app to begin creating your own Sentinel Wallet. The app automatically checks for your personalized card and authenticates your fingerprint using the biometric scanner built into the Sentinel Wallet Card. Once authenticated, the app fetches the public key, receives the address for your wallet, and displays it.. The app also fetches your balances from the blockchain, allowing you to receive tokens on your wallet. If the card was not previously personalized, the app prompts you to create or restore a Sentinel Wallet.

1. Double-tap the Sentinel Wallet application icon. The first time you launch the app it displays informational screens that describe the functionality of the Sentinel Wallet.
2. 2. Tap Get started three times to advance through the welcome screens.
3. Tap and hold your Sentinel Wallet card under the rear camera on your smartphone as shown in Figure 2.0 below.
4. Tap Scan card. If the Sentinel Wallet was not previously personalized the app prompts you to create a new wallet.
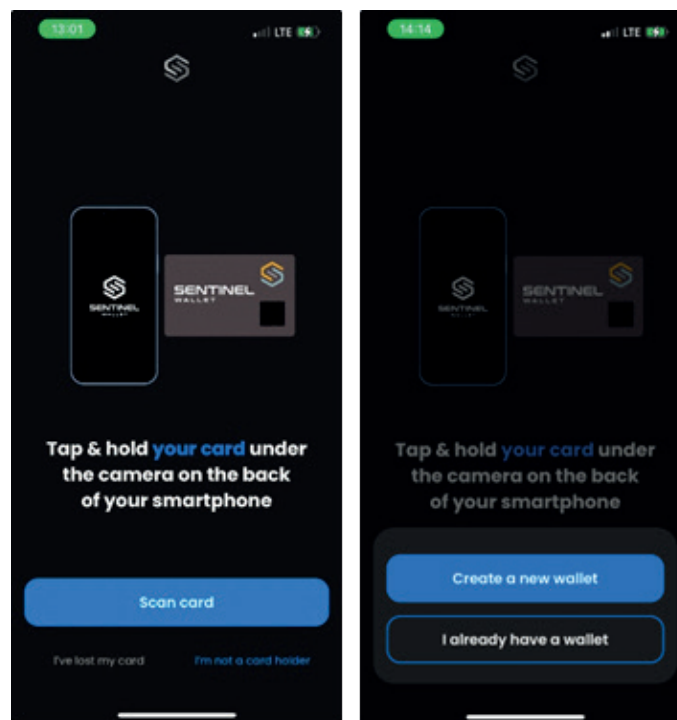5. Tap Create a new wallet.

Figure 2.0 Sentinel Startup Screen

4.1 Creating a Sentinel Wallet

To view your balances and to send and receive tokens using Sentinel Wallet, you need to follow a few steps. First, you need to enroll your biometrics (fingerprint) and create a recovery seed. It is important to note that if you close the app before completing the entire wallet creation process, you must enroll your biometrics again. The app requires you to do so to ensure that your fingerprint is registered, since an existing fingerprint on the card cannot be validated.

1. Read through the information to learn more about protecting your wallet and the key benefits of the Sentinel Wallet (screen 1.1 and 1.2).
2. Tap Continue after each screen.
3. Tap Start Biometric Enrollment (1.3).
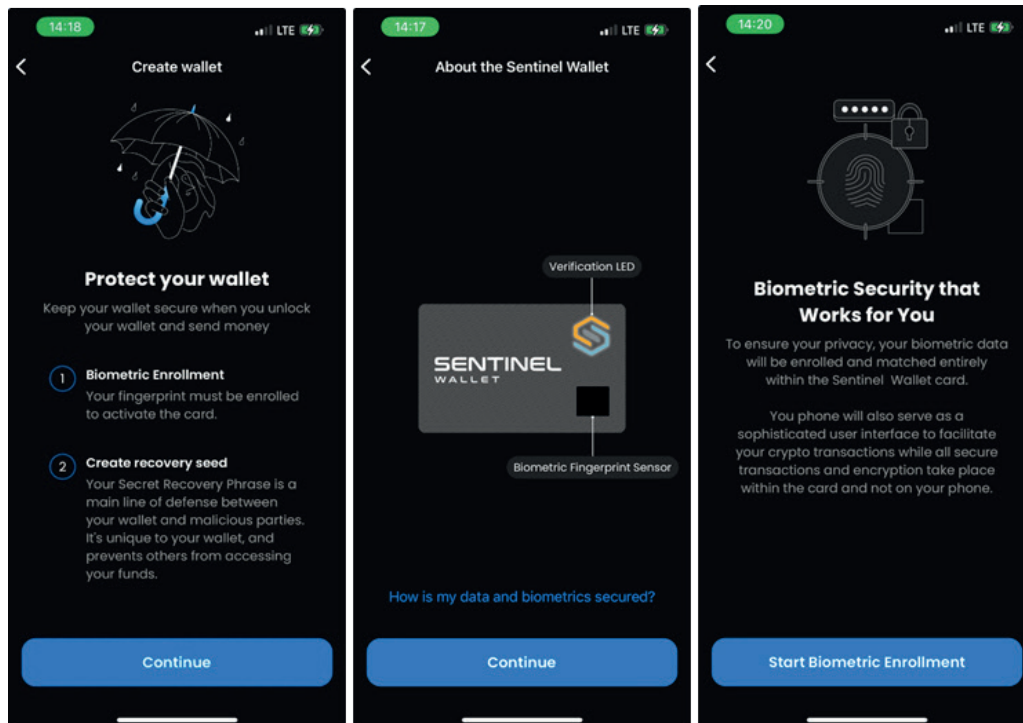

1.1   **1.2**   **1.3**

Figure 2.1 Sentinel Wallet Creation Sequence.

4.2 Biometric Enrollment

To complete the Biometric (fingerprint) enrollment process, the app requires you to scan your thumb fingerprint on the biometric sensor on the Sentinel Wallet Card. It is important to keep the smart-phone and the Sentinel Wallet Card still to avoid errors during the enrollment process.

1. Place the Sentinel Wallet Card on a sturdy surface with the front of the card visible.
2. Lay the smartphone over the wallet so that the verification LED and the fingerprint sensor are visible (1.4).

3. Place and lift your thumb at different angles over the fingerprint sensor (1.5). The app shows the completion percentage for the scanned fingerprint. The scan is complete once the app shows 100%.
4. Tap Continue. The app prompts that the biometric enrollment is complete.
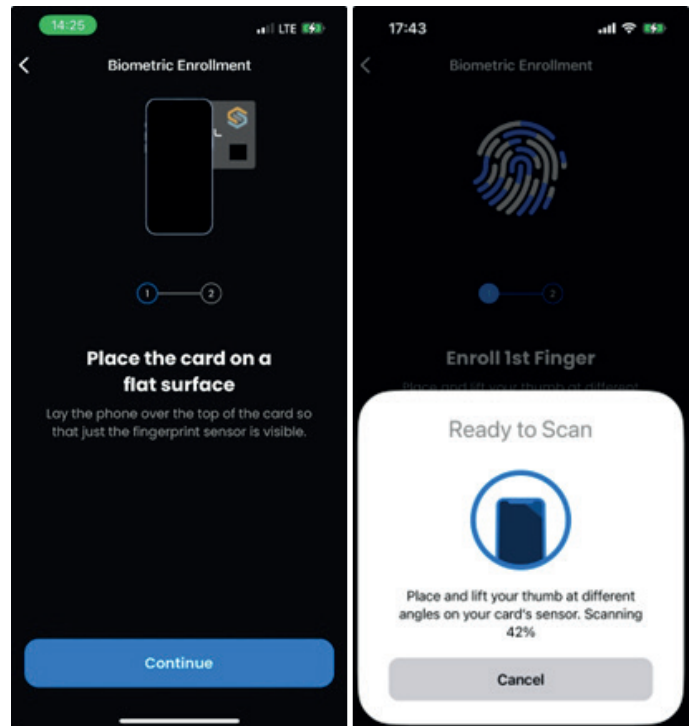
1.4   1.5

Figure 2.2
Enrollment Process on Sentinel Wallet.

4.3 Create Recovery Seed

1. A recovery seed, also called a seed phrase, is a list of random words that users are prompted to create when setting up a cryptocurrency wallet. The purpose of a recovery seed is to ensure that users can retrieve their crypto assets if they lose access to their wallets. Tap What is a Recovery Seed? for important information about creating, saving, and using your recovery seed (1.6). Figure 2.3. Recovery Seed Creation Process.
2. Tap Got it to close the recovery seed information (1.7).
3. Select either a 12-word or a 24-word seed phrase, then tap Continue.
   The app opens the Wallet Creation screen (1.8). This process may take 5-10 seconds to complete. It is important not to remove the Sentinel Wallet Card from the smartphone. Once the scan completes, the app prompts you to secure your wallet.
4. Tap Get started to secure your wallet (1.9).
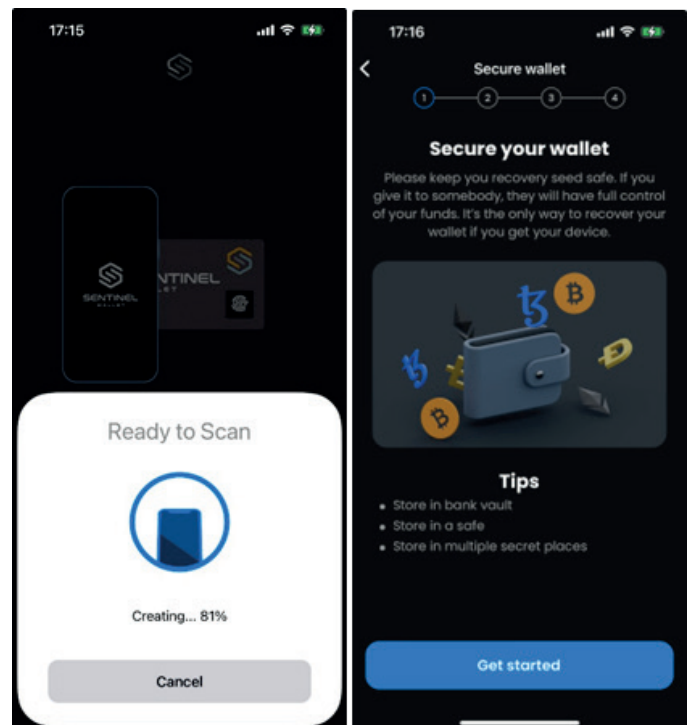
1.8   1.9

Figure 2.4
Biometric Enrollment with Sentinel.

2.5 Secure the Wallet

At this point, you have created your Sentinel Wallet. It is important to understand that if you close the app now you will not have access to your recovery seed. Note: This step is the only time you will see and be able to record your recovery seed.

1. Tap each button to confirm that you understand the responsibilities and the consequences of creating a recovery seed (1.10).
2. Tap Continue. Once complete, the app displays your recovery seed (1.11).
3. Write your recovery seed on paper. Note: you cannot take a screenshot or otherwise record the recovery seed in the app. This restriction protects your recovery seed in case your phone is lost or stolen.
4. Tap I wrote down the phrases. The app prompts you to double-check certain words in the recovery seed (1.12).
5. Select the appropriate words as prompted in the app from the recovery seed you wrote down. Continue until you successfully identified each word.
6. Click Finish.
7. Click Done on the Congratulations screen. You can now use your Sentinel Wallet with the app.
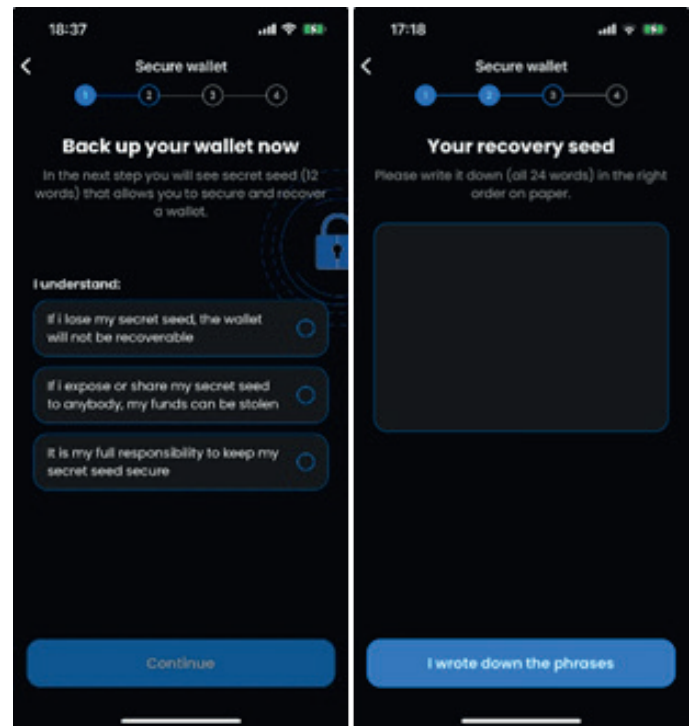
1.10 **1.11**
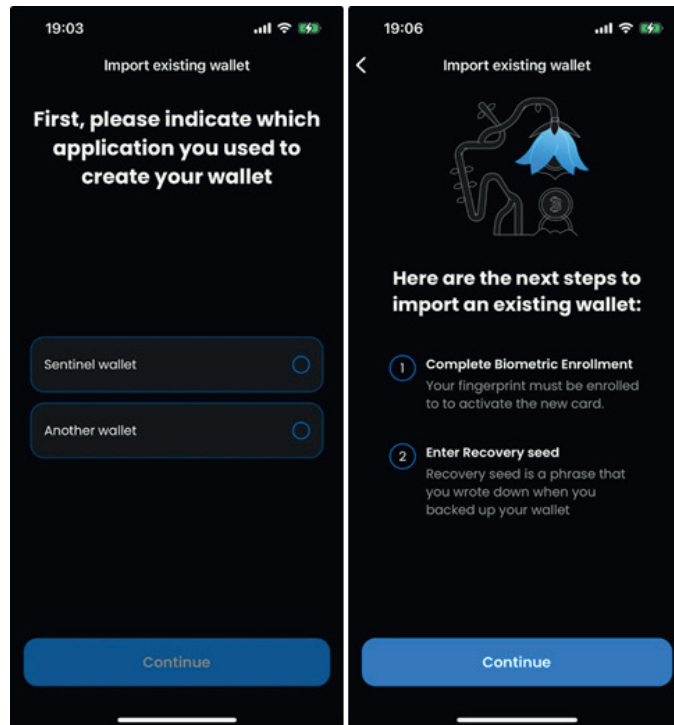
Figure 7.0 Wallet Backup Process.
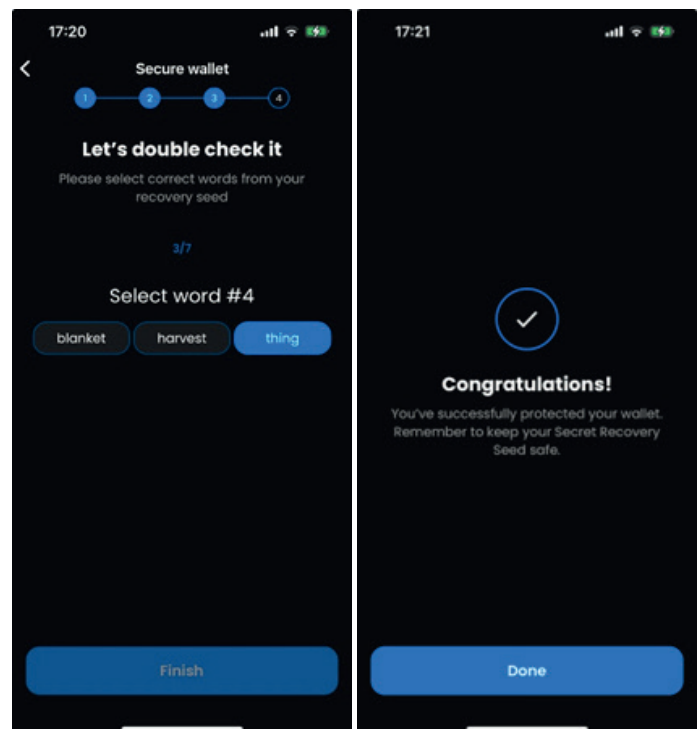
1.12 **1.13**

Figure 2.5 Verification of Wallet Backup.

4.5 Restore your Sentinel Wallet

1. Specify where the original wallet was created (3.1), then tap Continue.
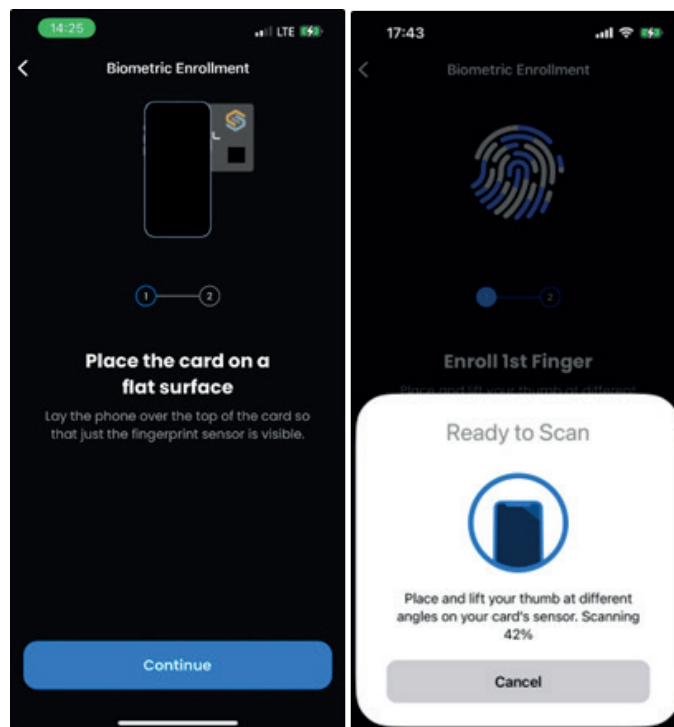2. Read through the wallet restore steps (3.2), then tap Continue.

3.1   **3.2**

Figure 2.6 Import of Existing Wallets on Sentinel.

3. Place the Sentinel Wallet on a sturdy surface with the front of card visible.
4. Lay the smartphone over the Sentinel Wallet Card so that the fingerprint sensor is visible.


3.3   **3.4**

Figure 2.7 Biometric Enrollment Process

5. Place and lift your thumb at different angles over the fingerprint sensor. The app shows the percentage scanned. The scan is complete once the app shows 100%.
6. Tap Continue. The app prompts that the biometric enrollment is complete. The app prompts for your recovery seed.
7. Type your 12- 15- 18- 21- or 24-word recovery seed. The app validates the recovery seed.
8. Tap Continue to start the restoration process. A successful restoration displays the Congratulations screen and you may use the Sentinel Wallet application with your wallet.
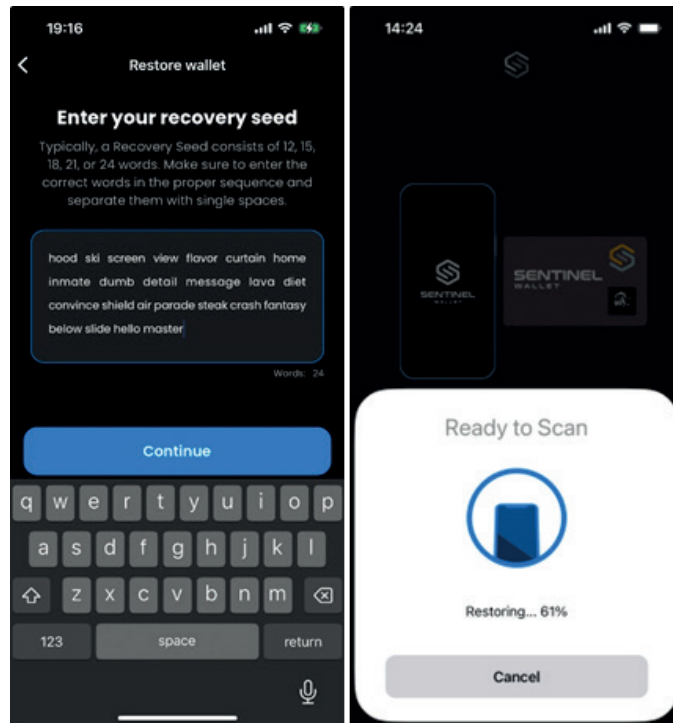
3.5   3.6

**Figure 2.8** Recovery Seed Entry Process.

5 Using the Sentinel Wallet application

The Sentinel Wallet mobile app, when connected to a Sentinel Wallet, enables you to send and receive funds easily. Once you have created and secured your Sentinel Wallet or restored it, the app opens the Sentinel main screen (3.1) where you can perform the following actions:

- Receive funds
- Send funds
- View your token balance (Bitcoin and Ethereum)
- View your activities

After you have set up or restored your wallet, the app retrieves your available balances from the blockchain. The Ethereum update may take a few seconds, while the Bitcoin update could take between 5 to 25 minutes depending on your smartphone model and internet connection speed.

> **Note:** During the sync phase, ensure that the app remains active, or else the synchronization process will restart. Once the blockchain update completes, the main screen displays your balances.
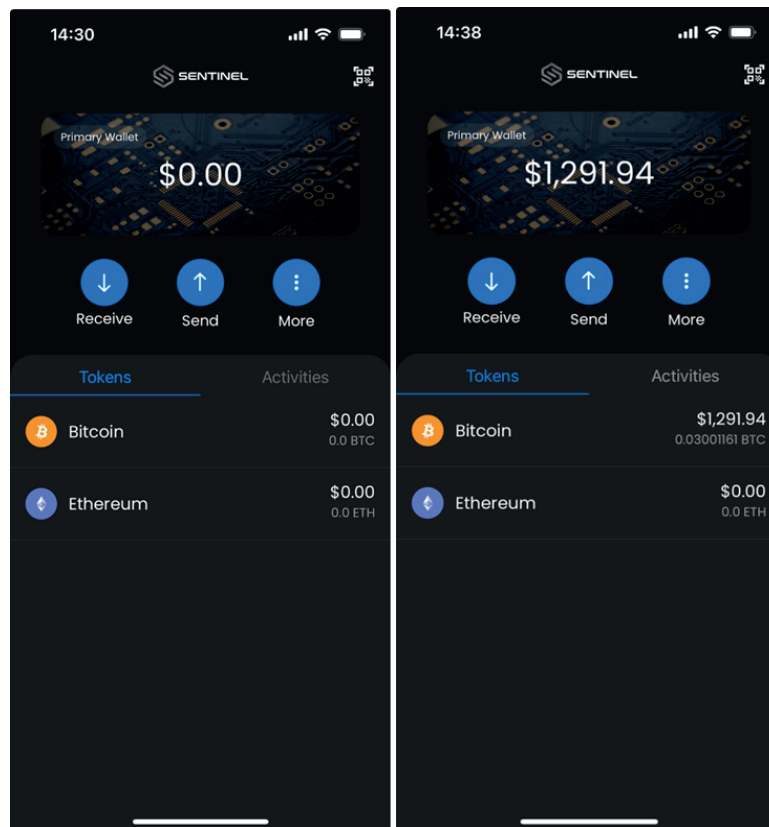
3.1   3.2

5.1 Receive Funds

To receive funds onto your Sentinel Wallet from another wallet:
1. Tap Receive on the main screen to initiate the request.
2. Select the token type, Bitcoin or Ethereum (3.3).
3. To receive the selected token, perform one of these actions:

a. Show the QR code to another Sentinel Wallet app user so they can scan the code.
b. Tap Copy to copy the address to another app on your smartphone. Then send the address to the sender.
c. Tap Share to send the address via a messaging app or an email client to the sender.

4. Check the main screen to verify that the funds transferred and that the app shows a log of the transaction in the Activities tab. Note transactions may take up to five minutes to post.
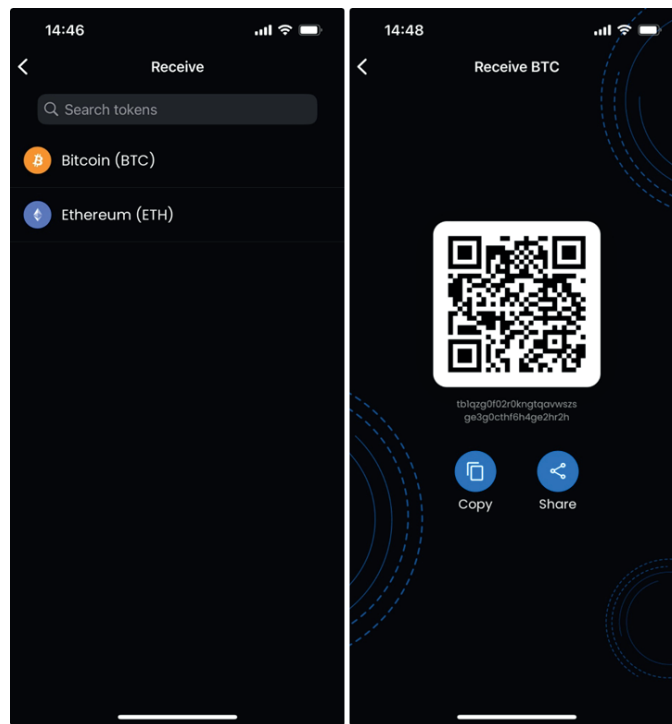

Figure 3.3 Obtaining the Sentinel Wallet Public Address

5.2 Send Funds

To send funds from your Sentinel Wallet you must first obtain a QR code or the address from the fund recipient. The app validates all addresses before sending tokens.
The app offers three methods to obtain the address:

Scan QR Code
1. Tap the QR Scan button, located in the upper right corner of the Sentinel screen.
2. Position your smartphone so the camera can read the QR code.

Enter the Address Manually

1. Tap Send from the main screen.
2. Choose the type of token to send, Bitcoin or Ethereum (3.5).
3. Type the recipient's address or tap Paste to paste the address from another source (3.6).

Scan QR Code Manually

1. Tap Send from the main screen.
2. Choose the type of token to send, Bitcoin or Ethereum (3.5).
3. Tap the Scan button, located to the right of Paste (3.6).
4. Position your smartphone so the camera can read the QR code.

After you enter the address and the app validates it, the app displays the following information (3.7):

- The number of tokens requested.
- The equivalent amount in USD.
- The estimated fee (displayed in the token units and USD).

You are prompted to complete the send transaction. Note: the app does not proceed if the requested amount exceeds the balance in your wallet.

1. Tap Next to confirm the amount. The app opens the confirm screen (3.8).
2. Confirm that all information is correct, then tap Send.
3. Place your Sentinel Wallet Card against the smartphone to sign the transaction using the Private Key stored on the wallet. Once signed, the transaction is transmitted via blockchain to the recipient's network for validation. Once the transaction is signed and sent, the app displays the Transaction submitted screen.
4. Tap Done to return to the main screen.
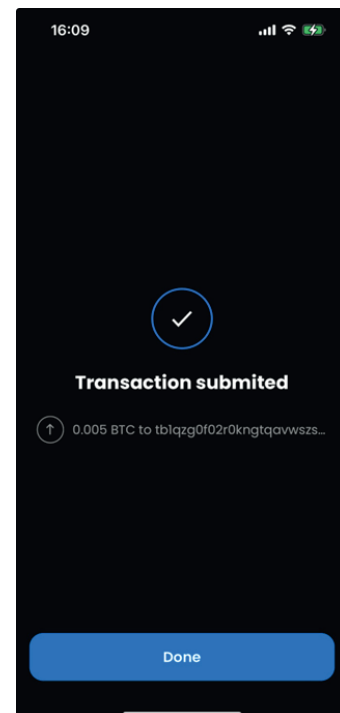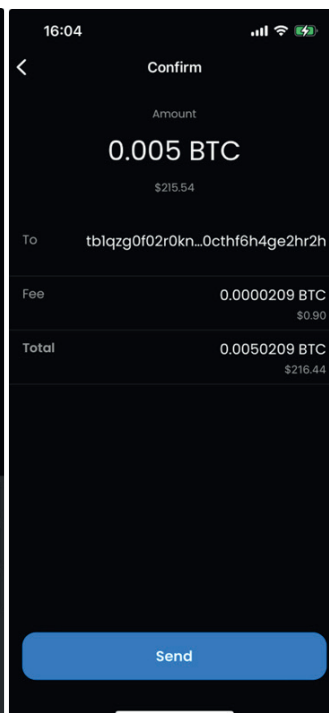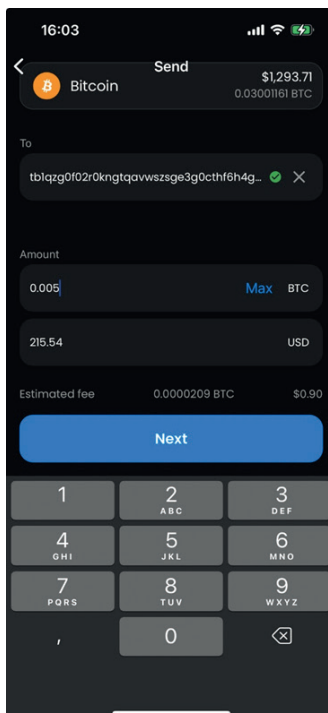
6 Appendix: Difference Between iOS and Android

- The NFC session on iOS starts tracking the Sentinel Wallet when the System screen appears. The Android operating system does not do this.
- The iOS blurs the Sentinel Wallet screen when a user swipes to close the app or to discard the app to the application Switcher. This protects your information so no one can see your wallet information as you switch apps.