How to Stamp Seed Words into a Steel Plate

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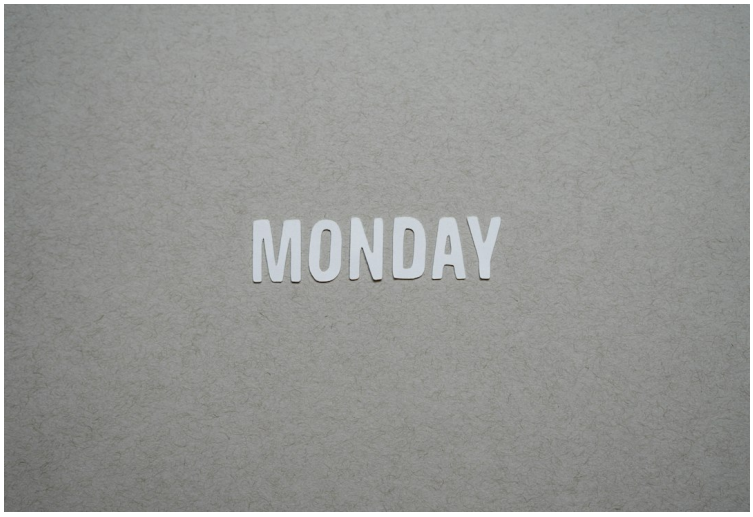


Photo by Kelly Sikkema on Unsplash

Practice on scrap, clamp the plate securely, stamp upright with one strike per letter, and verify every word before storage.

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A stamped seed backup must preserve every word in the correct order, with letters clear enough to read years later. Plan the layout and prove your technique on scrap before bringing the real recovery phrase to the bench.

Choose tools and plan the layout

Use a steel plate intended for hand stamping, letter punches explicitly rated for its material, a compatible hammer, a solid steel bench block, and clamps. Punches intended for soft jewelry metals can wear or flatten when used on stainless steel. Follow the punch manufacturer's hammer requirements. ([impressart.com](https://www.impressart.com/stamping-faqs))

Add safety glasses, hearing protection, a ruler, removable marking supplies, and preferably a punch holder. Inspect the tools before starting; set aside any punch with a chipped tip or damaged striking head.

Choose between full words and four-letter prefixes before marking the plate. Each English BIP39 word is uniquely identifiable from its first four letters; words shorter than four letters must be recorded completely. Full words simplify later reading when space allows. Confirm that your wallet actually uses BIP39 and the English wordlist before applying this convention. ([github.com](https://github.com/bitcoin/bips/blob/master/bip-0039.mediawiki))

For a practical layout, reserve one numbered row per word. Mark the reading direction clearly if using multiple columns or both sides. On paper, test whether the longest entry fits with room for its position number and margins. Keep this layout sketch free of actual recovery words.

Practice on scrap and clamp the plate

1. Practice on scrap matching the plate's alloy and thickness. Use isolated letters and position numbers, without copying any part of your actual recovery phrase. Try characters with broad and narrow faces.
2. Establish a repeatable strike. Aim for one firm, controlled hammer blow that leaves the entire character readable. Multiple strikes can create doubled impressions, especially if the punch moves between blows. ([impressart.com](https://www.impressart.com/stamping-faqs))
3. Check your practice under light from several directions. Adjust the setup or technique until you can produce complete letters consistently. If the required force feels uncontrolled, stop and review tool compatibility.
4. Put the steel block on a sturdy bench. Lay the real plate flat on the block, with solid support directly beneath the area being stamped. Secure the block against sliding, then clamp the plate to it along an unused edge. Keep clamp jaws outside the hammer's path.
5. Press the plate's corners to check for rocking. Reposition the clamps whenever necessary to maintain support and access. Avoid leaving the working area overhanging the block.

Treat the following layout and checking steps as a conservative workflow: complete each row, inspect it, and only then move on. Keep the original backup where you can consult it without placing it under tools or clamps.

Keep punches upright and strike each letter once

Use a straight guide and evenly spaced position marks to maintain alignment. Hold each punch at `90°` to the plate, with the character face seated flat. Confirm its orientation before striking; markings on the shank may help, depending on the manufacturer. ([impressart.com](https://www.impressart.com/how-to-metal-stamp-new))

1. Mark row baselines and character positions using only numbers and spacing marks. Do not write the complete phrase onto disposable tape.
2. Consult the original backup for the current word and position. Select the first punch and check its face and orientation.
3. Set it on the intended position. Check upright alignment from both the front and side, then hold it firmly without tilting.
4. Deliver **one firm strike per letter**, centered on the punch head. Use the force established during practice, then lift the punch and inspect the impression. The manufacturer's basic stamping method likewise uses a

single blow with the punch held firmly in place. ([impressart.com](https://www.impressart.com/how-to-metal-stamp-new))

5 Move to the next spacing mark. Finish and verify the word before starting another row. Pause after interruptions and recheck your position against the original.

Keep character spacing consistent rather than adjusting it by eye after every impression. If a letter is ambiguous, stop. Avoid improvising overlapping corrections; use a fresh plate when the intended reading would otherwise require explanation.

Verify the backup and store it privately

Read every stamped row against the original, checking position numbers, spelling, missing letters, and repeated words. Then make a second pass from the final row backward to reduce the chance of automatically reading what you expect.

Use your wallet's documented backup-check feature if available, following its instructions for entering words securely. A BIP39 checksum catches many transcription errors, but some incorrect phrases still pass; checksum validation alone does not confirm that the backup matches your wallet. Keep the existing working backup until verification is complete. Avoid photographing the plate or entering its contents into a website.

Store the finished plate somewhere protected from unauthorized access. If you use a BIP39 passphrase, preserve it through a separate, deliberate backup arrangement: recovery requires the same passphrase, including capitalization and spaces. An incorrect passphrase produces a valid seed without a built-in indication that it is wrong, so the stamped words alone may not recover your wallet. ([github.com](https://github.com/bitcoin/bips/blob/master/bip-0039.mediawiki))

FAQ

Should I stamp full words or four letters?

Full words are easier to interpret directly. Four-letter prefixes uniquely identify words in the English BIP39 wordlist when shorter words are recorded completely. Your recovery software may require you to expand those prefixes into full words before entering them. ([github.com](https://github.com/bitcoin/bips/blob/master/bip-0039.mediawiki))

Can I strike a faint letter again?

Realigning it can produce a doubled impression. Establish sufficient force on matching scrap first; replace an ambiguous plate rather than relying on a guessed reading. Secure any discarded plate containing recovery words, since replacing it does not erase the impressions. ([impressart.com](https://www.impressart.com/stamping-faqs))

Should I practice with my real seed words?

Use isolated, nonsecret characters. This keeps practice pieces from becoming additional sensitive backups that you must track and secure.

Sources

- ImpressArt: How to Metal Stamp (www.impressart.com)

- ImpressArt: Metal Stamping FAQs (www.impressart.com)
- BIP39: Mnemonic Code for Generating Deterministic Keys (github.com)

> Continue reading on bip39-phrase.com: Metal Seed Phrase Backup: Steel Plates, Tiles and Tests
> More on this topic: Seed Phrases

Example sequences from the BIP39 wordlist

Randomly generated sequences of words from the BIP39 English wordlist. None of them passes the BIP39 checksum, so no wallet will accept them: they show the format only. Never store funds with a phrase you found in a document.

Example 1

1 frozen	2 hungry	3 onion
4 other	5 thumb	6 regret
7 coast	8 regret	9 sell
10 around	11 shield	12 over

Example 2

1 guard	2 sunset	3 brown
4 trigger	5 initial	6 erosion
7 squirrel	8 normal	9 mistake
10 attack	11 sleep	12 crunch

Example 3

1 lunch	2 climb	3 barrel
4 moment	5 pear	6 border
7 tuna	8 defense	9 actor
10 gallery	11 guard	12 hazard

Example 4

1 banner	2 smart	3 marble
4 orphan	5 empty	6 unfold
7 crisp	8 poet	9 swing
10 elder	11 suggest	12 found

Example 5

1 indoor	2 morning	3 second
4 scissors	5 smooth	6 siren
7 arrive	8 winner	9 grab
10 tip	11 hold	12 unlock

Example 6		
1 toddler	2 drum	3 snap
4 permit	5 sample	6 crime
7 audit	8 december	9 swift
10 grocery	11 segment	12 village

Example 7		
1 crash	2 guess	3 cinnamon
4 panic	5 chair	6 sand
7 scale	8 sea	9 close
10 exist	11 trash	12 inside

Example 8		
1 lizard	2 property	3 crisp
4 advice	5 coral	6 exchange
7 frost	8 liberty	9 express
10 sugar	11 plate	12 cargo

Reading a BIP39 phrase

Every word stands for an 11-bit number: its position in the 2048-word list, counted from 0. Here is Example 1 decoded word by word. Each word links to its page on bip39-phrase.com, where the list is numbered from 1.

#	Word	Index (0-2047)	Word no.	11 bits
1	frozen	749	750	01011101101
2	hungry	890	891	01101111010
3	onion	1238	1239	10011010110
4	other	1256	1257	10011101000
5	thumb	1803	1804	11100001011
6	regret	1445	1446	10110100101
7	coast	358	359	00101100110
8	regret	1445	1446	10110100101
9	sell	1563	1564	11000011011
10	around	97	98	00001100001
11	shield	1581	1582	11000101101
12	over	1263	1264	10011101111

The 12 words carry 132 bits: 128 bits of entropy followed by a 4-bit checksum. The checksum must equal the first 4 bits of the SHA-256 hash of the entropy.

```
Entropy (hex): 5dadea6b4e8e17694b35a5c3618716ce
```

This sequence ends in the checksum bits 1111, but SHA-256 of its entropy starts with 0010, so wallets reject it as an invalid phrase. That is the point of the checksum: about 15 of every 16 random or mistyped sequences fail it.

See also

- Letter of Instruction for BIP39 Seed Phrases · June 14, 2026
- Twelve Words, Infinite Responsibility: A Conversation About BIP-39 · June 26, 2025
- Diceware Lists and BIP39 Words: Different Jobs · October 30, 2026
- Understanding Seed Phrases · June 9, 2025

Educational document. The example sequences are random and fail the BIP39 checksum: they are not wallets and must never hold funds. Security notes: bip39-phrase.com/security/