



Tribute to

Chris Belcher

The Man, the Marine, the Mastermind



David Jennings and Chris Belcher
June 2012

This booklet is dedicated to my friend and mentor Chris Belcher, who sadly has advanced lung cancer and is receiving palliative care.

Chris Belcher is to my mind, and the minds of many, a lock genius. He created many tools that have opened up the industry for skilled, practising locksmiths. I don't use the word genius lightly. The way Chris could simplify difficult lock problems was astonishing.

UAP Tradelocks have worked with Chris, and his lovely wife Suzzie, for the past 8 years. First we bought his tools, then we licenced them, then we entered into developing products with him.

In the next month or so we will be launching a new tool to open and decode the almost impossible Polish Gerda Lock. The engineering involved in the tool is complex but the solution to the problem is beautifully simple. So simple that you can explain the concept to a child in a minute.

That is Chris Belcher's fingerprint. Simplifying the complex, and doing it with humour and humility.

I visited Chris and Suzzie yesterday in the Bristol Royal Infirmary where Chris is receiving palliative care for advanced lung cancer. 'What the bloody hell have you been doing to yourself you silly sod?' I said. 'Yep, I've really buggered myself up this time,' he replied with a smile. A few minutes later Suzzie was telling the Oncology Doctor that she had been giving Chris natural iron medication to help his tiredness for months. 'Oh what sort of medication?' asked the doctor, 'Guinness,' Suzzie replied with a grin.

Morecombe and Wise, Yin and Yang, Ant and Dec, Chris and Suzzie. All natural partners. Suzzie and Chris have enviable warmth between them as they talk to locksmiths and students at trade fairs and open days – passing on their considerable

knowledge without even thinking about being rewarded for doing so. There are very few people who would have anything negative to say about these 2 wonderful people.

I also make no secret that Chris's input into our locks has, in part, been responsible for our growth over the last 8 years.

His timing pin solution to cure Euro Cylinder lock bumping rather than using trap pins, and other elaborate solutions, is a case study in the Chris Belcher fingerprint. The system features in all our BSi Kitemark cylinders. He took a really difficult problem. He studied it closely. He considered Newtons laws of physics, and then he developed a beautifully elegant and simple solution to cure it. His genius is right there in every cylinder we sell. And his genius protects every householder who has one of our Kitemarked locks fitted. If you want to see poetry in motion, and British design and engineering at its very best, then go and open one of these cylinders and see the system in action.

Suzzie asked me yesterday if I had any miracles up my sleeve. Sadly I do not. But what I can do, and what I will do, is make sure that the Chris Belcher legacy lives on. It will live on in every Kitemarked cylinder we sell, it will live on in the way we look at design and development and testing of all our products.

Chris Belcher is a phenomenon. The locksmith industry, and UAP, will be the lesser without him. But we have all been graced by his gentle genius, and we are all the better for it. As for me, I am proud to call Chris Belcher a personal friend, and I am proud too of mine and UAP's association with him.

– David Jennings

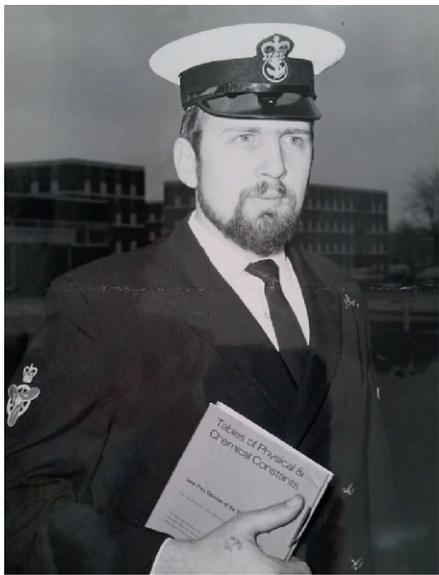


Engineering a Career from the Royal Navy to Locksmith Royalty

“My working life has been divided into two different careers. My Royal Naval life from the tender age of 15, and then my locksmithing life when I left the Royal Navy.”

– Chris Belcher





Though he is now retired, it's undeniable that Chris has not only changed the landscape of the locksmithing world, but he has inspired, informed and encouraged many who follow his work. He has made the lives of locksmiths easier and taught many in the industry his wonderful ways. But how did the man who was serving in the Royal Navy go from Marine to Mastermind? Here is his story:

At just 15 Chris joined the Royal Navy and began a career that would span almost 30 years. He served as an engineer, working on multiple vessels, operations and duties. From serving on the HMS Ganges Training Ship which he worked on towards the beginning of his career, to submarine vessels like the HMS Dolphin; he served at the HMS Sultan Defence School of Marine Engineering and then onto work with the likes of the HMS Devonport Nuclear Repair Crew - plus many more in between.



But it was in 1987, as his service was coming to an end that Chris turned his hand to locks and set up his own company which concentrated on locksmithing and safe engineering. He ran Bel-Cher Locksmiths & Safe Engineers Mobile Service for 27 years before it became Bel-Cher Lock Consultancy in 2014.

Chris has been described as many things, including 'the Grandfather of Mortice Picking.' He took his knowledge from engineering in the Navy and used it to engineer locks. He was able to work out every aspect of a lock, its entire workings, and that was how he could develop such effective tools.

Aside from having an engineer's mind, he had raw talent when it came to picking, and has been described as being able to do things others simply could not, like pick locks with just a few bits of wire and change the way other locksmiths saw locks themselves. The tools he developed centred on mortice locks, antique locks and safe opening and repair. But, what he did for the industry was more than just make a few tools. He looked at the problems locksmiths had and he came up with effective solutions. He was the very first

person to create a pick for mortice locks with a detachable wire. This simple idea revolutionised picking as the wire could be tilted and manoeuvred to get under tricky levers.

“The multi gauge curtain pick was the best pick made. It revolutionised the world of curtain picking with a set of two wires which enabled locksmiths to open 95% of all curtain locks with just one tool. It significantly helped locksmiths wanting to become non-destructive and wanting to be the best they could be in their field.”

– Jason Hillier

Chris made tools which were not only brilliantly effective, but that were affordable. He made tools for the locksmith. This was powered by his genuine interest in wanting to help those in the trade.

He had many accomplishments. From the tools he made, to projects he worked on and the patents he received for his innovations. Chris even won a Lifetime Achievement Award courtesy of Locks and Security Monthly Magazine in 2011. They said:

“When we had the idea for this award we had to think of a name for it. Who in our opinion was a model we could use? Who has benefited hundreds of locksmiths by improving their skills? One name kept springing to mind - Chris Belcher. His cheery manner, his willingness to help anyone, his design and engineering skills in producing quality tools and his ethics in wanting to know who they were being sold to are well known. Both he and his wife Suzzie are at the forefront of helping fellow locksmiths and rightfully deserve due recognition.”

Chris is more than just a marine, a locksmith or even an engineer. He is an inventor, an innovator, a teacher, a writer, an architect, an inspiration and above all else, a gentleman.





The Man Behind the Tools

Family life

Whenever you here the name Chris Belcher is isn't often without mention of his wife Suzzie, who worked alongside Chris both in a marital partnership and a professional one.

"Morecombe and Wise, Yin and Yang, Ant and Dec, Chris and Suzzie. All natural partners. Suzzie and Chris have enviable warmth between them as they talk to locksmiths and students at trade fairs and open days and passing on their considerable knowledge without even thinking about getting a reward for doing so. There are very few people who would have anything negative about these 2 wonderful people."

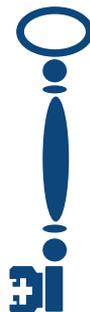
– David Jennings,
Managing Director of UAP Tradelocks.

Together they had 3 children, Sarah, Richard and David who are without a doubt their biggest achievements of all. Chris even worked alongside his son to Assistant Manipulation Aid for combination safe locks – well and truly keeping their accomplishments within the family.





Chris Belcher and his wife Suzzie



The Chris Belcher Locksmith Legacy

“At first, the new tool was looked upon as ridiculous; however history shows that it’s probably the most successful pick of its kind.”

Now we know where the Chris Belcher legacy begun we can start to see how his genius has revolutionised the industry:

“Over twenty-five years ago I created a tool for curtained lever locks for my own use. This was the great-grandfather of the Reversible Pocket Curtain Pick. It was made from two steel key-blanks welded together and shaped very similar to the current Pre-Lifter Curtain Pick. I made it specifically for picking the Chubb locks. It remained in that shape until I eventually decided that it had a commercial value. Then I redesigned it to be more acceptable for other locksmiths to use. At first, the new tool was looked upon as ridiculous; however history shows that it’s probably the most successful pick of its kind. The tool was

registered with its European Design Rights, and we set about trying to sell it. The variations of the basic tool along with different shaped wires further expanded its versatility. We have continuously tried to improve its ease of use over the years, so what started out as a very plain steel tool, is now much more refined.”

– Chris Belcher

It was with his reversible pocket curtain pick, his safe repair tools and all of the other ingenious equipment he has brought to the business that he did it. And here they are, his works and his legacy:

Chris Belchers Original RPCP Set

The Original Reversible Pocket Curtain Pick Set from Chris was designed to open British Standard mortice locks, and this tool, along with all of Chris's works, are renowned around the world.

The tool comes in 2 variations; one for British Standard 5 gauge locks and another for 7 gauge locks.

Each set, which comes presented in an attractive and eco-friendly Chris Belcher display case, includes a 5g curtain pick, a 7g curtain pick, 3 double ended wires (3 right hand, 3 left hand) and a lollipop wire holder.

Of the 3 wires, there is a standard wire, a PLS wire, designed for the new Securefast range of locks, and a F wire, designed for picking the ERA Fortress Locks.

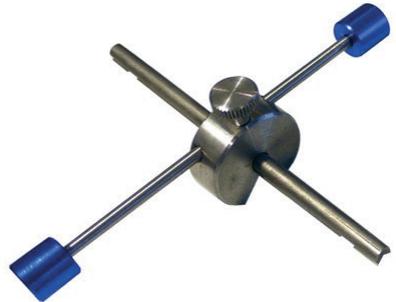
The standard wire is designed to be used as a general purpose wire and for the majority of locks. This is primarily based around picking the BS Legge range of curtained lever locks. The standard wire has a short picking tip.

The PLS wire has a very thin picking tip to pick the thinner levers found in the Securefast Locks. It can also be used on a variety of other locks except for the BS Legge range of curtained lever locks.

Finally, the F wire, specifically for ERA BS Fortress Locks, has an extra bend on the left hand picking tip to bridge the side warding of the Fortress – it can also be used on the UAP 6 Lever Lock. Like the PLS wire, this can't be used on the Legge range of curtained lever locks.

The Reversible Pocket Curtain Pick is just one example of the incredible engineering from Chris.

To use the tool you simply identify the mortice lock, insert the curtain pick into the lock and then use the thumbturn unit and the wire to pick the individual wires and open the lock.



The RPCP Chubb 110 Kit



Chubb Detainer Locks have always been considered in the industry as one of the hardest locks to pick. But, Chris did the impossible when he found a way around this tricky lock.

Robust and revolutionary is how we would describe the Reversible Pocket Curtain Pick-110, designed specifically for Chubb Mortice Detainer Locks. It can manually pick a range of Chubb Detainer Locks, including the 3R35, the 3K70, the 3J60 and of course the 110.

Chris has designed this tool like all the rest, to make the life of the locksmith easier. It utilises his infamous and ingenious reversible picking wire for picking of left and right handed mounted locks.

Before this tool was introduced to the locksmithing world, picking of detainer locks was somewhat hit and miss. But now, once this tool has been mastered, opening times are surprising to say the least.

The tool, which also comes in a quality, wooden presentation box, is made with hardened steel to make it stronger for picking, and should last for years.

The RPCP Chubb 110 Decoder – For the RPCP 110 Kit

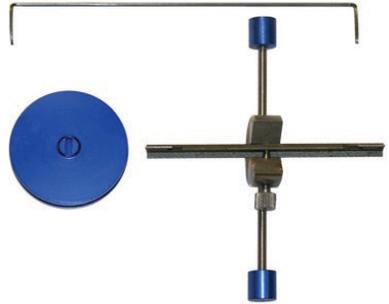


This handy attachment for the RPCP Chubb 110 Kit is a fantastic addition to the range. It allows for the decode of the Chubb Detainer Lock and works in perfect harmony with the 110 Kit for a complete job. When you buy a 110 kit from Tradelocks, you will receive a 100 decoder free of charge, making completing a job on your Chubb Detainer lock even easier – thanks to Chris and Tradelocks.

The RPCP Pre-Lifter Set

The pre-lifter set came into play to cover ERA Fortress Mortice Locks. It was designed to lift all levers fractionally and allow ease of passage for the picking wire. The picking wire is unique and only requires light tension to be applied when working.

Without this pre-lifter it would be impossible to pick under the lever pack in these locks, making it a very clever and effective tool indeed. It can even be used on the Chubb 114 older versions of the lock.



The Drill Point Card and Speed Pick

Yet another product which proves Chris' vast lock knowledge; this clear and easy to understand drill template card has numbered holes corresponding to the lock identified. You would simply place it over the keyhole and drill through the correct hole.

Though it's never ideal, when a lock is faulty it might be necessary to drill it, and with this kit it is easy to identify a lock and know exactly where to drill.



The Button Gauge Set for Decoding Mechanical Digital Locks



As more and more locksmiths began having to face mechanical digital locks, Chris came up with the Button Gauge Set – which offered a different perspective to lock manipulation.

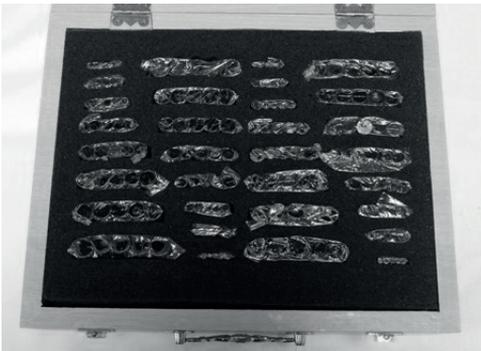
Though there are numerous methods of manipulating mechanical digital locks, doing the job would involve trialling and testing the different variations and wasting a lot of time.

But Chris looked at things from a different perspective. His approach makes guessing absolutely unnecessary, as instead you look at the lock in a logical and mechanical way. You manipulate the lock from the front and the Button Gauge Set gives you a good overall understanding of the relationship between the buttons and the gears. Using Chris' comprehensive instruction manual and with a little practice, the tool makes defeating this kind of lock faster than any other.

The Taper Repair Pin Kit for Safes

Chris knew that every professional should be prepared with the right tools, whether they are attempting to defeat or repair a cylinder or a safe lock. As always Chris thought of everything with his Taper Repair Pin Kit, which was put together to ensure a locksmith was fully equipped to take on any safe lock.

The kit comes with 160 individual pieces (5 x 32 different sizes). Each is HRC – 58 machine tested hardness - and come in 8 different thicknesses and 4 different lengths. Each of the pins is developed with a slightly larger diameter on one end than the other and they are made with hardened steel to ensure durability and strength. The variety of lengths helps ensure that repair time is sped up for drilling holes into safes and the numerous options help cover most situations.



The Multi Gauge Mortice Lever Lock Pick

The Multi Gauge Mortice Lever Lock Pick has been designed for ease of use, functionality and effectiveness on multiple mortice locks. It was made to open all curtain bolt thrown mortice locks, including BSI rated locks, and locks from the Chubb detainer series.

This pioneering pick covers all 9 gauges of a keyhole and has a thumb turn design for lever angle recognition – making it simple and effective at opening mortice locks in wooden doors. Chris' aim with many of his tools, and when creating a tool for this lock in particular was to pinpoint issues professionals have with their standard tools and find solutions to those issues.

Chris said: "This pick is made for ease of use and that has been achieved by making it loose and easy to tilt. The main aim of the design is to make picking stubborn locks possible. You want a pick that can open a lot of locks, even the trickier ones.

"The curtain pick is easy to turn and by remaining loose it allows for leverage - the better the access to the lock the more effective the picking will be."



The Universal 7 Gauge 2in1 Safe Pick Set

Chris is responsible for creating this clever set which is allows for safe tools to be adjusted appropriately for the picking of different locks.

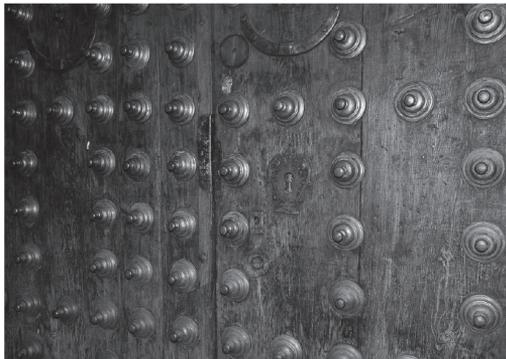
The set allows you to make up a pick based on the lock you are trying to defeat. This is done through adjustment of the picking tip and tension tip of the lock tool. Included in the set is a variety of tips which can then be mixed and matched so as to create the ultimate lock tool. Included in the set are 5 different tips which allow for up to 25 individual variations which help you not only have every you need to pick a wide range of locks at your fingertips but also save money on purchasing individual picks for different types of locks.

Just some of the non-curtain safe locks that can be picked include, the L&F 2802 07016 G Safe Lock, the Willenhall CT 12 Deadlock and the Walsall S13117 Lever Safe Lock.



The Reversible Impressioning Kit for Box Locks

This impressioning kit was designed for old, warded locks, the kind found in churches and on other mature buildings. It works by putting a special key blank into a lock with plasticine to make an impression of the key. With that impression it's possible to cut the shape of the warding out and create a working key – simple!



The Chubb AVA Pick & Decoder Set

This pick was designed to overcome the AVA 10 disc locks which are found in rim cylinders, the Hercules padlock, shackle padlocks and AVA filing cabinets which have only 9 discs. Not to mention the custodial handcuffs which come with 3 tips.

This tool is the essence of Chris' genius and favoured by numerous high profile locksmiths. The Chubb AVA lock was very well made and proved very difficult to defeat – but not for Chris. He found a decode and created a pick for this lock which is preferred by most within the industry.

Jason Hillier, expert locksmith who worked closely with Chris said: "This is one of my favourite picks and I was honoured to have been involved in testing the tool and demonstrating it at the launch."

The Chubb AVA Pick and Decoder eventually led to the Chubb Auto AVA Pick and Decoder which was sold here at Tradelocks.



The RKL10 Reset Kit

This kit was designed for the Rosengrens Safe Lock, a high security, key changeable lock.

Chris found a way to reset the lock without taking it all apart, which reduced the risk of messing up the lock. He had an undeniable talent for working out every aspect of a lock and finding innovative ways around defeating them – just as he did with this one.



The Assistant Manipulation Aid V2, V2.5 and V3

This was designed to aid the opening of 3 and 4 wheel safe combination locks by measuring the contact points. Chris also invented a new concept which dramatically reduced the opening times of these locks. Instead of doing 50 reads per wheel, taking reads every 2 numbers; you only need to take 10.

This project was even more special than the others. It combined his knowledge of locks with the computer knowledge of his son – a joint, family venture.

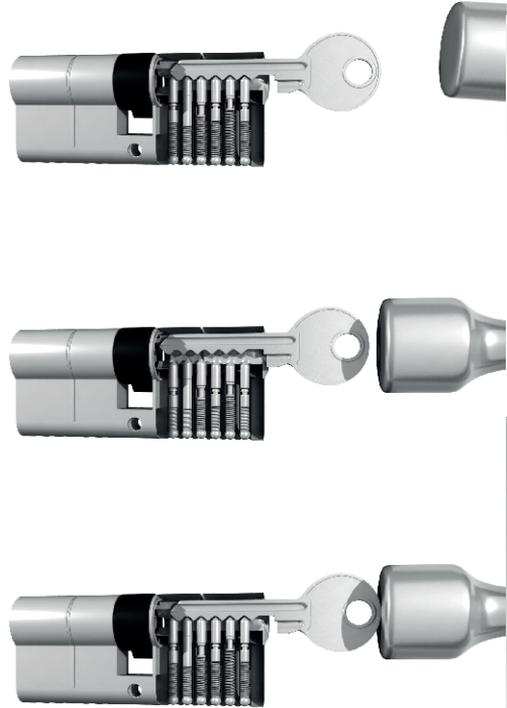


Anti-Bump Timing Pin System

We wanted an effective, anti-bump solution for our cylinders; one that was unique and like no other on the market. With that in mind there was only one person to turn to. One person with the knowledge and understanding of locks needed to come up with the very best resolution – Chris.

This very clever system that Chris came up with uses nickel plated hardened steel key pins and driver pins, which gives the anti-drill feature we wanted to incorporate. The patented timing pins are designed to interrupt the timing of the pins when bumped, and it is highly effective.

Because we use special pins rather than trap pins, we also don't have the high expense in getting this anti-bump feature and the omitted trap pins means there is no cylinder entrapment and the lock remains operational for the inside even when bumped. The timing pins have inbuilt anti-picks and mushroom driver pins, which makes them highly effective against picking.



The Gerda Pick

The Gerda Pick, which is a collaboration of our own and Chris' expertise, is still in the making. It is a tool that enables you to decode and open the Gerda 16 Pin Radical Cylinder Lock Series.

The opening tool includes a decoder tool and pin lifting wire, which enables the user to lift each individual pin so they can determine what length of pin is in the chamber they are working on. The impressing tool can be inserted into the lock and will line up with each of the pin chambers. Before inserting the inclusive aluminium foil must be wrapped around the tool. When fully impressed this tool is used to open the lock.

The pin depth chart is used to note the size of pins in each chamber and the setting block and setting pin, also included, allows the user to set the depths of any number 3 and 4 pin lengths found within the pin chambers.



The Super Snapper Bar

Chris redesigned the snapper bar in recent years to make it even more effective against breaking difficult cylinders. The tool simply, and without difficulty, breaks through high security cylinders through destructive entry. It is agile and was designed to defeat just about any anti-snap feature in a euro cylinder.

Only someone with as much knowledge around locks and with Chris' expertise could create a product this effective.

It works by inserting the WHOLE cylinder into the CB Snapper Bar but only once removing the door handle to reveal the full cylinder length. Its redesign meant it is heavier than it once was to create even more leverage to bypass new and improved anti-snap features seen in cylinders now on the market.

It is strong, durable and as always, Chris has thought of every aspect of the tools design to ensure it is as effective as it can be. He changed the design so the tool was not only made with steel to be much stronger but also to have a narrower face it will fit in most doors profiles to get past the troublesome anti-snap mechanism. Anti-grip pins and sacrificial cut lines are no match for this compact snapper bar, which is only 25mm in diameter and 190mm in length.

With this innovation, Chris has simply made easy work of defeating difficult cylinders for any domestic locksmith.



The La Gard 2200 Variable Tool and VMI (Variable Magnetic Indicator)



In 2004 Chris designed the La Gard 2200 Variable Tool, which was updated in 2010. This safe opening tool promised to tackle the tricky La Gard Lock.

The problem with the La Gard Safe Lock was that the key guide tooth, in the entrance of the keyway, tended to snap off or break when worn. This makes it difficult to manipulate and defeat with your standard safe lock tool. But, Chris found a way around this with a device that wasn't affected by a worn keyway. How did Chris construct the pick?

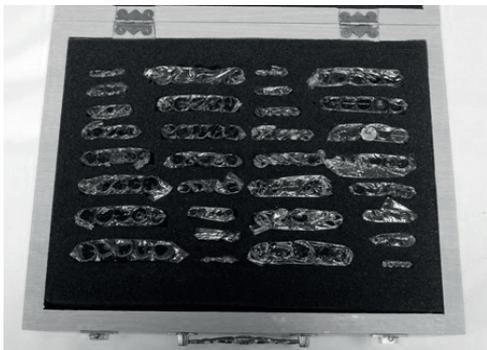
"The tool is a precision engineered tool and is constructed of Grade 303 Stainless Steel. I designed this tool with a sliding aluminium thumb-turn instead of a bar to give more control over manipulation and to reduce the tools' 'end weight'. The tool has various indication lines to achieve the following:

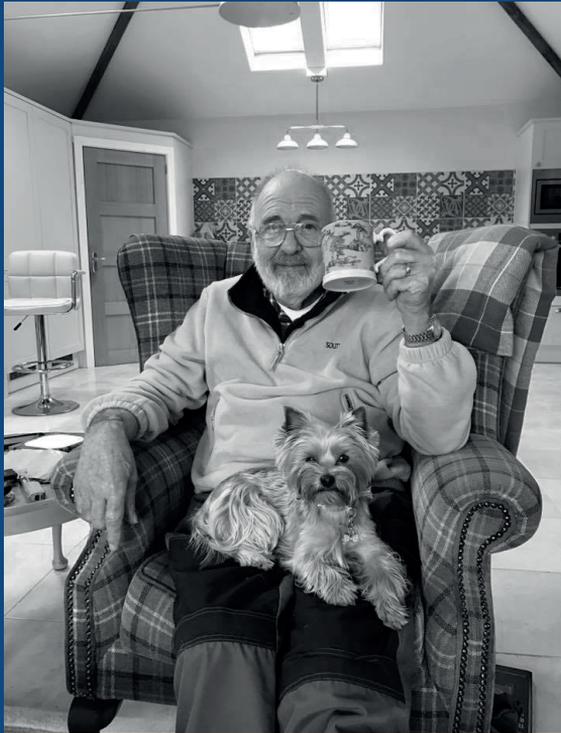
1. Positioning of the pick within the wheel pack.
2. Positioning the drive wheel under the drop arm nose in just a few seconds.
3. Positioning each of the four wheels at their original code settings (if a key or original code is available.)

"Once proficient, set-up time for this tool/pick is just about zero, except for checking the handing of the lock and also checking that all the wheels are at the start position."

The way in which the La Gard 2200 Variable Tool and VMI operates is that it allows the thumbturn to slide along the picking stem. This in turn enables you to bring the thumbturn relatively close to the face of the safe door, which removes the end-weight which affects the picking. You may also position the thumbturn anywhere else you prefer - it is entirely up to the user.







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The locksmith industry, and UAP,
will be the lesser without him.”

– David Jennings,
UAP Managing Director,