BuMpKeYs

Origin Denmark

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Read All About It!

With bumpkeys being at the headlines lately I have been receiving many questions about them.While I have nowhere near the experience in bumping locks as Barry Wels or Han Fey, I do have a fair amount.Although this is neither my main area of interest nor expertise I would still like to share some of my fortunes and misfortunes with this method.

Get It Straight.....

I will be referring to these tools as bumpkeys and not 999 keys.The reason behind this is there seems to be some misconception by new comers to the sport that all bumpkeys for all locks need to be cut at a "9" depth to be a bumpkey.This is not true.In theory, a bumpkey needs only to be cut to the deepest possible cut for the keyway you are bumping.If you were cutting a bumpkey for a schlage 5-pin lock you would in fact cut a 99999 key.On the other hand if you were cutting a bumpkey for a kwikset lock you would cut a 66666 key.We will discuss adjusting these numbers slightly later, but this addresses why in this text they are referred to as "bumpkeys" and not "999" keys.

Operation

Now let's get into how bumping actually works..Bumpkeys work on Newton's third law of motion, for each action there is an equal and opposite reaction.By applying force to the bottom pins by inserting our bumpkey and striking it with an object (discussed later) we force the top pins to jump above the sheer line for a split second.This is identical to the operation of a mechanical pickgun.The striking force exerted to the bottom pins from the bumpkey is transmitted to the top pins.The top pins in turn deposit the energy into the springs by moving upward, thus creating the gap in the sheer line for the plug to turn.That is a very simple explanation of operation as I expect if you are interested in bumping you have knowledge of the operation of a pin tumbler lock.

As stated bumpkeys operate on the same principal as a mechanical pickgun.This however does not mean that a mechanical pickgun is nearly as successful as a bumpkey in opening a lock.Warding in the keyway, and sidebar systems can render a mechanical pickgun useless.This is why bumping has become such a powerful bypass tool.No matter how restrictive the warding in the keyway, a bumpkey will work on most locks.In some cases the warding may be so restrictive that inserting a pick or pickgun is difficult or impossible, let alone using it to manipulate the pins.Sidebar information can also be retained on the keyblank making bumping an even more powerful bypass method for some locks.Certain limitations as to the types of secondary locking mechanisms that can be bypassed must be examined closely and dealt with on a lock-to-lock basis.

Obtaining Bumpkeys

I am sure everyone wants to know where or how they can get bumpkeys.The good news is that I can tell you a few ways that you are guaranteed to obtain them.The one catch is that they are going to cost you something to get.Many times I see someone complain about spending this much or that much for an item.Bumpkeys are one item you can absorb some of this cost easily if you have friends that pick locks also simply by splitting whatever costs incurred obtaining the bumpkey and having a copy made at your local hardware store.This will save everyone a few bucks and involve a few more people in the hobby, which is a great thing.

The first way to obtain a bumpkey is to get to know a locksmith well.This must be approached tactfully and honestly, and not by stopping in and saying "hey, will ya cut me a 999 key?".A question like that will probably land you on their doorstep.Instead try making friends and hanging out a bit before announcing your hobby.Letting them get to know you and your personality will take you a long way.This is my number one recommended method of obtaining bumpkeys.There will still be some modifications required if the bumpkeys are only cut by code for your keyway.The remaining modification will be to take a bit of material off of the tip of the key and the shoulder of the key.These amounts should be experimented with to find the amount that best suits the brand or type of lock you are dealing with.If you have access to his or her cutting machine or can make suggestions while cutting bumpkeys you can do away with the need to remove material from the shoulder of the key simply by moving the key over a few millimeters before clamping it down and making the cuts.This simply moves all of the cuts forward on the blank away from the shoulder thus simulating as though you have removed material.This is not necessary but it does result in a cleaner looking bumpkey.The next step I like to involve is to cut slightly deeper than the deepest cut to create a 10 10 10 bumpkey.This is accomplished by using a small piece of shim stock to place between the stop on the key machine and the keyblank.This effectively raises the blank in the tool holder on the key machine resulting in deeper cuts.

The theory I have for doing this is simple.If you are using a schlage bumpkey cut at 99999 to bump a lock that is pinned at 97579 when you strike the blank you are already oversetting the first and last pins.By cutting 1/2 to 1 full pin depth lower you can effectively bypass this and still bump zero and one cuts easily.

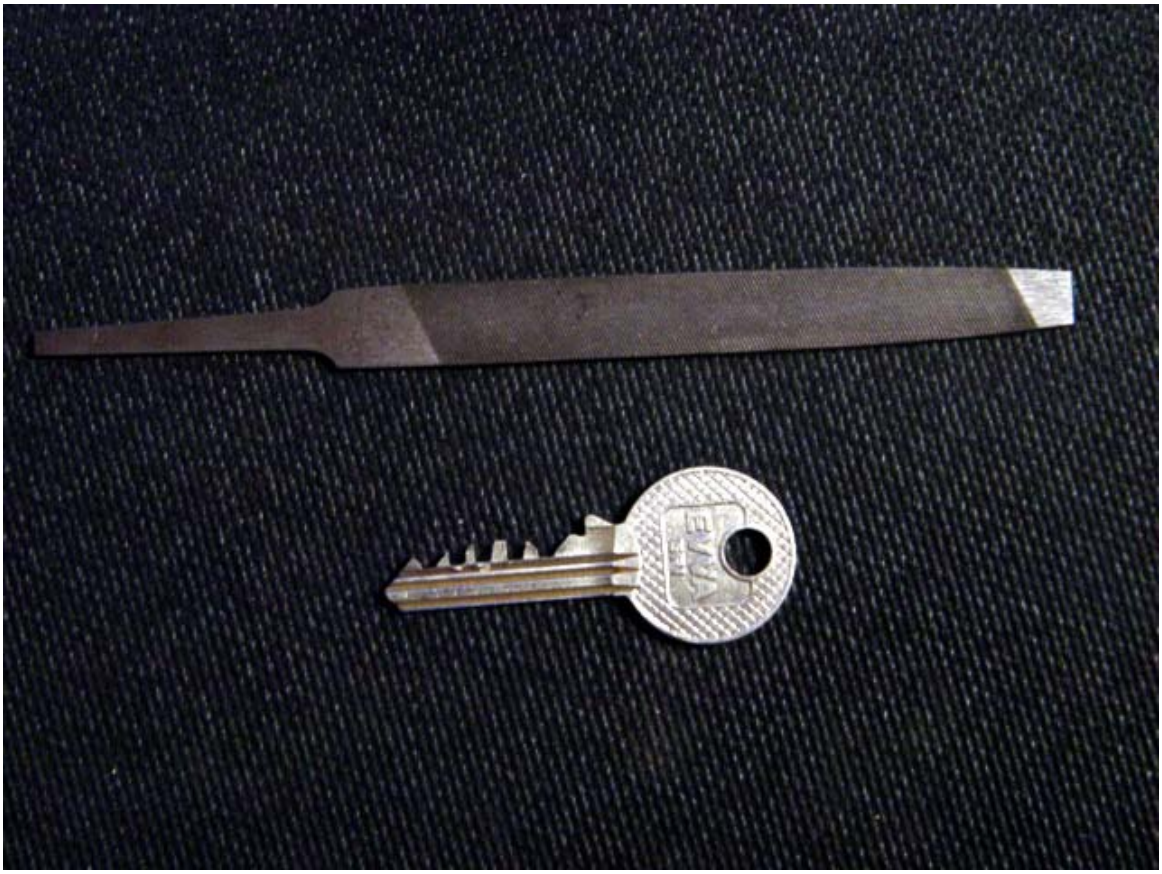
The second way of obtaining bumpkeys is to purchase a set of space and depth keys for the keyway you are wanting to bump.This is a very easy way of obtaining a bumpkey as little work to the key itself will have to be done to have a working bumpkey.The only work that will need to be done is remove a small amount of material from the tip of the key and a small amount of material from the shoulder of the key.My idea of how to best use this method would be to purchase the space and

depth keys of your choice from ebay, splitting the cost with as many friends as you can.Once you have paid for the space and depth keys and they arrive, take them to the nearest hardware store and have the deepest cut space and depth key duplicated as many times as you like and pay for the duplications.Once that is complete relist the space and depth keys with the original deepest cut space and depth key back on ebay.This way you have split all of the initial costs with however many friends you started out with.So lets say you went in with four friends and bought some schlage space and depth keys for $8.00 plus $4.00 shipping.You had a copy of the number 9 depth key made for each one of you which cost a total of $6.00.You then sold the space and depth keys for $6.00 on ebay, which cost you $2.00 to list the auction.You now have $3.50 in your bumpkey.It really doesn't get any cheaper than that for lock tools. Cutting a 10 10 10 key from this is a little different from what is described above but do not worry.It is not an exact science.Take a few thousandths off and give it a shot.When you are happy with the performance of your bumpkey then quit taking material off.Experimentation is what is fun about this hobby.If everything worked the first time then you would not be reading this article ;o) .

The third and final method I will discuss is making your own bumpkey from an existing key.This may sound difficult but it is relatively easy if you have an extra five dollars sitting in your wallet and a key that will fit the lock you want to bump.Since you are only going to be using your files on brass keys you can get by going with cheap files.Five dollars should cover a small flat file and round file which for the sake of this article is all I used to make my bumpkey.This is the exact amount of money spent of the files $1.99 file the small flat file and $2.39 for the round file at my local Rural King.I done this so I would not be using my expensive impressioning files that many people do not have.I like to use a blank that already has a deepest cut for the keyway I am going to be bumping.For this article, I selected a evva euro cylinder.This cylinder is a evva Ges. Gesch. Profilsystem lock.The warding in this lock is fairly heavy.I have not seen many American locks that would come close to the level or warding on this lock.You can see a picture of the original key here:

A picture of the cylinder can be seen here:

Step one of modifying the key is cutting all depths to the deepest cut.We will use the narrow side of our flat file to take the cuts down to the deepest depth trying to keep our cuts as straight as possible.When we are finished our key looks just like this:

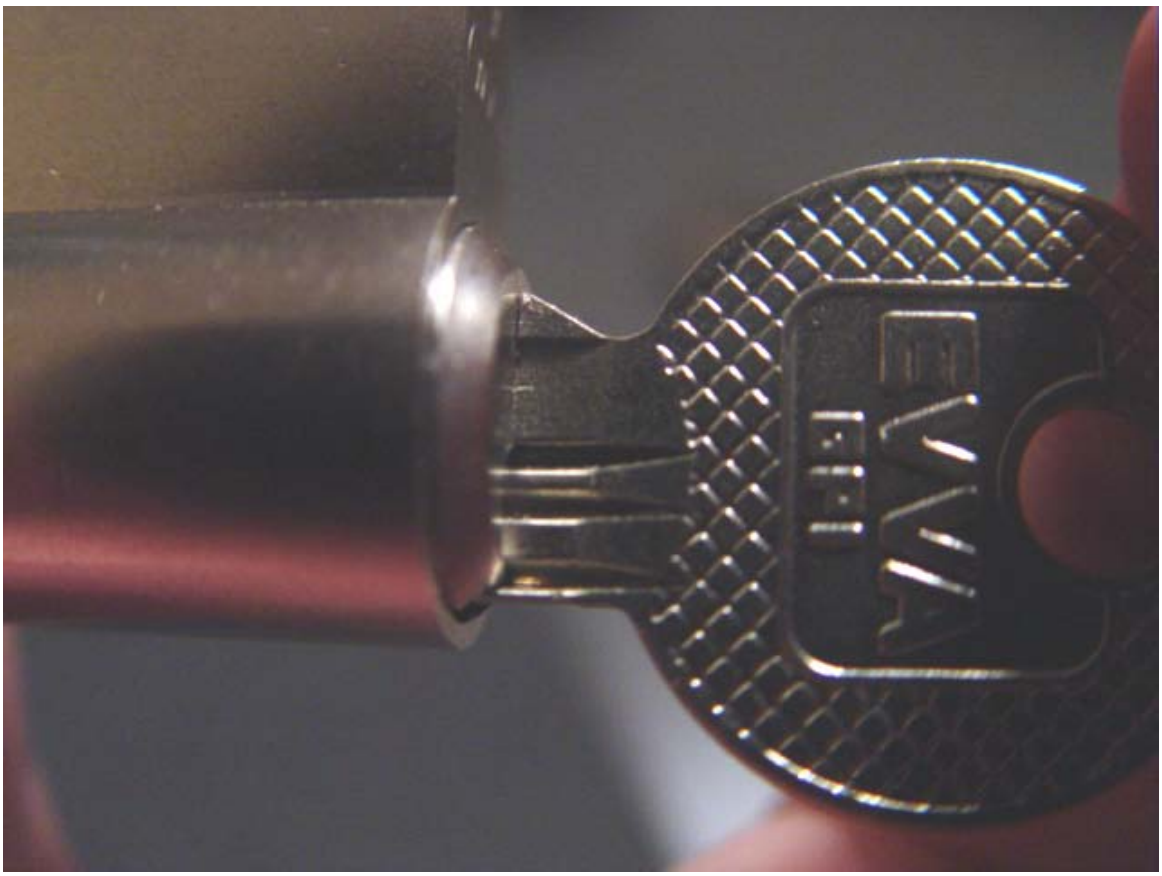


Once we are finished taking our cuts down to the deepest depth, we need to taper between our cuts with an angle so our bumpkey does not get stuck in our lock.If we were to stick our bumpkey in right now we would only be able to insert the key two pin depths before the key become lodged in the lock.At this point we would neither be able to withdraw the key or insert it further due to the angle (90 degrees) of the cuts we just made.So lets go ahead and taper them down with our round file.This can be easily done by resting our round file between the ninety degree cuts and filing until the bottom of the round file touches the bottom of our 10 10 10 cut of the bump key.If there is any 90 degree shoulder left we can take it out with our straight file.When we are finished we should have a key that appears somewhat like this:

Great, our key now resembles the deepest cuts for this blank.Now we can remove a bit from the tip of the blank and a bit from the shoulder of the key!When we are finished the bumpkey should appear just like this:

Our bumpkey is now ready to try out.So let's insert it into our lock.We should see a small gap from us filling away the shoulder of the key as shown in this picture:

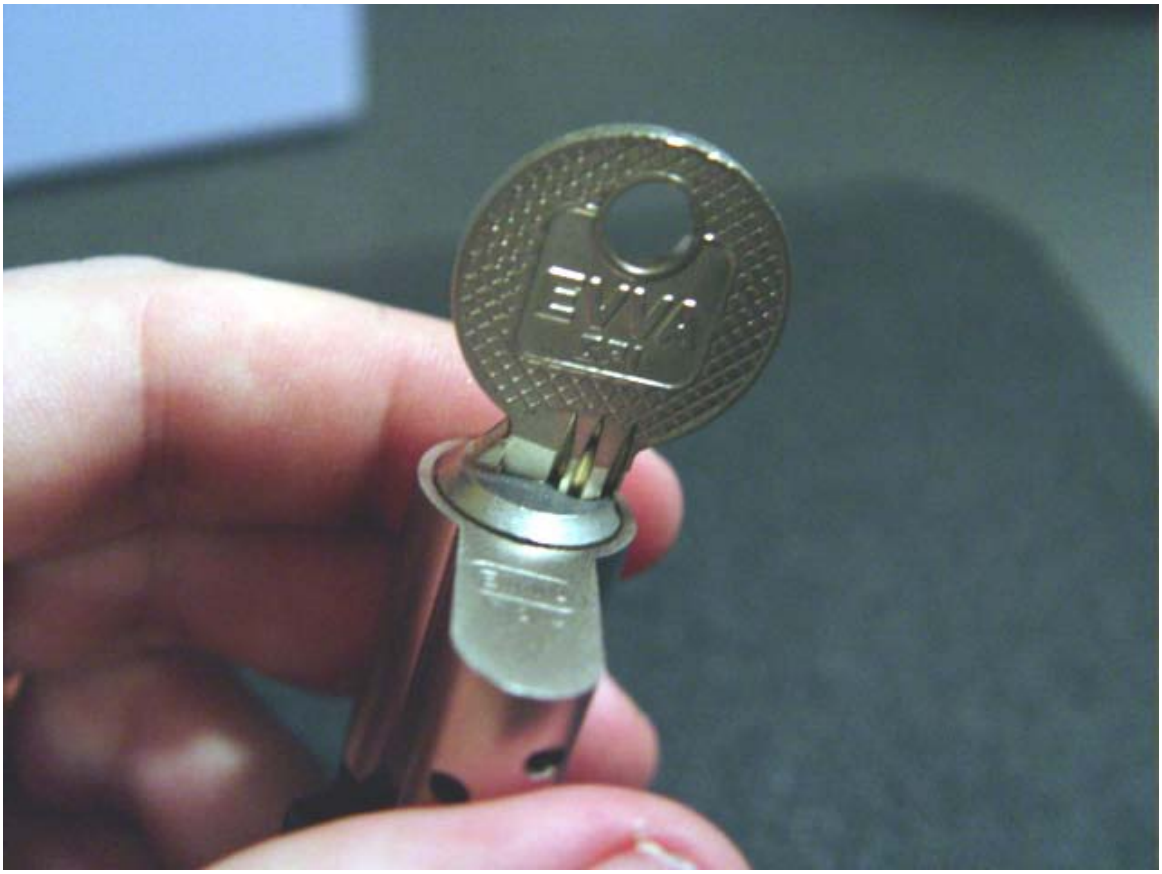
When the key is bumped it will be pushed into the lock against the shoulder of the key as appears in the following picture:



Now that our bumpkey is complete let's give it a try.My technique for this paper is going to involve using a screwdriver handle

as everyone has one.My technique for using this involves moving your hand at the wrist from a horizontal posistion to a vertical position and then striking back to the horizontal position using only your wrist.I find this a very effective method for using a screwdriver handle.While this is effective, it is not nearly as effective as the "whip" action of an actual bump striker.N2oah of the LP101 forums has made a very effective striking tool for bumping locks from a stainless steel ruler and an inline skate brake.The whipping action of this device is so effective in bumping locks that it cannot be emphasized enough.

Evva lock bumped open



In all of my testing, the striking method has been the decisive medium between success and defeat.My opinion is that it is almost as important as the bumpkey itself.While I have not tried a "Tomahawk" tool myself, I can only imagine the success achieved by such a device!

5 Pin 4 5 or 6 Pin

That's right, a 5 pin bump key will bump a 6 in lock. This is due to the front angle of a 5-pin key. Whether it is intentional or not, it works. I guess this fact makes a 6 pin bumpkey even more universal, as mentioned by chucklz if it will bump a LFIC a 6 pin bump key or LFIC bumpkeys would be an interesting thing to try out and save locksmiths quite a bit of time if the method proved successful. The large format interchangeable cores such as those made by schlage utilize a seventh pin of a smaller diameter that must be lifted by a seventh standard cut on a control key. When this is done the key is turned clockwise and the entire core can be removed from its housing. A bumpkey for this lock could be made from a control key blank leaving the seventh cut at the blank tip at the standard height. This is done because there is no bumping required for the control pin, as it is a standard cut across all locks. The rest of the cuts should be made to a half or full depth past the deepest cut for the lock you are working with. Then as described above remove the desired amount of material from the shoulder and tip of the key and try your bumpkey.

This article has now taken you through how to successfully obtain or make and use a bumpkey.I hope you have enjoyed this article as much as I have enjoyed writing it.If you have any questions, please drop me a PM on lp101 under the user name of zeke79 or drop me an email at orion_33@hotmail.com. I would like to thank everyone who has helped me along the way also!! Please contribute your success and failures to www.lockpicking101.com . This is THE web page to learn about lock picking! I look forward to writing the next article, zeke79….