

CARVING BY NUMBERS

Mike Davies

www.CarvingbyNumbers.com



Woodcarving by Numbers is a simple to follow programme that guides woodworkers of all skill levels to become competent woodcarvers. Available with a selection of tool sets, simply match your carving tools to the numbered profile chart, and follow the step-by-step guidance through a wide selection of projects. As a bonus with each tool set, you will have access to a comprehensive treasure trove of technique tutorials, project, and guidance videos. Watch and learn the Significant Six carving techniques and practice them on a selection of projects, graded in difficulty, designed to put your skills to the test.

The ultimate goal is to create designs of your own to add a unique point of difference to your woodworking projects.

Please refer to the **Significant Six techniques tutorial** or watch the **Foundation Skills DVD** at www.carvingbynumbers.com for safety and guidance with your techniques.

Letter Carving

The comprehensive tool collection is recommended for letter carving.

Sweep Profile Reference Chart

Essential Collection:

- 1
- 2
- 3
- 4
- 5

Pattern Carving Set:

- 6
- 7
- 8

Spoon Carving Set:

- 9
- 10
- 11

Comprehensive Collection:

Bonus Gouge

- 12

Letter Carving



Photo 1.

The art of lettering is a tremendously popular form of carving, due to its infinite applications.

Names or house signs carved in wood can make treasured gifts, while poems and favourite catch-phrases can be documented in a way that will survive the centuries. You may wish to initial or date pieces of your work, incorporating personal details into your very own logo.

Letter carving is relatively quick and simple, however as with all projects, the carving is a direct representation of the drawing. Therefore, a great deal of importance must

be placed on marking out the letters correctly before starting to carve.

Prior to the days of computers, the art of lettering required a sound knowledge of the founding principals of signwriting. However, the computer has made things so much easier, offering a vast selection of fonts that can be manipulated to any requirement in seconds. That said, it is worth becoming familiar of a sign writers considerations, so that you can make informed decisions when taking the shortcuts.

Style

There are many styles of lettering to choose from, some plain, some fancy and many in between. It is important to make sure that the style suits the application. For example, a house sign will need to be clear for people driving by, therefore, a plain style would be the most appropriate.

Another point to consider is whether individual letters are recognisable. Initially, this may seem a strange consideration, but it is a valid point for certain styles. In photo 2, you will see an old English letter J. It could be mistaken for a letter 'T' or the letter 'I'. Therefore, this style of lettering could potentially lead to confusion when used for initials before the surname.



Photo 2.

Substrate

Thought should be given to the choice of timber that you plan to carve letters into. A highly figured piece of timber may detract the eye from the lettering. Find a substrate that will complement the application and design.

Spacing and Definition

When letters are drawn by hand, a common problem is encountered by carvers who break down words into the number of letters and then mark out equally proportioned boxes for each. The result when the letters are positioned is, of course, irregular and non-flowing. This is because few letters are of exactly the same proportions. Take, for example, the letters I and M.

The solution is to draw the letters free hand and space them to appear visually correct as opposed to mathematically correct.

The height of letters is a slightly different matter. A standard height for upper and lower case letters should be established and maintained throughout the sign, unless of course you wish for letters of varying height to be part of the design. Standardising the height of letters can be regulated by drawing three parallel lines on to the timber. A common scale is for lower case letters to be 1/3rd smaller than upper, although the example shown in photo 3 uses lower case letters that are just over 1/2 the size of the upper case.

Inevitably ascetics play a key role. Ensure spacing between word lines is equal and that the distance between words is sufficient to avoid over-crowding. It is possible to give prominence to certain words by carving them larger than others.

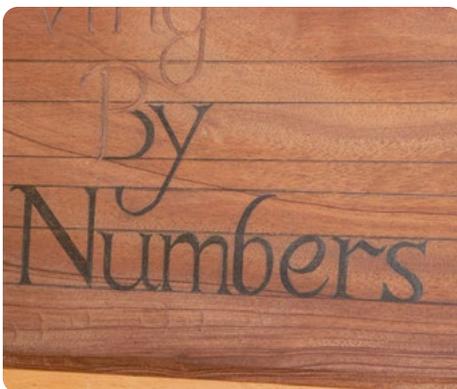


Photo 3.

Regulating Letter Form

Study the examples of letter styles provided in photo 4. Note that each letter is formed with a variation of thin lines developing into thick. Transfer these to your carving to add interest, and regulate the thickness throughout the text. An example could be to set the thin lines at 2mm and the thick lines at 5mm. Whatever your decision, it will be important to adhere to these guidelines from start to finish.

When carving 'incised' letters, note that the wider the line is drawn, the deeper the cut is carved. When carving letters in relief, the wider components would be the higher. This will be explained and illustrated in greater detail as we progress.



Photo 4.

Angle of letters

Attention should be given to the angle of letters. If they are drawn with a slight slant, then efforts are necessary to maintain this angle.

Position of words

When marking out words remember to consider their position in relation to the borders of the sign itself. Imagine perfectly spaced letters forming words, which are all located slightly off centre.

Finishing

Make sure when completing the marking out process, that the lines of each letter are clean and crisp, with clearly defined edges. Remember drawing is the first stage of carving. If the drawing is unclear then the carving is almost guaranteed to be the same.

Reference

It is useful to build collections of different styles of lettering. The use of a computer and printer makes life so much easier, as you can access a vast array of letter fonts.

Take photographs of interesting signs and study the layout and proportions.

Handy Tip

Print your words or sentences from a computer, and use double sided carpet tape to stick the design to your timber. Then simply carve through the paper into the timber below. Photo 5.



Photo 5.

NOTE: it will be helpful to refer to the 'Significant Six Techniques' tutorial or view the Woodcarving Foundation Skills DVD.
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Incised Letters

Study the examples of letter styles provided. Incised letter carving is relatively quick and easy and is therefore ideal for the beginner to tackle first. The level of difficulty will vary in line with the style of font and the combination of straight into curved lines. It may be wise to choose a simple style to begin with and move towards more ornate styles as your skills develop.

At the top and bottom of letters within certain fonts, you will notice an ornate flick.

These flicks are known as Serifs. See in photo 6 how the serif is formed by 3 cuts forming an inverted pyramid shape.



Photo 6.

The Letter A

Mark the letter A onto your timber, referring to the previous suggestions. Photo 7.

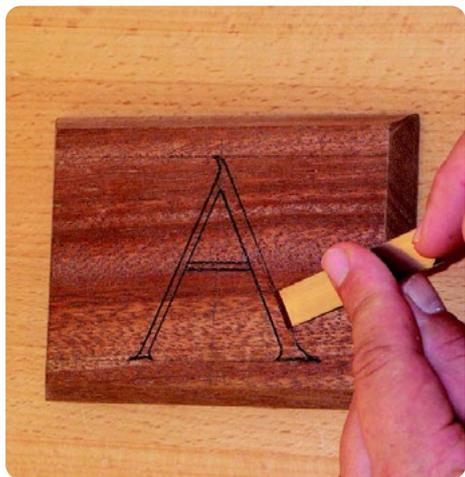


Photo 7.

Use the flat edge of tool ref #1 or 8, to make the first incision. The edges of the letter should be angled towards each other at around 45° to form a V cross section.

Ensure that you achieve clean, straight lines as you form the walls of the letter A. It is important that the base line of the 'V' is central to the upper lines when carving straight letter components. You can begin the valley's using tool ref #5, but always finish with the straight edge of tool ref #1 or 8 to maintain clean lines, especially on the timbers surface.

Notice how the letter is developing in pic 8 and how the lines of the A have been partly formed. Remember, the depth of cuts forming the 45 degree valley should be less for thinner lines.



Photo 8.

Use tool Ref number # 1 to create an inverted pyramid effect for the serifs at the point where all edges meet. Fine sandpaper should then be wrapped around a sanding block to remove any pencil marks apparent on the timbers surface. This will also highlight any wandering lines that need cleaning up. **Photo 9.**



Photo 9.

To develop your skills further try carving a letter that incorporates curves. The letter 'R' is an ideal choice. Note in Photo 10. how the curve varies in thickness from wide to narrow. The thickness of the line also relates to the depth of the incised V. When carving straight components remember that the centre line of the V should remain central to the surface lines. However, the bottom of the V can sometimes be positioned towards the convex side of the curve when carving rounded shapes. Take a close look at the valley line as it travels around the arc of the R.

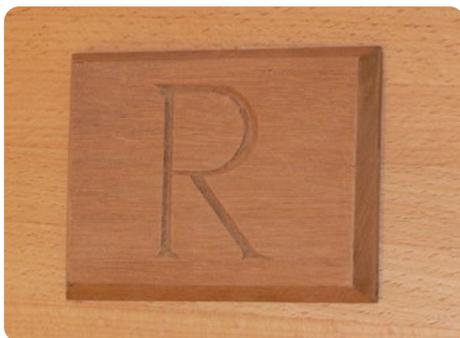


Photo 10.

The real test is to carve the letter 'S'. **Photo 11.** Form the curved lines using the various profiles of your tool kit. It is not necessary to have the exact radius or 'sweep' of gauge to meet the shape of your letter. You can change the diameter that the carving tool produces by using the tips of the gauge and sliding the tool to vary the radius of circle that the tool produces.



Photo 11.



Photo 12.

Relief Letters

I have chosen an old English style of lettering to demonstrate relief letter carving. This is considered a challenging font as each letter is decorated with fine details from which the background must be reduced. When carving any style of letter in relief, a flat chisel is a useful part of your toolkit. For your first attempts and to help build confidence, it is a good idea to choose a plain letter style.

Mark out the profile of the letter on the surface of the timber. It may help to shade the letter to make its shape clearer.

The next stage is to remove the background to distinguish the letter. This can be done by hand, however a router will come in very handy. It is important to create the walls of the letter at 90° to the reduced timbers surface. This will ensure that the edges do not change shape as they are carved lower. **Photo 13.**



Photo 13.

Just as with incised letters, where the valley depth varies in accordance with the width of the lines, the same principal also applies in relief forming an opposite impression. Instead of a valley line, we need to create a high ridge line. The ridge should be lower as the line becomes thinner.

Once again, it is important to consider the position of the ridge line in relation to the sides of the letter. If the line is curved, carve a concave profile on the concave side and vice versa for the convex side, as illustrated in **Photo 14.**

In the finished letter, as illustrated in **photo 15**, note how extra depth can be added to your carving by allowing components to overlap others, An example of this is evident halfway around the crescent shape of the 'C' section.



Photo 14.

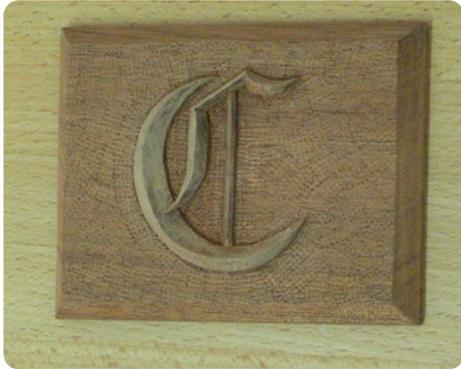


Photo 15.

Photo 16. Note the background has been stamped to help define the carved letter from the background. This is especially effective when stains are used as the stain sits in the recesses of the stamped area, highlighting the letter.

To make a stamp, you can simply file a series of v shaped grooves into a steel bar using a fine triangular shaped file. Simply file a series of valleys at 90 degrees to each other forming a series of pointed pyramids.



Photo 16.

ABCDEFGH
IJKLMNOP
OPQRSTU
VWXYZ
abcdefghijklmnop
klmnopqrst
uvwxyz
1234567890

ABCDEF
GHIJK
LMNOPQR
STUV
WXYZ
abcdefghijklmnop
nopqrstu
vwxyz
1234567890

ABCDEFGH
IJKLMN
OPQRS
TUVWXYZ
abcdefghijklmnop
lmnopqrstu
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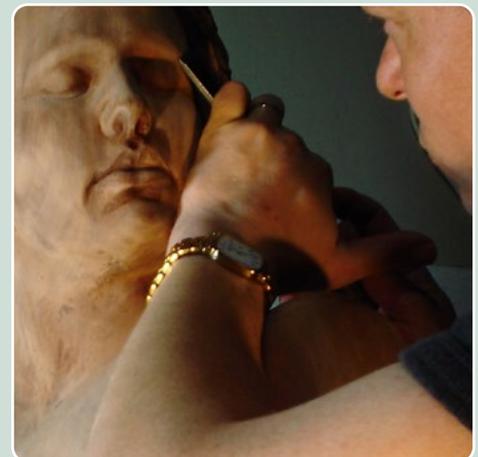
About the Author:

Mike Davies is an accomplished craftsman, who has completed projects for royalty, national trusts and private collectors alike. He has surveyed and restored works by many of the great designers and carvers from the past.

As a qualified teacher, he originally developed his 'Woodcarving by Numbers' educational system in 1994. It was created to help woodworkers of all skill levels to master the art of woodcarving.

Since then, his system has been published in magazines and books. It has been televised and used to teach students in schools and colleges around the world.

The information contained within this document, forms part of an educational package, which has been developed in cooperation with many of the world's leading carving tool manufacturers.



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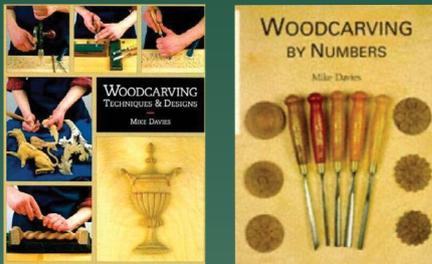
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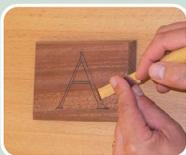


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Lettering



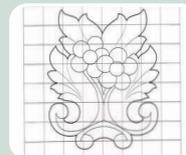
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CARVING BY NUMBERS

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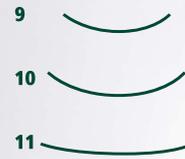
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- + Pattern Carving Set
- + Spoon Carving Set
- + Bonus Gouge
- + Canvas Tool Roll



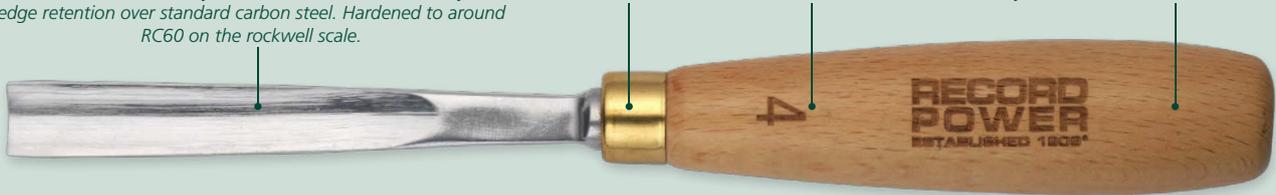
Premium Wood Carving Tools:

Chromium-vanadium alloy steel offers enhanced durability and edge retention over standard carbon steel. Hardened to around RC60 on the rockwell scale.

Brass ferrule

Numbered reference for educational system

Hardwood beech handle



Record Power has a long and impressive history. Established in Sheffield, the heart of the UK's steel industry, and stretching back over 100 years, we enjoy an enviable reputation for creating high quality tools through our many years of experience and unparalleled knowledge in manufacturing and design.

In addition to our UK-made products, we work with carefully selected partners from across the globe to ensure we supply only the best quality products possible. Record Power products are exported to more than 30 countries worldwide.

Prices valid from 1st October 2023 E&OE. Specifications, prices and availability are subject to change without notice. Prices do not include local tax and freight charges.