

Handmade and nearly free

Ideas for making and acquiring lock related stuff without paying full price

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Cheapest decoders/shims from pocket measuring tape

Tools used

- Some type of pry tool(Anything to get it open)
 - Small flat blade screwdriver (1/4" or less)
 - Handle of a slim lockpick
 - Careful use of a hammer might work too :)
- Some type of cutter for the steel(Much easier than filing everything!)
 - Kitchen Shears
 - Side Cutters
 - Dremel
- Some type of holder for the flexible steel(Prevent cuts while shaping)
 - Bench Vise
 - Vise Grips
 - Pair of Pliers
- Some type of smoother for the steel
 - Diamond Files
 - Sandpaper
 - Sharpening Stone

The work begins

This is the cheapest pocket tape measure I could find on amazon, at \$2.32 including tax and shipping. (This exact listing is gone, but there is always a new cheapest listing)



It took a month to arrive, but only 2 seconds to pop it open! (This plastic is very soft)

Stuck a flat blade screwdriver into the slot the tape comes out of and the keyring opening, just a little wiggle got it apart



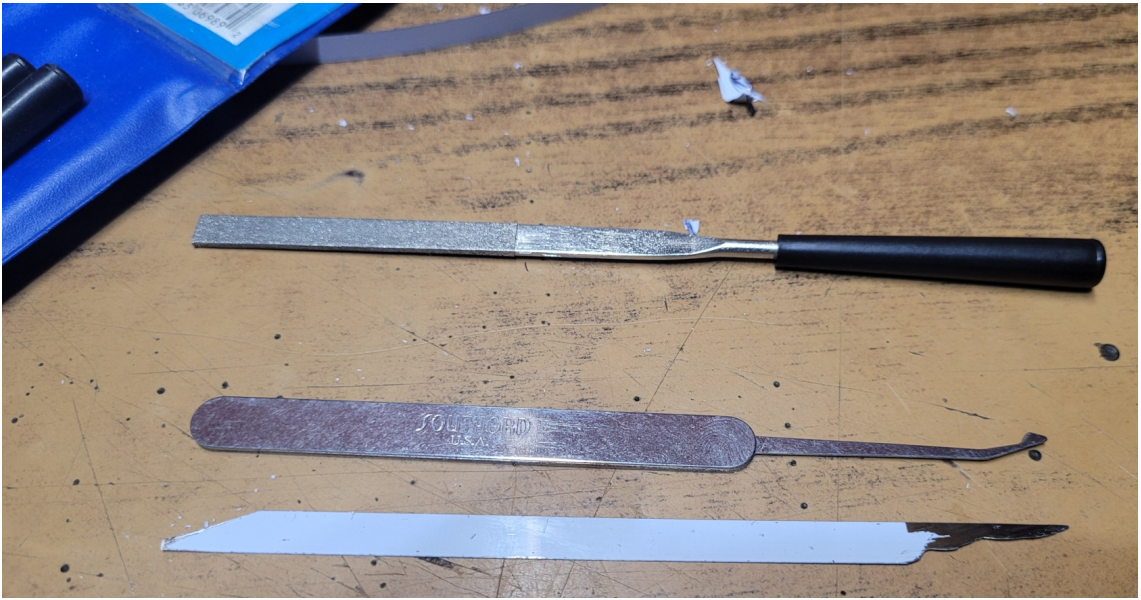
I used a cheap pair of flush cutters to chop off the tightest curled part (at less than \$3 for the whole tape, it wasn't worth the extra effort to straighten)



Butchering the tip to make a slimmer end was a ton more trouble than expected... Since the metal tape is hardened, it tends to break rather than cut with these cutters (Lesson - kitchen shears or tin snips work way better!)



In the end I used the kitchen shears to cut an angle on the other end, and a cheap diamond file to smooth out the edges and burrs (sandpaper is great too!)



Leaving the paint (or powder coat) on the tape it measures 0.0035" (or 35 ten-thousandths of an inch, or 0.089mm, or 89 microns thick), and when I scrapped the coating off it measured an even 0.003" (or 3 thousandths of an inch, or 0.076mm, or 76 microns). This size is very thin and great for the more delicate tasks (decoding mostly), but less good for the harsher tasks. (bypassing master 175s)





I will see about picking up one of the more expensive (~\$10) pocket tape measures, since they usually have a slightly thicker spring attached to the thinner tape measure (to make the readable part replaceable). Others I have cannibalized in the past, had the spring and tape both, which provides us with two different materials each with different thickness.

All that being said, even after trashing the coil in the center(maybe 2-3 more), we ended up with 8 full pick length decoders(4.75" long & 0.0035" thick) for \$2.32!

Round Two!

This time I picked up the Stanley brand 3 foot long keychain tape measure for around \$7.00.

<https://www.amazon.com/St Stanley-39-130-4-Inch-PowerLock-Tape/dp/B00002X2HB>



I used a number 1 Philips screwdriver on the only screw holding it together, but wrapped it in a tea towel before opening the case...**so I don't loose an eye!** This spring is thicker than the cheaper

tape from above, coming in at 0.0042" (or 42 ten-thousandths of an inch, or 0.107mm, or 107 microns thick). The tape itself is also thicker at 0.006" (or 6 thousandths of an inch, or 0.152mm, or 152 microns thick) with the powder coating left in place, and once again, scraping the paint/coating from the tape only takes the thickness down to 0.0055" (or 55 ten-thousandths of an inch, or 0.14mm, or 140 microns thick).

The decoders made from both the spring and the tape materials on this tool, are of similar thickness to popular commercially available decoders. The spring part works great to open those Master 175 combination padlocks as well as other heavy shimming and decoding tasks.

Conclusion

This exploration turned out to be a great win with all of the materials being usable!

The total cost is up to about \$10 USD for 23 full size ~4.75"(121mm) shims or decoders ranging from .003"(.08mm) to .006"(.15mm) in thickness:

- Stanley Tape - 8x - .006"(.15mm) w coating / .0055"(.14mm) bare metal
- Stanley Spring - 7x - .0042"(.11mm) bare metal
- Cheapo Tape/Spring - 8x - .0035"(.089mm) w coating / 0.003"(.08mm) bare metal

There could be some variation in the material thicknesses found in these specific tapes as time progresses, but it is well worth the meager investment to try more than one tape if the first one doesn't meet the requirements. More expensive tapes are more likely to have thicker materials while the cheapo tapes will be as thin and cheap as they can functionally be made.

Free Locks

Now that's a clickbait title if I ever saw one!

Friends, Family, Co-workers & Neighbors!

Everyone knows people, and most people either remodel the place they live or maybe move households once in a while. When moving into a new house, it is standard practice to change all the locks. Letting everyone around us know that we are looking for locks they are usually happy to hand over their old "Trash" as it comes along. Suggesting a better way to secure someone's prized possessions without breaking their bank is a good way to help everyone involved, since they are typically happy to give away their old "junk".

Locksmiths

This one is a bit trickier since their livelihood overlaps so closely with our hobby. I tend to begin with a little bribery; such as showing up with a hot pizza and an empty bucket around 11AM. Sometimes we get lucky and the locksmith is happy to point to a trash can in the back room and say "Have at it", while others are completely unwilling to help in any way.

Fair Warning - *It is really unfortunate, but some locksmiths I have approached reacted with fear\anger as if I was taking money from them in some way. I see no gain in antagonizing someone regardless of how misguided I believe their viewpoint is. My recommendation would be to simply Smile and Say "Thanks Anyway" then LEAVE THE PIZZA.*

Maintenance Technicians

- Apartment complexes
- Condos
- StripMalls
- U-Stor-Its
- Laundromats
- Office parks
- etc.

The people working to maintain the spaces we live, work, and play can be a fantastic resource for lockpickers like us. Groups like these can be a gold mine in practice locks for a club! Technicians usually end up with lots of cut or otherwise "useless-to-them" locks that would normally go in the trash. I have had the best luck by offering to help them personally with something as a trade, but the Pizza and bucket trick is always a good choice. Check back with them every few weeks and don't forget to paint the bucket so they remember it's YOURS and it's for LOCKS.

UNLIMITED Lock Cylinder Shims

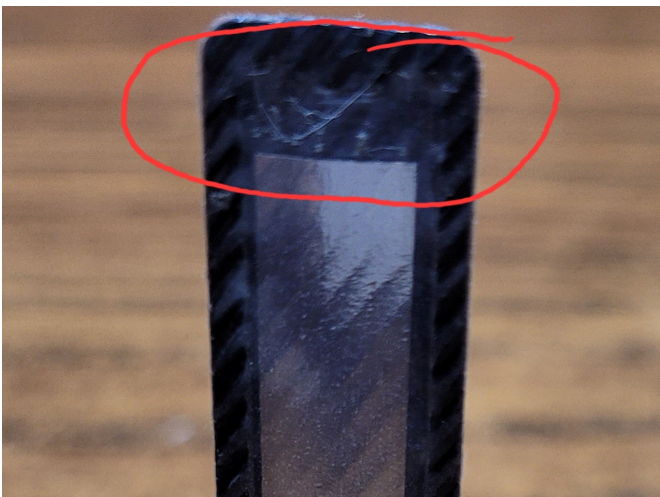
Buy new stuff and get free lock shims!

Almost everything purchased from a physical store these days has a magnetic anti theft device attached, or more often recently, inside the packaging where it is harder to remove while in-store! Regardless of type, color, or placement, there is always at least one thin metal strip free floating inside each.



Recovering the shims

Tilt the security device on it's end, then tap it on the table a few times to shake any free floating bits to the bottom of the container. *They are rarely clear on the back but it made for nice pictures!*



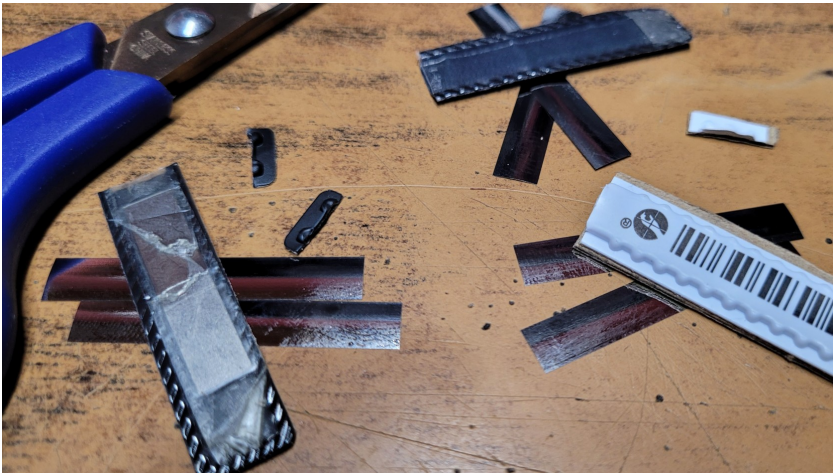
I use scissors to cut open the container, but try to get as close to the top as possible; static can prevent the strips from moving even when shaken.



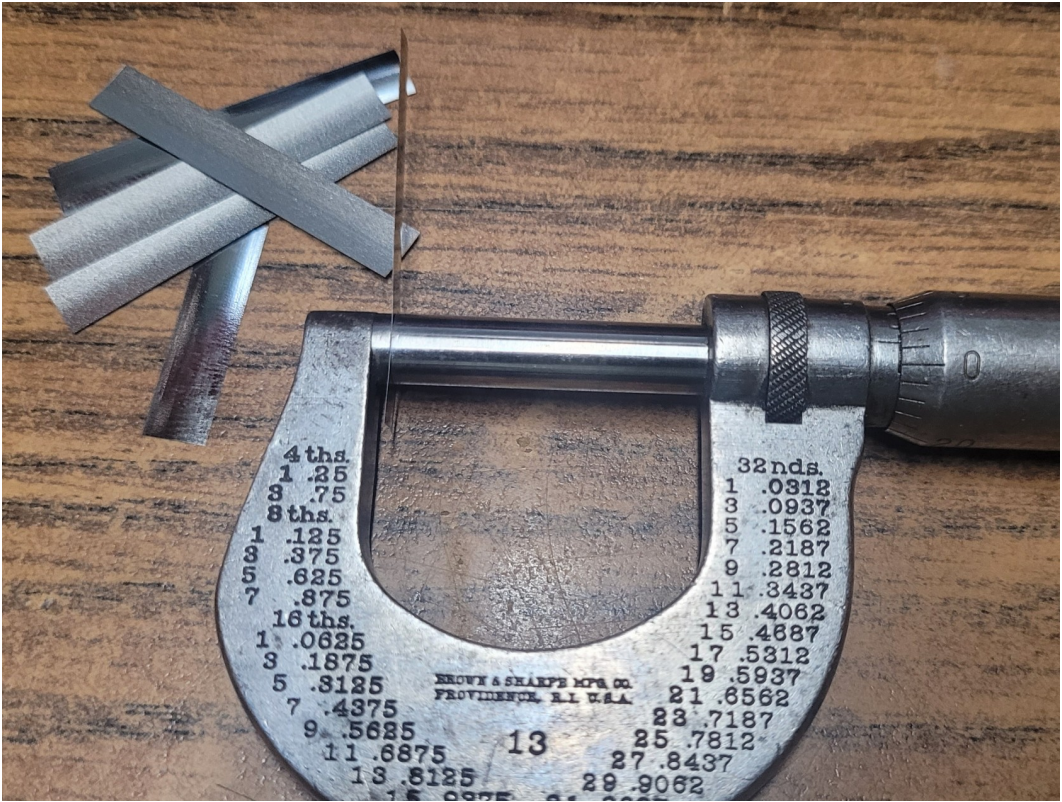
Make certain to cut low enough to fully open the top of the container.



Turning it over and shaking is usually enough to drop out the 1 to 3 strips inside. There will often be a strip or two, that is stuck inside the container... *leave it/them, it's not worth the effort to remove unharmed, there is always another security device.*



These shims are incredibly thin at one and a half thousandths of an inch (0.0015")(0.038mm), making them great for cylinder shims but less good for decoding as they are too floppy for my taste.



Saving every single security device from everything I normally buy would provide literally hundreds of these in no time!

3D Printed Lock Stuff

The home 3D printer provides the amateur locksmith a significant advantage over those without. These links are only organized by category, not preference or recommendation (ie: No Particular Order!).

Hand Holders

<https://www.thingiverse.com/thing:3115194>

<https://www.thingiverse.com/thing:1386781>

<https://www.thingiverse.com/thing:3271556>

<https://www.thingiverse.com/thing:4977770>

<https://www.thingiverse.com/thing:4584249>

<https://www.thingiverse.com/thing:4901835>

<https://www.printables.com/model/237950-sparrows-various-tools-practice-lock-holder-handle>

<https://www.printables.com/model/355053-locksport-lock-cylinder-holders>

<https://www.printables.com/model/639581-kik-and-mortise-lock-holders>

Bench Holders

<https://www.thingiverse.com/thing:224069>

<https://www.thingiverse.com/thing:4093656>

<https://www.thingiverse.com/thing:3761207>

<https://www.thingiverse.com/thing:5169795>

<https://www.printables.com/model/139569-lock-cylinder-holders>

<https://www.printables.com/model/76088-lock-cylinder-holder-remixed>

<https://www.printables.com/model/281042-lock-holder-for-euro-cylinder-locks-handheld-vise>

Picks & Keys

<https://www.thingiverse.com/thing:1016119>

<https://www.thingiverse.com/thing:5161338>

<https://www.thingiverse.com/thing:1744475>

<https://www.thingiverse.com/thing:264891>

<https://www.thingiverse.com/thing:1214013>

<https://www.thingiverse.com/thing:703681>

<https://www.thingiverse.com/thing:606542>

<https://www.thingiverse.com/thing:1123385>

<https://www.thingiverse.com/thing:2786049>

<https://www.thingiverse.com/thing:3847621>

<https://www.thingiverse.com/thing:1132632>

<https://www.printables.com/model/408266-lockpick-tool-holder>

<https://www.printables.com/model/515364-parametric-lockpick-holder-for-windshield-wiper-in>

<https://www.printables.com/model/585531-sfic-lock-opening-tools>

Demos

<https://www.thingiverse.com/thing:2153185>

<https://www.thingiverse.com/thing:2058932>

<https://www.thingiverse.com/thing:5157538>

<https://www.thingiverse.com/thing:2377207>

<https://www.thingiverse.com/thing:5138558>

<https://www.thingiverse.com/thing:152527>

<https://www.thingiverse.com/thing:5074397>

<https://www.thingiverse.com/thing:880668>

<https://www.thingiverse.com/thing:5156185>

Other Tools

<https://www.thingiverse.com/thing:5459886>

<https://www.thingiverse.com/thing:5145400>

<https://www.thingiverse.com/thing:3140402>

<https://www.thingiverse.com/thing:197990>

<https://www.thingiverse.com/thing:2235594>

<https://www.thingiverse.com/thing:4912677>

<https://www.thingiverse.com/thing:1091544>

<https://www.thingiverse.com/thing:3301246>

<https://www.thingiverse.com/thing:2863083>

<https://www.printables.com/model/629273-locksport-gutting-stationpick-holder>

Puzzles

<https://www.thingiverse.com/thing:2925409>

<https://www.thingiverse.com/thing:2823962>

Less practical but just as interesting

<https://www.thingiverse.com/thing:2922427>
