

TOOOL UK info sheet on the Yale 1109 reconfigurable 5 pin cylinder kit

Firstly, thanks for supporting The Open Organisation Of Lockpickers with your purchase! Our aim is to generally increase security and promote lockpicking as sport. Please, always use your powers for good!



We have online resources at <http://toool.uk/1109>

About your new training lock

This is a Yale 5 pin rim cylinder, model number 1109. For a great many years this has been the most common lock in the UK on wooden doors. In the kit you will find a modified lock, with a unique sliding top cap, so that you can reconfigure your lock and enhance your learning experience, even if you fail to open it sometimes.

The lock as standard has 5 plain key pins (pins that touch the key) and 3 plain driver pins (driven by the spring) plus, in chambers 2 and 4, security spools. To prevent some attacks, such as wire decoding, there are at least three lengths of top pin, randomly used.

You will find a blank & two keys: one works your lock, in the current configuration. To modify the lock, remove key, & use the steel tailstock to slide the black plastic TOOOL UK cap to the rear, carefully levering against the back side of the lock face. Underneath you will find 5 chambers with a spring in each and, below, a driver pin; below that, a key pin. There's some extras in the kit.

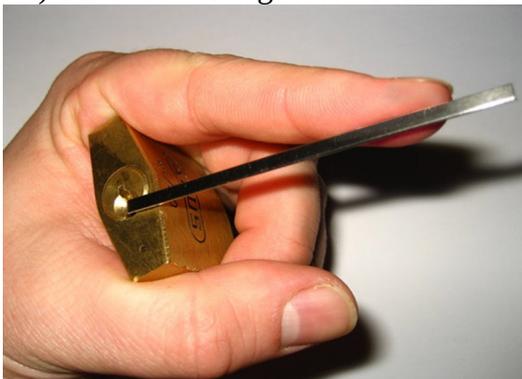
Key cut (height from bottom edge)	Key pins (2.85mm Ø) (chamfered one end)	Driver pins (2.85mm Ø) (flat both ends)
4.7	8.2	4
5.2	7.7	4.8 (inc all spools)
5.7	7.2	5.1
6.2	6.7	Blank key – profile YA1E (or U5) ~8.5 x 27mm blade  The key is shoulder stopped  Face to middle of first pin is 4.9mm  Pin spacing is 4.2mm
6.7	6.2	
7.2	5.7	
7.7	5.2	
8.2	4.7	

Impressioning

Can you learn impressioning from this lock? Yes, you can. There's a blank in the pack, but you'll need to source some other things. See [Toool.uk/1109](http://Toool.uk/1109)

Getting started

Remove the cap, it slides backwards using the steel tail as a pry tool. Configure your lock. If you have never picked a lock before, carefully remove the five springs and 10 pins. Make certain to count them out. (If you want to make a very simple pinning tray, take a bit of spare paper, and fold it concertina style, 12 times, then pull it apart so it looks like ^^^^ \\_\_\_\_\_ You can use this to keep each stack in a line and not rolling away, and the remaining flat part you can write your notes on.) Start with noting which end of the key is which pin!



*Bottom of keyway/ edge of plug tension*



*Top of keyway/center of plug tension*

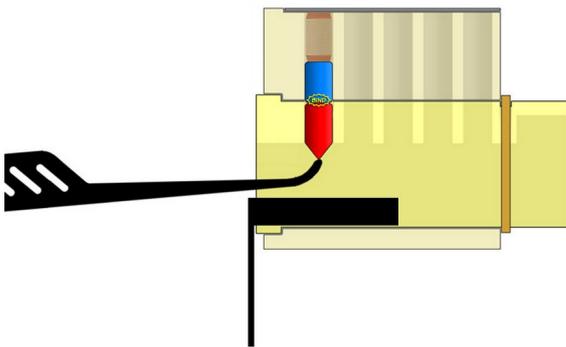
Now, take your tensioner, and let's get started.

Firstly, decide if your tensioner is better for top or bottom of keyway. The long end is generally better for bottom of keyway – the open edge where the bottom of the key would be – and the shorter end is better for the top of the keyway. Your practise lock will “open” turning either way, so don't worry about that, it is more about just getting it to turn. Use your tensioner to turn the plug with no pins in the lock, just to get the idea. Try it in both positions. There shouldn't be any jamming, binding or grinding. If there is, adjust the tensioner position until it is smooth.

Now replace the first stack so you have a “one pin lock” (the frontmost chamber should have a key pin, a driver pin, and a spring) and you can replace the black cap by sliding it back on. Make sure to keep the spring(s) from getting trapped when you do this, as they will get damaged if crushed. Just push them down with the tip of a screwdriver, the corner of the tensioner, or a fingernail, as needed. Check it works with the key, and doesn't work if the key is nearly all removed.

Place your tensioner, and apply a little turning force. This time, the lock plug (the part that rotates with the key) shouldn't move. Look at the front of the lock, you'll see “YALE”, and below that, the keyway, and, inside, your pin! If you can't see the pin, adjust your tensioner – if it is blocking the way, your pick won't easily be able to reach that target pin. Now, take it out again.

Take a J pick, and put the tip of the pick onto the bottom of the pin, and lift it up inside the lock. It should travel freely up, and then return under the pressure of the driver pin and spring. Do this a few times.



Now, let's replace the tensioner, and do it again, both together – so apply a little turning force with the tensioner, and then push the pin a fraction upwards, and look at the pin. It should be higher up (you might want to turn the lock upside down to see this). (If it comes back down under the spring, you'll need a little more tension, to make it **bind**. If it won't move, you have too much.) Tap it upwards a little more, a little more... Click! Congratulations, you just opened your first lock!

Before we go on, reset the lock. Just turn it so it locks up again, with a click. You can safely turn it all the way in either direction, and, if you ever make it just *too hard*, you can take the slider off the top and rescue it that way. This next time, use lots of pressure on the tensioner. You'll notice that it is impossible or really hard to move the pin – it is too heavily *bound*, or **binding**. If you press *too hard*, you could break the pick! Slowly relax your tension down to nothing, and you'll find the pin moves up and the lock opens again before you get there. So, now you also know what “*too much*” tension is. Try it again with “*too little*” tension too. You'll soon get the idea.

Strip your lock, and add another pinstack. You can make it so the key still works, or not – you're past that already! Slide the cover back on, it is time to learn the Golden Rule:

**“Only move the binding pin”**

So, with this in mind, tension your cylinder, and touch each pin in turn, moving the bound pin only. Once set to the **shear line** you'll feel the plug move slightly, and probably hear a click. Repeat until “OPEN!”

Once you've mastered the plain pins, you can add spools!



*These manufacturing variations from perfection cause a binding order*

Welcome to LockSport! There are thousands of others around the world who are also into this hobby, and you can meet some of them on our Discord server at <https://discord.gg/YpqWh3r> or <https://TOOOL.uk/>