

BITLOX

BITLOX User Manual

INTRO

Welcome to the BitLox system of security for your digital assets.

Your Bitcoins will never be safer than they are when using the BitLox hardware wallet to secure your private keys and sign your transactions.

Let's get started.

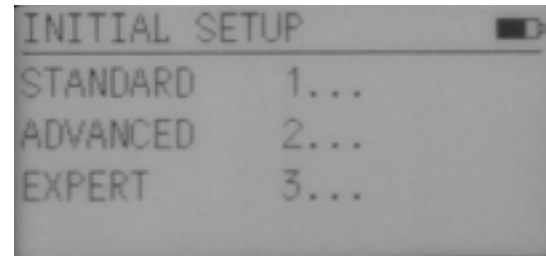


INITIALIZING

Your BitLox comes from the factory ready to be initialized for use.

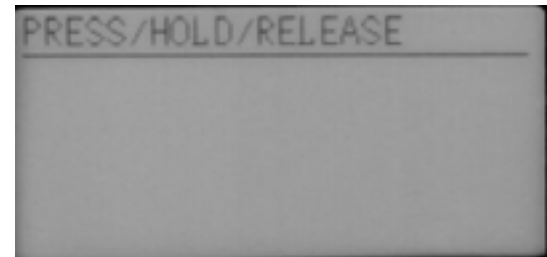
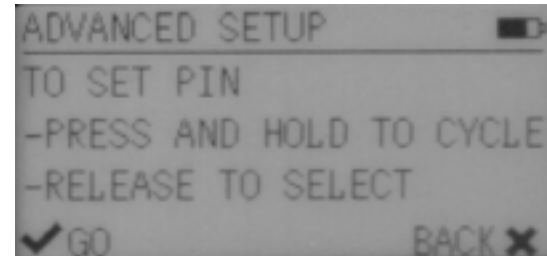
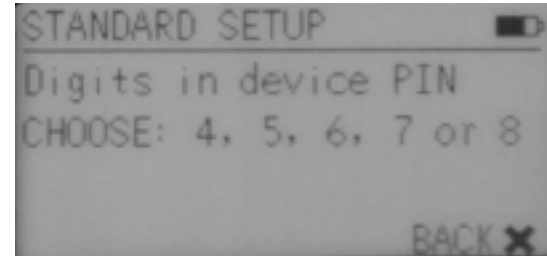
To get your BitLox up and running is easy!

1. Power on the device by moving the switch towards the “1” position. You may want to connect to a USB port for the initial charging, as air shipment of fully charged batteries is not allowed to some countries.
2. Select your desired language from the screen.
3. Initial Setup Choices
 1. Standard - Automatic generation of random numeric PINs, you can choose the length between 4 and 8 digits. 12 word mnemonic backup phrase.
 2. Advanced - Self selection of PINs, up to 60 characters alphanumeric. 18 word mnemonic backup phrase. Anti device-tampering recognition phrase setting.
 3. Expert - Self selection of PINs, up to 60 characters alphanumeric. 24 word mnemonic backup phrase. Anti device-tampering recognition phrase setting.

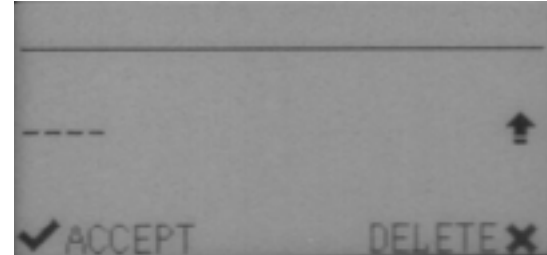


Transaction specific PIN.

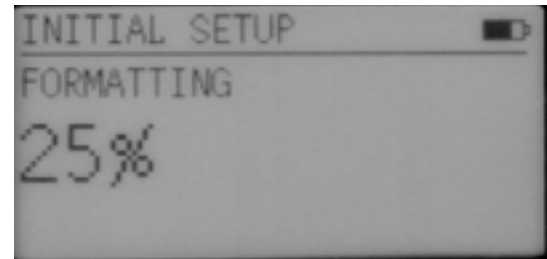
4. Choose what setup type you prefer
5. You will be prompted about the device PIN.
 1. Standard. Select 4, 5, 6, 7 or 8 as your PIN length. The PIN will be automatically generated and presented to you. If you don't like it, choose back and you can generate another one. Write this device PIN down or memorize it.
 2. Advanced. You will be entering a PIN manually. This is done via the alphanumeric entry pad. Press each key and hold for successive characters. for example, press and hold "1". You will see on the display "1" then "a" then "b" then "c" then "1" again and so forth. Release the key to choose a character. Uppercase characters may be used, first press and hold the "0" key to access the shift function. Activate the shift function again to revert to lowercase. X to delete/backspace.
 3. Expert - You will be entering a PIN manually.



This is done via the alphanumeric entry pad. Press each key and hold for successive characters. for example, press and hold “1”. You will see on the display “1” then “a” then “b” then “c” then “1” again and so forth. Release the key to choose a character. Uppercase characters may be used, first press and hold the “0” key to access the shift function. Activate the shift function again to revert to lowercase. X to delete/ backspace.



6. The device will now automatically format the wallet storage area preparing it for use. Formatting is done in a secure manner, writing the entire area with 1s, then 0s, then twice with random data, ensuring every bit gets flipped at least once.
7. Wallet setup. You will be prompted about the wallet PIN for an initial wallet at this point. PIN type will be according to your initialization choice - Standard, Advanced or Expert. If you do not want to automatically generate a wallet at this time, press X until the “cancel wallet creation”notice appears.



1. Standard. Select 4, 5, 6, 7 or 8 as your PIN length. The PIN will be automatically generated and presented to you. If you don't like it, choose back and you can generate another one. Write this device PIN down or memorize it.

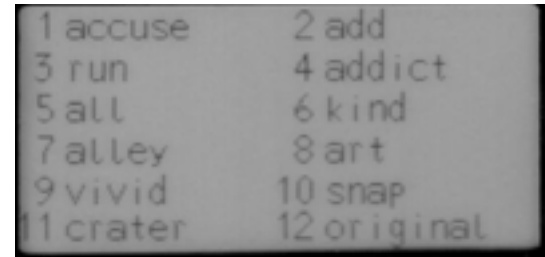
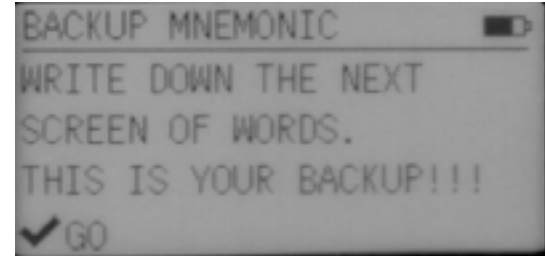


2. Advanced. You will be entering a PIN manually. This is done via the alphanumeric entry pad. Press each key and hold for successive characters. for example, press and hold "1". You will see on the display "1" then "a" then "b" then "c" then "1" again and so forth. Release the key to choose a character. Uppercase characters may be used, first press and hold the "0" key to access the shift function. Activate the shift function again to revert to lowercase. X to delete/backspace.
3. Expert - You will be entering a PIN manually. This is done via the alphanumeric entry pad. Press each key and hold for successive characters. for example, press and hold "1". You will see on the display "1" then "a" then "b" then "c" then "1" again and so forth. Release the key to choose a character. Uppercase characters may be used, first press and hold the "0" key to access the



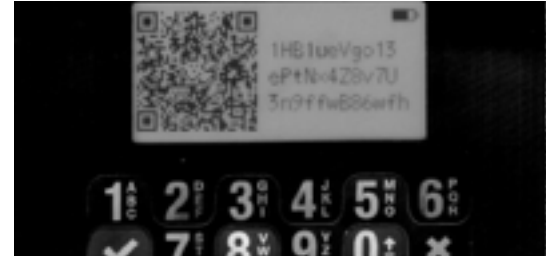
shift function. Activate the shift function again to revert to lowercase. X to delete/backspace.

8. After the wallet PIN has been set, you will be presented with the Backup Mnemonic screen. Press “GO” and the mnemonic list appears. Continue with the “check” key. Redisplay the list if desired by following the prompts.
1. It is **STRONGLY** advised you copy this list to the supplied mnemonic cards and keep it in a secure location separate from your BitLox.
2. In the event of loss or damage to your BitLox, all funds in a wallet may be recovered using the mnemonic list.
3. If your mnemonic list is compromised, you may incur loss of funds, so keep the list private and secure.
9. The default wallet is initialized, confirmation is displayed with a large “check” on the device.
10. Connection mode - The display shows the icons for USB and Bluetooth LE. Click 1 or 2 or 3 to use USB with the web app on your computer,



click 4 or 5 or 6 to use Bluetooth with your mobile device.

11. The receiving address for your first wallet will be displayed as a QR code. You can immediately use this to send funds to your new BitLox protected wallet.



LOADING A WALLET

When the device is connected to the app, you will be presented to a list of wallets that are initialized on the device.

Choose a wallet, then follow the prompts on the BitLox to enter your PIN.

If you wish to access a Hidden Wallet, you must do a direct entry of the wallet number. On the web app, choose "load hidden wallet". On iOS, pull down on the wallet listing to reveal the entry tab for hidden wallets. On Android, choose the Settings icon in the upper right hand corner, then choose "Hidden wallet". Enter the hidden wallet number and check the BitLox for the prompt to enter the PIN.



RECEIVING FUNDS

Receiving funds can be as easy as having someone scan the QR code that can be displayed on the screen of your BitLox. Once the code is displayed, you may switch off your BitLox to conserve battery life. The QR code will continue to be displayed, as the e-paper screen needs no power to continue to display. The BitLox does NOT need to be powered on or connected for you to receive funds to your wallet.



Web App - You can click on the QR code icon to bring up a scannable code that then can be copied to the clipboard and shared. You may also click the button to copy your address itself to the clipboard.

Mobile app - Once your wallet is loaded, tap the “RECEIVE” button to display a QR code. Tap the “share” button to send the code to other people.

If you need additional addresses, you may create a new one once you have used the previous address.

SENDING FUNDS

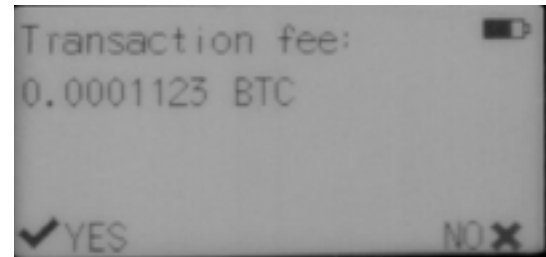
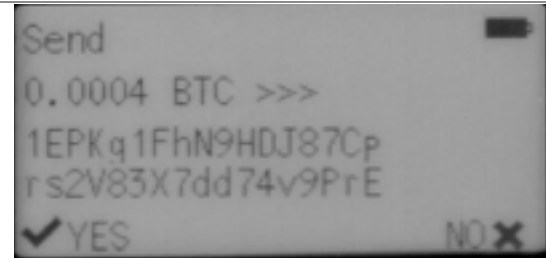
Once you have some funds in your wallet, you can use your BitLox to securely send to others.

Web - Select the “SEND” section and enter the address of the recipient(s), adjusting the fee if desired. We suggest at least a 0.0001 fee for expeditious processing. Click the “Send” button to proceed.

Mobile - Tap “SEND” to enter the sending pane. Tap the address field to bring up the address entry pane. Type or paste the address into the field, or tap the camera icon to bring up the QR scanner. Tap “DONE” in the upper right hand corner when finished to return to the sending screen.

Enter the amount you wish to send.

*optional - if you wish to send from a specific address, tap the “Any address” area and select a specific address with funds.



Tap the “SEND” button when ready.

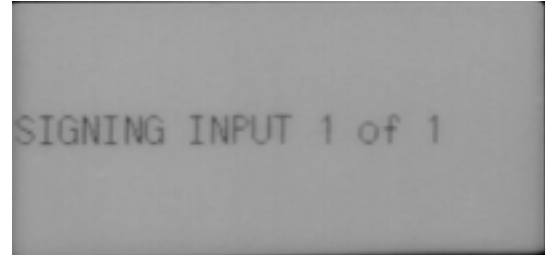
Now the app is fetching the data from the blockchain to prepare your transaction. Once done, it will send to your BitLox.

On the BitLox, you will see “PREPARING TRANSACTION” as it checks the data.

Next, you will need to approve each spending output and the fees. Change that is returned to the same address as sent from is not shown.

“YES” approves, “NO” will cancel the transaction. All parts of a transaction must be approved to proceed.

Once approved, the BitLox will sign each of the inputs to the transaction and send the signed transaction back to the app. The app submits it to the network automatically, and you are done.



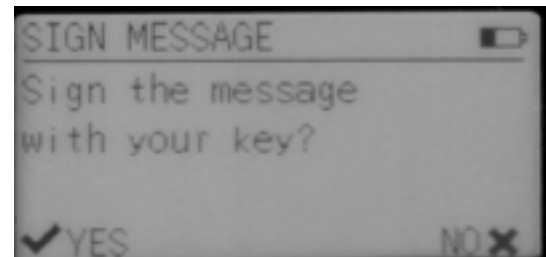
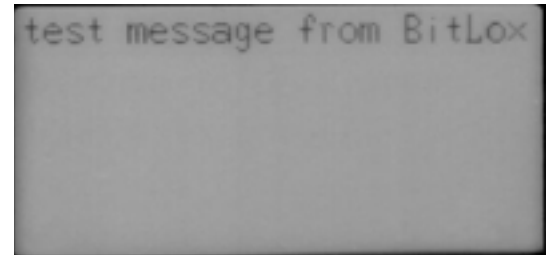
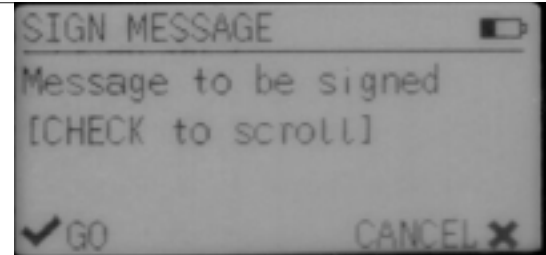
SIGNING A SHORT MESSAGE

You can cryptographically sign a short text message with your BitLox using the private key associated with an address. This could be used, for example, to verify to someone that you are the rightful owner of a specific address.

To sign a message, load a wallet, then simply select "SIGN MESSAGE", type in the message (650 character limit) and hit continue. Select an address to sign with, then follow the instructions on the BitLox. Your message will be displayed for verification.

Your message will be returned copied to the clipboard for use in other applications, such as sending a message or pasting in an email.

Only latin alphabet is supported for messages at this time.



MAKE A NEW WALLET

You can create multiple wallets for different uses. The BitLox can store up to 50 completely separate wallets, plus an additional up to 50 “hidden” wallets may be configured. (More on those later)

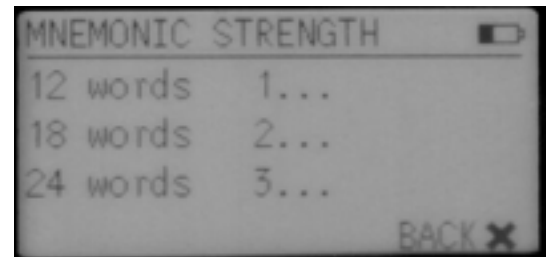
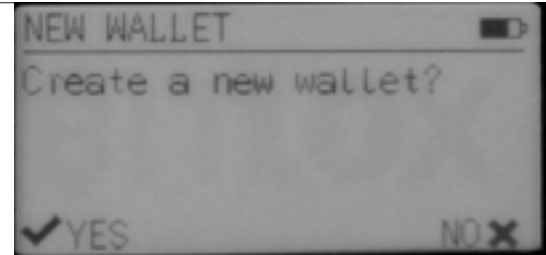
Web - Enter a wallet name in create wallet, press “Go”

Mobile - At the wallet listing, press “+” in the lower right to create a new wallet. Enter the desired wallet name, and if you want a PIN on the wallet (PIN recommended)

At this point, please check your BitLox.

NEW WALLET - You will be prompted if you really want to create a new wallet. Enter YES or NO,

MNEMONIC STRENGTH - you will be asked the mnemonic strength. 12, 18 or 24 word mnemonics are available. The most compatible is 12 words. (for example, this mnemonic length is compatible with



the hive wallet [<https://web.hivewallet.com>])

PASSWORD - if you selected “create wallet with no PIN” you will be prompted if you really want to do this. Confirm or cancel.

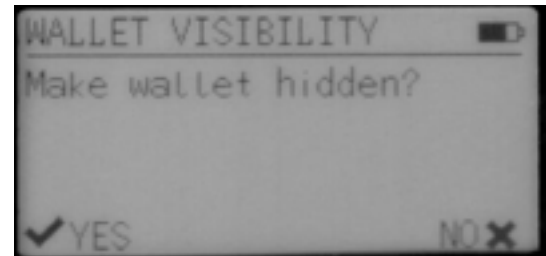
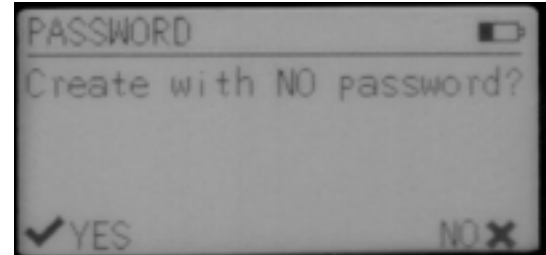
WALLET PIN TYPE - you will be asked the PIN type. 1 for Standard (auto generated PINs), 2 for Advanced (manual PIN entry), 3 for Expert (manual PIN entry + transaction password). Choose the PIN type, then set your PIN and copy the data down in a safe place or memorize.

WALLET VISIBILITY - do you want the wallet to be included in the listings of the wallets on the device? If you choose hidden wallet, you will be prompted to enter a number between 51 and 100. This is your wallet number. DO NOT FORGET THIS, as you must have both the wallet number and the PIN to access a hidden wallet.

WALLET PIN - please write down or memorize the PIN

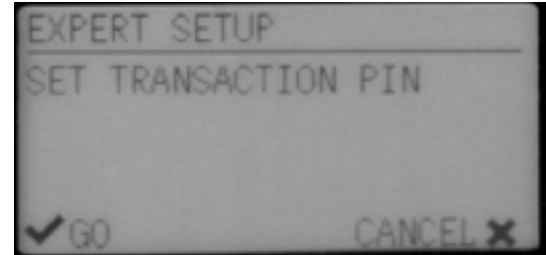
*EXPERT SETUP - set transaction PIN. If you have chosen Expert setup, you will now be prompted to enter a transaction PIN. Enter the PIN desired using the manual entry method, and confirm.

BACKUP MNEMONIC - Press “GO” and the mnemonic list appears. Continue with the “check” key. Redisplay the list if desired by following the prompts.



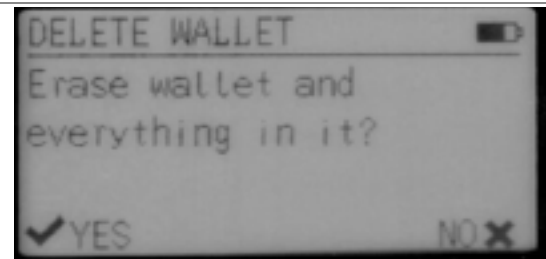
1. It is **STRONGLY** advised you copy this list to the supplied mnemonic cards and keep it in a secure location separate from your BitLox.
2. In the event of loss or damage to your BitLox, all funds in a wallet may be recovered using the mnemonic list.
3. If your mnemonic list is compromised, you may incur loss of funds, so keep the list private and secure.

Your new wallet is now ready to go, and the BitLox screen will show the initial address of the wallet as a QR code and text.



DELETING A WALLET

Wallets can be deleted once the device has been unlocked with the device PIN. You do not need the wallet PIN to delete a wallet. **WARNING:** deleting a wallet will cause you to lose access to all funds from all addresses in the wallet. The only way to



recover any funds lost is to use the mnemonic code phrase that was generated when the wallet was created.

Web - Select the “Delete” pane. Click “Delete this wallet?” You will be asked to verify this action on the BitLox screen. Once you accept, you will be presented with a OTP (One Time Password) on the BitLox screen. Enter this OTP into the app where requested. Confirm, and the wallet is deleted.



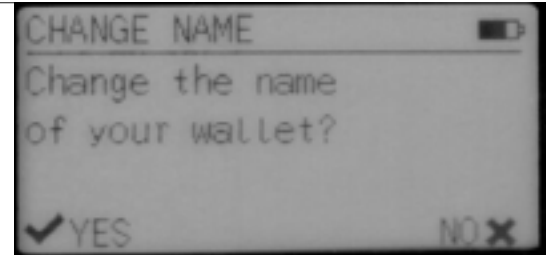
Mobile - When at the wallet listing screen, press “Edit” to bring up the option to delete the wallet. Choose delete. You will be asked to verify this action on the BitLox screen. Once you accept, you will be presented with a OTP (One Time Password) on the BitLox screen. Enter this OTP into the app where requested. Confirm, and the wallet is deleted.

RENAMING A WALLET

Wallets can be renamed from the wallet listing screen.

Web - Choose “rename” from the options presented after loading a wallet.

Mobile - Choose “EDIT” or slide the name of the wallet you want to rename. Choose “rename wallet”.



You will be prompted to enter a new name for this wallet. Confirm, and on the BitLox, enter the wallet PIN. The wallet will load. You will then be presented with a confirmation screen on the BitLox. Confirm the rename or cancel. Your wallet is renamed.

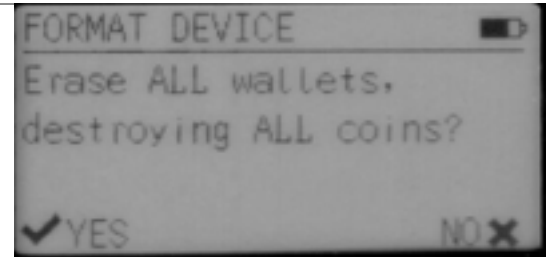
RENAMING YOUR DEVICE

Mobile - Go to the app settings menu in the upper right of the wallet listing screen. There you can choose “Rename Device”. Input a new name for your device when prompted and confirm.

FORMATTING YOUR DEVICE

To delete all wallet data, go to the app settings menu on the upper-right corner. Choose “Format device”. You will be prompted to confirm your choice. Once you accept, you will be presented with a OTP (One Time Password) on the BitLox screen. Enter this OTP into the app where requested. Confirm, and the device will commence formatting.

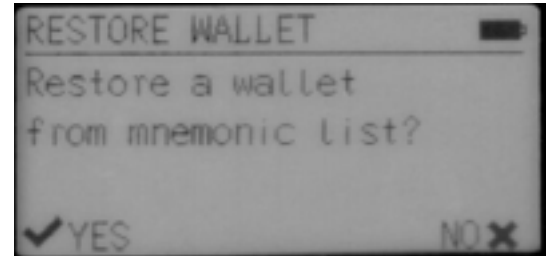
WARNING - formatting will destroy all wallets and the funds contained in them. You will lose all access to these funds unless you have your mnemonic backup phrases.



RECOVERING A WALLET FROM THE MNEMONIC

If you need to recover a wallet via the mnemonic phrase, go to the settings menu (mobile) and choose “Restore Wallet to device” or on the web app check “restore wallet” and click “go”

Restoring a wallet is very similar to creating a new wallet. You will be prompted for the wallet PIN type and if you want the wallet to be hidden. (Plus transaction PIN if you selected Expert). These selections (except for mnemonic length) are completely independent of how the wallet was previously configured.



The mnemonic list is entered in one of two ways - direct alphanumeric entry of the list, or entry of the indices of the words from a list. (see appendix for a the indexed list or download from our website <http://bitlox.io> . Alternatively, you may fetch the list from an independent source at <https://raw.githubusercontent.com/bitcoin/bips/master/bip-0039/english.txt>)

RESTORE WALLET - confirm you want to restore a wallet

MNEMONIC STRENGTH - make sure you choose the length that corresponds to your saved mnemonic

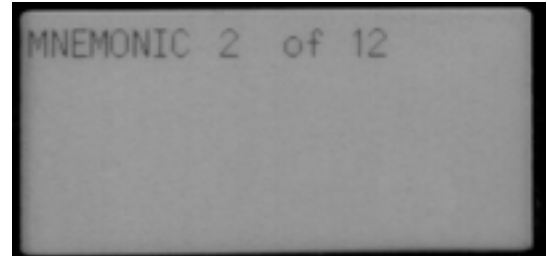
WALLET PIN TYPE - You will be prompted as to the type of PIN generation for the restored wallet. This will be a new PIN unrelated to any previous PIN the wallet may have had before.

WALLET VISIBILITY - Choose if you want to make this wallet hidden. Again, this is unrelated to the previous wallet's visibility.

PIN SETUP - enter/copy down the PIN for the new wallet according to the method chosen

MNEMONIC INPUT - Choose either "Index input" or "Direct input"

1. Index input - "Please input indices"- then the screen changes to show "1 of 12"(or the count of your mnemonic if it was 18 or 24). Type in the number of each word from your phrase list, entering a check after each number. Example: word is "acoustic" you enter 1 7 then check. The display will not update until you hit check. The count advances. When you finish, the list will be redisplayed to you.
2. Direct input - "MNEMONIC ENTRY 1 of 12" will be shown. Start entering the mnemonic list, in order. The keypad will only cycle through letters, no numbers. Only lowercase entry. Check to accept each entry in turn. The count advances. When you finish, the list will be redisplayed to you. *NOTE: it is possible to create a new custom wallet in this way with your own word list. This is not recommended, as most word lists created by people do not have enough "randomness", but it is possible if desired.



BACKUP MNEMONIC - the mnemonic phrase you just entered will be shown to you to check and verify if it is correct

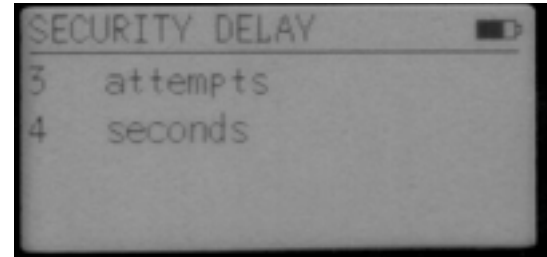
The wallet will be restored and will be listed as "Restored wallet #" in the wallet listings.

The restore wallet function is BIP39 compatible.

SECURITY FEATURES

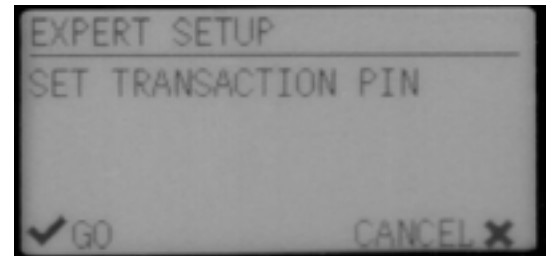
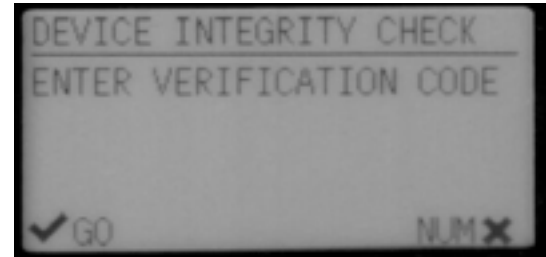
All your wallet, device and transaction PINs must ONLY be entered on the device, never into any app.

1. Device PIN - If the device PIN is entered incorrectly, you will need to wait a specified period of time before the next attempt is validated. This is to prevent brute force attacks on your device password. With more incorrect entries, the time of the delay increases dramatically.
2. Wallet PINs - The security delay for wallet PINs is slightly different. If an aggregate of 10 wallet pin attempts are made incorrectly, the device will reset itself and you face a mandatory 15/30/45 minute delay (Standard/Advanced/Expert initial setup) for reentering the device. This is to protect against brute



force attacks on wallets, but must be set up as an aggregate, as the wallet has no knowledge if hidden wallets even exist, ergo if the device kept count of wallet attempts on a wallet-by-wallet basis, it would be possible to infer the existence of a hidden wallet.

3. Device Integrity Check (“Anti evil maid”attack) - This feature is a BitLox exclusive. When setting up the BitLox, if you choose Advanced or Expert mode, this feature is enabled. When enabled, you choose a special “recognition phrase” that will be encrypted with a password you supply. Upon device power on, you enter the password. This will be used to decrypt the stored recognition phrase. If the recognition phrase is correct, the congratulations, this is the correct device. If NOT, then it is possible that you are the victim of a malicious attempt to trick you into entering your device and wallet PINs into a foreign device. Proceed with caution. It may be recommended you wipe any devices you are in possession of (or obtain new devices) and reinstall your wallets via the mnemonic restore.
4. Transaction PIN (the “tackle attack”) - This feature (enabled when a wallet is initialized in Expert mode) requires you set a PIN that will be required to enter before any transaction signatures are returned to the app for



transmission. An example scenario: You unlock the device, unlock a wallet that has considerable funds in it. At this point, you are attacked and the device is taken from you. The malicious party will still not be able to access/transfer the funds from your wallet, as a transaction PIN STILL has to be entered before any funds can be transferred out. Even if they wait until you have made a successful transaction, the PIN must still be entered for ANY subsequent transaction in that wallet. Incorrect input of a Transaction PIN causes an immediate reset of the device followed by a mandatory 30 minute delay before the device can be reopened.

5. Hidden wallets - When creating a new wallet from the app, you are given the additional choice of making the wallet hidden. A hidden wallet will not show up in the wallets listing, and the data portion of a hidden wallet is indistinguishable from random data. The only way to access it is through directly entering the wallet number by the hidden wallet entry field. You MUST remember the wallet number you enter into the device upon hidden wallet creation. A typical scenario would be to have a single visible wallet on the device with a small amount of funds, where the bulk of funds could be stashed in a hidden wallet - easily accessible IF you know the PIN and the wallet number but safe from prying eyes. Attempted loading of a hidden wallet with an incorrect PIN has the same behavior as attempting to load a wallet from a space where no wallet exists.
6. Emergency/duress wipe - On the device PIN entry screen, if the PIN “911” is entered, the device will appear to correctly authenticate and ask for the connection mode. However, once this PIN is entered, the device will instantly and irrevocably be erased

completely, setting it back to a factory reset. All PINs and all wallet data will be COMPLETELY destroyed and overwritten with random data.

FAQ

If you can't get the device to activate from "Looking for BitLox" screen, restart the device by moving the power switch to O and back to I again, and make sure you have enough battery power, or plug in the BitLox.

USING THE APPS

To use your BitLox, the following apps are available:

- Mobile
 - [Android](#)
 - [iOS iPhone/iPad](#)
- Web (Mac/Linux)
 - [Web app](#)
- Chrome app (Mac/Windows/Linux)
 - [Chrome app store](#)

APPENDIX

WORD LIST

- | | | | |
|--------------|--------------|-------------|-------------|
| 0. abandon | 16. acoustic | 32. advice | 48. alcohol |
| 1. ability | 17. acquire | 33. aerobic | 49. alert |
| 2. able | 18. across | 34. affair | 50. alien |
| 3. about | 19. act | 35. afford | 51. all |
| 4. above | 20. action | 36. afraid | 52. alley |
| 5. absent | 21. actor | 37. again | 53. allow |
| 6. absorb | 22. actress | 38. age | 54. almost |
| 7. abstract | 23. actual | 39. agent | 55. alone |
| 8. absurd | 24. adapt | 40. agree | 56. alpha |
| 9. abuse | 25. add | 41. ahead | 57. already |
| 10. access | 26. addict | 42. aim | 58. also |
| 11. accident | 27. address | 43. air | 59. alter |
| 12. account | 28. adjust | 44. airport | 60. always |
| 13. accuse | 29. admit | 45. aisle | 61. amateur |
| 14. achieve | 30. adult | 46. alarm | 62. amazing |
| 15. acid | 31. advance | 47. album | 63. among |

64. amount	87. april	110. assist	133. awful
65. amused	88. arch	111. assume	134. awkward
66. analyst	89. arctic	112. asthma	135. axis
67. anchor	90. area	113. athlete	136. baby
68. ancient	91. arena	114. atom	137. bachelor
69. anger	92. argue	115. attack	138. bacon
70. angle	93. arm	116. attend	139. badge
71. angry	94. armed	117. attitude	140. bag
72. animal	95. armor	118. attract	141. balance
73. ankle	96. army	119. auction	142. balcony
74. announce	97. around	120. audit	143. ball
75. annual	98. arrange	121. august	144. bamboo
76. another	99. arrest	122. aunt	145. banana
77. answer	100. arrive	123. author	146. banner
78. antenna	101. arrow	124. auto	147. bar
79. antique	102. art	125. autumn	148. barely
80. anxiety	103. artefact	126. average	149. bargain
81. any	104. artist	127. avocado	150. barrel
82. apart	105. artwork	128. avoid	151. base
83. apology	106. ask	129. awake	152. basic
84. appear	107. aspect	130. aware	153. basket
85. apple	108. assault	131. away	154. battle
86. approve	109. asset	132. awesome	155. beach

156. bean	179. biology	202. bone	225. bring
157. beauty	180. bird	203. bonus	226. brisk
158. because	181. birth	204. book	227. broccoli
159. become	182. bitter	205. boost	228. broken
160. beef	183. black	206. border	229. bronze
161. before	184. blade	207. boring	230. broom
162. begin	185. blame	208. borrow	231. brother
163. behave	186. blanket	209. boss	232. brown
164. behind	187. blast	210. bottom	233. brush
165. believe	188. bleak	211. bounce	234. bubble
166. below	189. bless	212. box	235. buddy
167. belt	190. blind	213. boy	236. budget
168. bench	191. blood	214. bracket	237. buffalo
169. benefit	192. blossom	215. brain	238. build
170. best	193. blouse	216. brand	239. bulb
171. betray	194. blue	217. brass	240. bulk
172. better	195. blur	218. brave	241. bullet
173. between	196. blush	219. bread	242. bundle
174. beyond	197. board	220. breeze	243. bunker
175. bicycle	198. boat	221. brick	244. burden
176. bid	199. body	222. bridge	245. burger
177. bike	200. boil	223. brief	246. burst
178. bind	201. bomb	224. bright	247. bus

248. business	271. capable	294. cave	317. chicken
249. busy	272. capital	295. ceiling	318. chief
250. butter	273. captain	296. celery	319. child
251. buyer	274. car	297. cement	320. chimney
252. buzz	275. carbon	298. census	321. choice
253. cabbage	276. card	299. century	322. choose
254. cabin	277. cargo	300. cereal	323. chronic
255. cable	278. carpet	301. certain	324. chuckle
256. cactus	279. carry	302. chair	325. chunk
257. cage	280. cart	303. chalk	326. churn
258. cake	281. case	304. champion	327. cigar
259. call	282. cash	305. change	328. cinnamon
260. calm	283. casino	306. chaos	329. circle
261. camera	284. castle	307. chapter	330. citizen
262. camp	285. casual	308. charge	331. city
263. can	286. cat	309. chase	332. civil
264. canal	287. catalog	310. chat	333. claim
265. cancel	288. catch	311. cheap	334. clap
266. candy	289. category	312. check	335. clarify
267. cannon	290. cattle	313. cheese	336. claw
268. canoe	291. caught	314. chef	337. clay
269. canvas	292. cause	315. cherry	338. clean
270. canyon	293. caution	316. chest	339. clerk

340. clever	363. coin	386. core	409. creek
341. click	364. collect	387. corn	410. crew
342. client	365. color	388. correct	411. cricket
343. cliff	366. column	389. cost	412. crime
344. climb	367. combine	390. cotton	413. crisp
345. clinic	368. come	391. couch	414. critic
346. clip	369. comfort	392. country	415. crop
347. clock	370. comic	393. couple	416. cross
348. clog	371. common	394. course	417. crouch
349. close	372. company	395. cousin	418. crowd
350. cloth	373. concert	396. cover	419. crucial
351. cloud	374. conduct	397. coyote	420. cruel
352. clown	375. confirm	398. crack	421. cruise
353. club	376. congress	399. cradle	422. crumble
354. clump	377. connect	400. craft	423. crunch
355. cluster	378. consider	401. cram	424. crush
356. clutch	379. control	402. crane	425. cry
357. coach	380. convince	403. crash	426. crystal
358. coast	381. cook	404. crater	427. cube
359. coconut	382. cool	405. crawl	428. culture
360. code	383. copper	406. crazy	429. cup
361. coffee	384. copy	407. cream	430. cupboard
362. coil	385. coral	408. credit	431. curious

432. current	455. decline	478. design	501. dirt
433. curtain	456. decorate	479. desk	502. disagree
434. curve	457. decrease	480. despair	503. discover
435. cushion	458. deer	481. destroy	504. disease
436. custom	459. defense	482. detail	505. dish
437. cute	460. define	483. detect	506. dismiss
438. cycle	461. defy	484. develop	507. disorder
439. dad	462. degree	485. device	508. display
440. damage	463. delay	486. devote	509. distance
441. damp	464. deliver	487. diagram	510. divert
442. dance	465. demand	488. dial	511. divide
443. danger	466. demise	489. diamond	512. divorce
444. daring	467. denial	490. diary	513. dizzy
445. dash	468. dentist	491. dice	514. doctor
446. daughter	469. deny	492. diesel	515. document
447. dawn	470. depart	493. diet	516. dog
448. day	471. depend	494. differ	517. doll
449. deal	472. deposit	495. digital	518. dolphin
450. debate	473. depth	496. dignity	519. domain
451. debris	474. deputy	497. dilemma	520. donate
452. decade	475. derive	498. dinner	521. donkey
453. december	476. describe	499. dinosaur	522. donor
454. decide	477. desert	500. direct	523. door

524. dose	547. dutch	570. elder	593. enforce
525. double	548. duty	571. electric	594. engage
526. dove	549. dwarf	572. elegant	595. engine
527. draft	550. dynamic	573. element	596. enhance
528. dragon	551. eager	574. elephant	597. enjoy
529. drama	552. eagle	575. elevator	598. enlist
530. drastic	553. early	576. elite	599. enough
531. draw	554. earn	577. else	600. enrich
532. dream	555. earth	578. embark	601. enroll
533. dress	556. easily	579. embody	602. ensure
534. drift	557. east	580. embrace	603. enter
535. drill	558. easy	581. emerge	604. entire
536. drink	559. echo	582. emotion	605. entry
537. drip	560. ecology	583. employ	606. envelope
538. drive	561. economy	584. empower	607. episode
539. drop	562. edge	585. empty	608. equal
540. drum	563. edit	586. enable	609. equip
541. dry	564. educate	587. enact	610. era
542. duck	565. effort	588. end	611. erase
543. dumb	566. egg	589. endless	612. erode
544. dune	567. eight	590. endorse	613. erosion
545. during	568. either	591. enemy	614. error
546. dust	569. elbow	592. energy	615. erupt

616. escape	639. exit	662. fan	685. fiber
617. essay	640. exotic	663. fancy	686. fiction
618. essence	641. expand	664. fantasy	687. field
619. estate	642. expect	665. farm	688. figure
620. eternal	643. expire	666. fashion	689. file
621. ethics	644. explain	667. fat	690. film
622. evidence	645. expose	668. fatal	691. filter
623. evil	646. express	669. father	692. final
624. evoke	647. extend	670. fatigue	693. find
625. evolve	648. extra	671. fault	694. fine
626. exact	649. eye	672. favorite	695. finger
627. example	650. eyebrow	673. feature	696. finish
628. excess	651. fabric	674. february	697. fire
629. exchange	652. face	675. federal	698. firm
630. excite	653. faculty	676. fee	699. first
631. exclude	654. fade	677. feed	700. fiscal
632. excuse	655. faint	678. feel	701. fish
633. execute	656. faith	679. female	702. fit
634. exercise	657. fall	680. fence	703. fitness
635. exhaust	658. false	681. festival	704. fix
636. exhibit	659. fame	682. fetch	705. flag
637. exile	660. family	683. fever	706. flame
638. exist	661. famous	684. few	707. flash

708. flat
709. flavor
710. flee
711. flight
712. flip
713. float
714. flock
715. floor
716. flower
717. fluid
718. flush
719. fly
720. foam
721. focus
722. fog
723. foil
724. fold
725. follow
726. food
727. foot
728. force
729. forest
730. forget

731. fork
732. fortune
733. forum
734. forward
735. fossil
736. foster
737. found
738. fox
739. fragile
740. frame
741. frequent
742. fresh
743. friend
744. fringe
745. frog
746. front
747. frost
748. frown
749. frozen
750. fruit
751. fuel
752. fun
753. funny

754. furnace
755. fury
756. future
757. gadget
758. gain
759. galaxy
760. gallery
761. game
762. gap
763. garage
764. garbage
765. garden
766. garlic
767. garment
768. gas
769. gasp
770. gate
771. gather
772. gauge
773. gaze
774. general
775. genius
776. genre

777. gentle
778. genuine
779. gesture
780. ghost
781. giant
782. gift
783. giggle
784. ginger
785. giraffe
786. girl
787. give
788. glad
789. glance
790. glare
791. glass
792. glide
793. glimpse
794. globe
795. gloom
796. glory
797. glove
798. glow
799. glue

800. goat	823. group	846. hawk	869. hole
801. goddess	824. grow	847. hazard	870. holiday
802. gold	825. grunt	848. head	871. hollow
803. good	826. guard	849. health	872. home
804. goose	827. guess	850. heart	873. honey
805. gorilla	828. guide	851. heavy	874. hood
806. gospel	829. guilt	852. hedgehog	875. hope
807. gossip	830. guitar	853. height	876. horn
808. govern	831. gun	854. hello	877. horror
809. gown	832. gym	855. helmet	878. horse
810. grab	833. habit	856. help	879. hospital
811. grace	834. hair	857. hen	880. host
812. grain	835. half	858. hero	881. hotel
813. grant	836. hammer	859. hidden	882. hour
814. grape	837. hamster	860. high	883. hover
815. grass	838. hand	861. hill	884. hub
816. gravity	839. happy	862. hint	885. huge
817. great	840. harbor	863. hip	886. human
818. green	841. hard	864. hire	887. humble
819. grid	842. harsh	865. history	888. humor
820. grief	843. harvest	866. hobby	889. hundred
821. grit	844. hat	867. hockey	890. hungry
822. grocery	845. have	868. hold	891. hunt

892. hurdle	915. include	938. inspire	961. join
893. hurry	916. income	939. install	962. joke
894. hurt	917. increase	940. intact	963. journey
895. husband	918. index	941. interest	964. joy
896. hybrid	919. indicate	942. into	965. judge
897. ice	920. indoor	943. invest	966. juice
898. icon	921. industry	944. invite	967. jump
899. idea	922. infant	945. involve	968. jungle
900. identify	923. inflict	946. iron	969. junior
901. idle	924. inform	947. island	970. junk
902. ignore	925. inhale	948. isolate	971. just
903. ill	926. inherit	949. issue	972. kangaroo
904. illegal	927. initial	950. item	973. keen
905. illness	928. inject	951. ivory	974. keep
906. image	929. injury	952. jacket	975. ketchup
907. imitate	930. inmate	953. jaguar	976. key
908. immense	931. inner	954. jar	977. kick
909. immune	932. innocent	955. jazz	978. kid
910. impact	933. input	956. jealous	979. kidney
911. impose	934. inquiry	957. jeans	980. kind
912. improve	935. insane	958. jelly	981. kingdom
913. impulse	936. insect	959. jewel	982. kiss
914. inch	937. inside	960. job	983. kit

984. kitchen	1007. law	1030. liar	1053. lonely
985. kite	1008. lawn	1031. liberty	1054. long
986. kitten	1009. lawsuit	1032. library	1055. loop
987. kiwi	1010. layer	1033. license	1056. lottery
988. knee	1011. lazy	1034. life	1057. loud
989. knife	1012. leader	1035. lift	1058. lounge
990. knock	1013. leaf	1036. light	1059. love
991. know	1014. learn	1037. like	1060. loyal
992. lab	1015. leave	1038. limb	1061. lucky
993. label	1016. lecture	1039. limit	1062. luggage
994. labor	1017. left	1040. link	1063. lumber
995. ladder	1018. leg	1041. lion	1064. lunar
996. lady	1019. legal	1042. liquid	1065. lunch
997. lake	1020. legend	1043. list	1066. luxury
998. lamp	1021. leisure	1044. little	1067. lyrics
999. language	1022. lemon	1045. live	1068. machine
1000. laptop	1023. lend	1046. lizard	1069. mad
1001. large	1024. length	1047. load	1070. magic
1002. later	1025. lens	1048. loan	1071. magnet
1003. latin	1026. leopard	1049. lobster	1072. maid
1004. laugh	1027. lesson	1050. local	1073. mail
1005. laundry	1028. letter	1051. lock	1074. main
1006. lava	1029. level	1052. logic	1075. major

1076. make	1099. maximum	1122. middle	1145. monkey
1077. mammal	1100. maze	1123. midnight	1146. monster
1078. man	1101. meadow	1124. milk	1147. month
1079. manage	1102. mean	1125. million	1148. moon
1080. mandate	1103. measure	1126. mimic	1149. moral
1081. mango	1104. meat	1127. mind	1150. more
1082. mansion	1105. mechanic	1128. minimum	1151. morning
1083. manual	1106. medal	1129. minor	1152. mosquito
1084. maple	1107. media	1130. minute	1153. mother
1085. marble	1108. melody	1131. miracle	1154. motion
1086. march	1109. melt	1132. mirror	1155. motor
1087. margin	1110. member	1133. misery	1156. mountain
1088. marine	1111. memory	1134. miss	1157. mouse
1089. market	1112. mention	1135. mistake	1158. move
1090. marriage	1113. menu	1136. mix	1159. movie
1091. mask	1114. mercy	1137. mixed	1160. much
1092. mass	1115. merge	1138. mixture	1161. muffin
1093. master	1116. merit	1139. mobile	1162. mule
1094. match	1117. merry	1140. model	1163. multiply
1095. material	1118. mesh	1141. modify	1164. muscle
1096. math	1119. message	1142. mom	1165. museum
1097. matrix	1120. metal	1143. moment	1166. mushroom
1098. matter	1121. method	1144. monitor	1167. music

1168. must	1191. neutral	1214. oak	1237. one
1169. mutual	1192. never	1215. obey	1238. onion
1170. myself	1193. news	1216. object	1239. online
1171. mystery	1194. next	1217. oblige	1240. only
1172. myth	1195. nice	1218. obscure	1241. open
1173. naive	1196. night	1219. observe	1242. opera
1174. name	1197. noble	1220. obtain	1243. opinion
1175. napkin	1198. noise	1221. obvious	1244. oppose
1176. narrow	1199. nominee	1222. occur	1245. option
1177. nasty	1200. noodle	1223. ocean	1246. orange
1178. nation	1201. normal	1224. october	1247. orbit
1179. nature	1202. north	1225. odor	1248. orchard
1180. near	1203. nose	1226. off	1249. order
1181. neck	1204. notable	1227. offer	1250. ordinary
1182. need	1205. note	1228. office	1251. organ
1183. negative	1206. nothing	1229. often	1252. orient
1184. neglect	1207. notice	1230. oil	1253. original
1185. neither	1208. novel	1231. okay	1254. orphan
1186. nephew	1209. now	1232. old	1255. ostrich
1187. nerve	1210. nuclear	1233. olive	1256. other
1188. nest	1211. number	1234. olympic	1257. outdoor
1189. net	1212. nurse	1235. omit	1258. outer
1190. network	1213. nut	1236. once	1259. output

1260. outside	1283. parrot	1306. person	1329. plate
1261. oval	1284. party	1307. pet	1330. play
1262. oven	1285. pass	1308. phone	1331. please
1263. over	1286. patch	1309. photo	1332. pledge
1264. own	1287. path	1310. phrase	1333. pluck
1265. owner	1288. patient	1311. physical	1334. plug
1266. oxygen	1289. patrol	1312. piano	1335. plunge
1267. oyster	1290. pattern	1313. picnic	1336. poem
1268. ozone	1291. pause	1314. picture	1337. poet
1269. pact	1292. pave	1315. piece	1338. point
1270. paddle	1293. payment	1316. pig	1339. polar
1271. page	1294. peace	1317. pigeon	1340. pole
1272. pair	1295. peanut	1318. pill	1341. police
1273. palace	1296. pear	1319. pilot	1342. pond
1274. palm	1297. peasant	1320. pink	1343. pony
1275. panda	1298. pelican	1321. pioneer	1344. pool
1276. panel	1299. pen	1322. pipe	1345. popular
1277. panic	1300. penalty	1323. pistol	1346. portion
1278. panther	1301. pencil	1324. pitch	1347. position
1279. paper	1302. people	1325. pizza	1348. possible
1280. parade	1303. pepper	1326. place	1349. post
1281. parent	1304. perfect	1327. planet	1350. potato
1282. park	1305. permit	1328. plastic	1351. pottery

1352. poverty	1375. program	1398. put	1421. random
1353. powder	1376. project	1399. puzzle	1422. range
1354. power	1377. promote	1400. pyramid	1423. rapid
1355. practice	1378. proof	1401. quality	1424. rare
1356. praise	1379. property	1402. quantum	1425. rate
1357. predict	1380. prosper	1403. quarter	1426. rather
1358. prefer	1381. protect	1404. question	1427. raven
1359. prepare	1382. proud	1405. quick	1428. raw
1360. present	1383. provide	1406. quit	1429. razor
1361. pretty	1384. public	1407. quiz	1430. ready
1362. prevent	1385. pudding	1408. quote	1431. real
1363. price	1386. pull	1409. rabbit	1432. reason
1364. pride	1387. pulp	1410. raccoon	1433. rebel
1365. primary	1388. pulse	1411. race	1434. rebuild
1366. print	1389. pumpkin	1412. rack	1435. recall
1367. priority	1390. punch	1413. radar	1436. receive
1368. prison	1391. pupil	1414. radio	1437. recipe
1369. private	1392. puppy	1415. rail	1438. record
1370. prize	1393. purchase	1416. rain	1439. recycle
1371. problem	1394. purity	1417. raise	1440. reduce
1372. process	1395. purpose	1418. rally	1441. reflect
1373. produce	1396. purse	1419. ramp	1442. reform
1374. profit	1397. push	1420. ranch	1443. refuse

1444. region	1467. resist	1490. ripple	1513. rule
1445. regret	1468. resource	1491. risk	1514. run
1446. regular	1469. response	1492. ritual	1515. runway
1447. reject	1470. result	1493. rival	1516. rural
1448. relax	1471. retire	1494. river	1517. sad
1449. release	1472. retreat	1495. road	1518. saddle
1450. relief	1473. return	1496. roast	1519. sadness
1451. rely	1474. reunion	1497. robot	1520. safe
1452. remain	1475. reveal	1498. robust	1521. sail
1453. remember	1476. review	1499. rocket	1522. salad
1454. remind	1477. reward	1500. romance	1523. salmon
1455. remove	1478. rhythm	1501. roof	1524. salon
1456. render	1479. rib	1502. rookie	1525. salt
1457. renew	1480. ribbon	1503. room	1526. salute
1458. rent	1481. rice	1504. rose	1527. same
1459. reopen	1482. rich	1505. rotate	1528. sample
1460. repair	1483. ride	1506. rough	1529. sand
1461. repeat	1484. ridge	1507. round	1530. satisfy
1462. replace	1485. rifle	1508. route	1531. satoshi
1463. report	1486. right	1509. royal	1532. sauce
1464. require	1487. rigid	1510. rubber	1533. sausage
1465. rescue	1488. ring	1511. rude	1534. save
1466. resemble	1489. riot	1512. rug	1535. say

1536. scale	1559. seed	1582. shift	1605. silly
1537. scan	1560. seek	1583. shine	1606. silver
1538. scare	1561. segment	1584. ship	1607. similar
1539. scatter	1562. select	1585. shiver	1608. simple
1540. scene	1563. sell	1586. shock	1609. since
1541. scheme	1564. seminar	1587. shoe	1610. sing
1542. school	1565. senior	1588. shoot	1611. siren
1543. science	1566. sense	1589. shop	1612. sister
1544. scissors	1567. sentence	1590. short	1613. situate
1545. scorpion	1568. series	1591. shoulder	1614. six
1546. scout	1569. service	1592. shove	1615. size
1547. scrap	1570. session	1593. shrimp	1616. skate
1548. screen	1571. settle	1594. shrug	1617. sketch
1549. script	1572. setup	1595. shuffle	1618. ski
1550. scrub	1573. seven	1596. shy	1619. skill
1551. sea	1574. shadow	1597. sibling	1620. skin
1552. search	1575. shaft	1598. sick	1621. skirt
1553. season	1576. shallow	1599. side	1622. skull
1554. seat	1577. share	1600. siege	1623. slab
1555. second	1578. shed	1601. sight	1624. slam
1556. secret	1579. shell	1602. sign	1625. sleep
1557. section	1580. sheriff	1603. silent	1626. slender
1558. security	1581. shield	1604. silk	1627. slice

1628. slide	1651. solar	1674. spend	1697. stage
1629. slight	1652. soldier	1675. sphere	1698. stairs
1630. slim	1653. solid	1676. spice	1699. stamp
1631. slogan	1654. solution	1677. spider	1700. stand
1632. slot	1655. solve	1678. spike	1701. start
1633. slow	1656. someone	1679. spin	1702. state
1634. slush	1657. song	1680. spirit	1703. stay
1635. small	1658. soon	1681. split	1704. steak
1636. smart	1659. sorry	1682. spoil	1705. steel
1637. smile	1660. sort	1683. sponsor	1706. stem
1638. smoke	1661. soul	1684. spoon	1707. step
1639. smooth	1662. sound	1685. sport	1708. stereo
1640. snack	1663. soup	1686. spot	1709. stick
1641. snake	1664. source	1687. spray	1710. still
1642. snap	1665. south	1688. spread	1711. sting
1643. sniff	1666. space	1689. spring	1712. stock
1644. snow	1667. spare	1690. spy	1713. stomach
1645. soap	1668. spatial	1691. square	1714. stone
1646. soccer	1669. spawn	1692. squeeze	1715. stool
1647. social	1670. speak	1693. squirrel	1716. story
1648. sock	1671. special	1694. stable	1717. stove
1649. soda	1672. speed	1695. stadium	1718. strategy
1650. soft	1673. spell	1696. staff	1719. street

1720. strike	1743. supreme	1766. system	1789. text
1721. strong	1744. sure	1767. table	1790. thank
1722. struggle	1745. surface	1768. tackle	1791. that
1723. student	1746. surge	1769. tag	1792. theme
1724. stuff	1747. surprise	1770. tail	1793. then
1725. stumble	1748. surround	1771. talent	1794. theory
1726. style	1749. survey	1772. talk	1795. there
1727. subject	1750. suspect	1773. tank	1796. they
1728. submit	1751. sustain	1774. tape	1797. thing
1729. subway	1752. swallow	1775. target	1798. this
1730. success	1753. swamp	1776. task	1799. thought
1731. such	1754. swap	1777. taste	1800. three
1732. sudden	1755. swarm	1778. tattoo	1801. thrive
1733. suffer	1756. swear	1779. taxi	1802. throw
1734. sugar	1757. sweet	1780. teach	1803. thumb
1735. suggest	1758. swift	1781. team	1804. thunder
1736. suit	1759. swim	1782. tell	1805. ticket
1737. summer	1760. swing	1783. ten	1806. tide
1738. sun	1761. switch	1784. tenant	1807. tiger
1739. sunny	1762. sword	1785. tennis	1808. tilt
1740. sunset	1763. symbol	1786. tent	1809. timber
1741. super	1764. symptom	1787. term	1810. time
1742. supply	1765. syrup	1788. test	1811. tiny

1812. tip	1835. tornado	1858. tribe	1881. twenty
1813. tired	1836. tortoise	1859. trick	1882. twice
1814. tissue	1837. toss	1860. trigger	1883. twin
1815. title	1838. total	1861. trim	1884. twist
1816. toast	1839. tourist	1862. trip	1885. two
1817. tobacco	1840. toward	1863. trophy	1886. type
1818. today	1841. tower	1864. trouble	1887. typical
1819. toddler	1842. town	1865. truck	1888. ugly
1820. toe	1843. toy	1866. true	1889. umbrella
1821. together	1844. track	1867. truly	1890. unable
1822. toilet	1845. trade	1868. trumpet	1891. unaware
1823. token	1846. traffic	1869. trust	1892. uncle
1824. tomato	1847. tragic	1870. truth	1893. uncover
1825. tomorrow	1848. train	1871. try	1894. under
1826. tone	1849. transfer	1872. tube	1895. undo
1827. tongue	1850. trap	1873. tuition	1896. unfair
1828. tonight	1851. trash	1874. tumble	1897. unfold
1829. tool	1852. travel	1875. tuna	1898. unhappy
1830. tooth	1853. tray	1876. tunnel	1899. uniform
1831. top	1854. treat	1877. turkey	1900. unique
1832. topic	1855. tree	1878. turn	1901. unit
1833. topple	1856. trend	1879. turtle	1902. universe
1834. torch	1857. trial	1880. twelve	1903. unknown

1904. unlock	1927. valley	1950. video	1973. wall
1905. until	1928. valve	1951. view	1974. walnut
1906. unusual	1929. van	1952. village	1975. want
1907. unveil	1930. vanish	1953. vintage	1976. warfare
1908. update	1931. vapor	1954. violin	1977. warm
1909. upgrade	1932. various	1955. virtual	1978. warrior
1910. uphold	1933. vast	1956. virus	1979. wash
1911. upon	1934. vault	1957. visa	1980. wasp
1912. upper	1935. vehicle	1958. visit	1981. waste
1913. upset	1936. velvet	1959. visual	1982. water
1914. urban	1937. vendor	1960. vital	1983. wave
1915. urge	1938. venture	1961. vivid	1984. way
1916. usage	1939. venue	1962. vocal	1985. wealth
1917. use	1940. verb	1963. voice	1986. weapon
1918. used	1941. verify	1964. void	1987. wear
1919. useful	1942. version	1965. volcano	1988. weasel
1920. useless	1943. very	1966. volume	1989. weather
1921. usual	1944. vessel	1967. vote	1990. web
1922. utility	1945. veteran	1968. voyage	1991. wedding
1923. vacant	1946. viable	1969. wage	1992. weekend
1924. vacuum	1947. vibrant	1970. wagon	1993. weird
1925. vague	1948. vicious	1971. wait	1994. welcome
1926. valid	1949. victory	1972. walk	1995. west

1996. wet
1997. whale
1998. what
1999. wheat
2000. wheel
2001. when
2002. where
2003. whip
2004. whisper
2005. wide
2006. width
2007. wife
2008. wild
2009. will
2010. win
2011. window
2012. wine
2013. wing
2014. wink
2015. winner
2016. winter
2017. wire
2018. wisdom

2019. wise
2020. wish
2021. witness
2022. wolf
2023. woman
2024. wonder
2025. wood
2026. wool
2027. word
2028. work
2029. world
2030. worry
2031. worth
2032. wrap
2033. wreck
2034. wrestle
2035. wrist
2036. write
2037. wrong
2038. yard
2039. year
2040. yellow
2041. you

2042. young
2043. youth
2044. zebra
2045. zero
2046. zone
2047. zoo