

AXMINSTER **RIDER**

SUPERIOR TRADE QUALITY WOODWORKING PLANES



Instruction Booklet

***Congratulations on the purchase
of your new Axminster Rider plane***



It has been carefully made using good quality materials and, with the right care, should provide many years of trouble free service.

Axminster Rider Planes

Instruction Booklet

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Introducing Axminster Rider planes

Axminster Rider planes are aimed squarely at professional woodworkers, tradespeople, apprentices, enthusiastic hobbyists and users at home. All will appreciate these well-made, affordable hand tools. Tools made with care and attention to fine detail, setting them apart from more ordinary planes.

Axminster Rider planes only require the bare minimum of initial preparation, a wipe down to remove the protective coating and checking the set. The blade comes honed with a secondary bevel so straight away you're ready to take shavings. The range of bench planes includes smoothers, jacks, fore and jointer planes. These are complemented by standard and deluxe block planes. There is a variety of specialist planes such as a small router, shoulder, bullnose and three-in-one together with a traditional rebate plane.

The raw material for all Axminster Rider planes is high quality ductile iron. Ductile iron possesses high strength, impact resistance and is far less prone to corrosion than ordinary cast grey iron, especially with the addition of both copper and nickel. Casting takes place in an up-to-date, modern, computerised foundry. On removal from the mould, the raw castings are then left outdoors for several months to condition or age. Conditioning removes internal stresses from the casting process, ensuring the plane's body is stable before machining and surface grinding. When the machining process has been completed, all Axminster Rider planes will have soles ground to 0.04mm or +/- 1.6 thou" tolerance. The bench planes have oil-finished selected rosewood handles from a sustainable managed source. The cap iron and other quality fittings on the planes are solid brass, an ideal material for moving parts.

The most important feature of all Rider planes is the blade. The bench plane blades are an impressive 3mm thick, surface ground on the reverse to ensure flatness. Each blade is oil quenched, high carbon spring steel, hardened and tempered to HRC 63. After grinding of the primary bevel, a secondary micro bevel ensures every blade is ready to go from the moment the plane arrives.

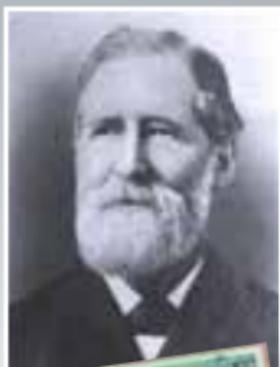
All planes undergo careful inspection in our workshop in Axminster prior to packaging. Each individual bench plane comes in a foam lined storage box, which also contains a spare blade and fabric storage sock. The sock provides extra protection from knocks or bumps encountered in the workshop or toolbox. Block planes are packed similarly, but with no spare blade and the specialist planes are simply packed into their storage boxes. This comprehensive instruction booklet containing details of how to care for the tool and hone the blade accompanies all planes.

We are confident that this new range of Axminster Rider planes represents a good standard in traditional, quality plane manufacture and great value.



A short history

For anyone interested in the development of hand tools, the iron plane is a fascinating study in itself, but it's fair to say that by far the greatest influence on its evolution can be attributed to **Leonard Bailey**, a toolmaker and inventor from Massachusetts, USA.



Bailey patented in the mid-to-late 19th century several features regarding woodworking planes, which were then manufactured by the Stanley Rule & Level Co of New Britain, Connecticut.



Initially, the planes were expensive but by 1892, advances in manufacture meant that the new tools were relatively affordable. As a result, they were highly prized by woodworkers of the late 19th and early 20th centuries and remain popular even today. Bailey's design concepts are still used and almost all of today's plane manufacturers adopt the ideas he first developed 150 years ago.

The complete family of Bailey planes has always used a two-piece iron composed of the blade itself and a 'chipbreaker', screwed tightly down on top, whose job is to break and curl the shavings as they're cut by the blade.

The bevel on the blade will have been ground at around 25° , with a honed edge of 30° . This combination is mounted into a Bailey plane at an angle of 45° , with the ground bevel on the blade facing 'down'... hence all Bailey planes are 'bevel-down', though it's this cutting angle of 45° that's crucial.

General care and maintenance

The main constituent of your new plane is ferrous metal. Ductile grey cast iron has been used for the main casting, with a high quality tool steel blade and a mild steel chipbreaker. All of these materials, given time and unfavourable storage conditions, will show signs of corrosion or rust which once established becomes extremely difficult to eradicate. Prevention is far better than cure and fortunately it's relatively easy to maintain your plane in pristine condition if a simple maintenance regime is adopted from new.

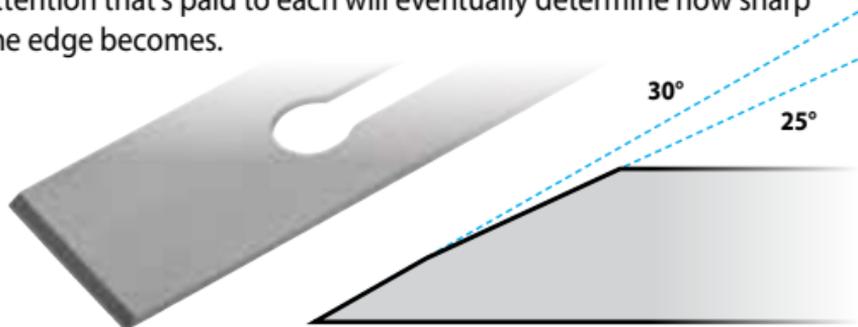
Bench planes have been provided with a sock made from a stretch knitted fabric that will provide some extra protection from knocks and bumps in the workshop or toolbox. It is also worth wiping the iron and steel surfaces with a light smear of camellia oil, used in Japan for centuries to protect Samurai swords against rust and corrosion. The most important factor though, is to not to keep your new acquisition for any length of time in damp, humid conditions. A couple of years in an old, wet, leaking shed at the bottom of the garden will render an unprotected plane fit for nothing more than a restoration project.



Camellia Oil Applicator
Code 300317

Sharpening plane blades

An edge is essentially where the two flat faces of the blade meet at a predetermined angle, usually 30° . The edge will consist of a wide 25° ground face, together with a much narrower honed bevel of 30° and it is this that is sharpened on suitable media. The honed edge and the back of the blade should be prepared in turn and the more attention that's paid to each will eventually determine how sharp the edge becomes.



Many different forms of sharpening systems are available nowadays. Oilstone, waterstones, diamond, ceramic... there are many permutations and each has its advantages and disadvantages, but a reasonable quality diamond stone, or combination stone, would make an ideal choice, as they are of consistent quality, flat, robust and produce a good edge quite quickly. A workable, honed edge can be obtained with a 1000g stone and succeeding finer grits will serve to produce a more polished edge where one is required.

Lubrication of some sort is also needed, which acts to keep the stone clear of steel debris as the sharpening process takes place. Almost anything will do, from water (make sure the diamond surface is dried afterwards) through to light machine oil, paraffin or even WD40.

**Double Sided
Diamond Bench Stone**
(400g and 1,000g) Code **951777**



Honing Guide

Code **340147**

A honing guide is also recommended, as one of these devices will ensure that a repeatable honing angle is achieved each time the blade is sharpened, provided that the blade projection remains constant.



To sharpen, or hone the blade, it must first be removed from the plane and held securely in the honing guide. It's also very useful to have a method of ensuring the same blade projection each time and perhaps the simplest is to use a steel rule placed on the edge of a bench.

The blade should be honed at 30° and ought to produce a tiny wire edge. It's then removed from the guide, turned over and the reverse side of the blade is placed flat on the stone and moved across it until the wire edge has been removed. The edge can be further improved by using a leather strop dressed with an appropriate polishing compound.

With the blade now sharp, the chipbreaker is then carefully screwed tightly to the blade so that its leading edge is approximately 1mm behind the honed edge.

After the 30° honed bevel has been sharpened several times, it will gradually become wider to the point where it becomes difficult to sharpen it again. The blade then needs to be reground at 25° , taking great care not to overheat the steel.

Axminster Rider Sharpening Station

The Rider Sharpening Board is made from ½" thick resin laminate with precisely machined rectangular recesses for a sharpening stone (not supplied) and a leather strop. The recess for the stone matches the Rider Double Sided Diamond Bench Stone, though a water or oilstone can be fitted with suitable packing pieces.

Each end of the board features a number of machined recesses which are designed to work in conjunction with the Rider Honing Guide or a similar Eclipse style guide. These recesses enable precise and repeatable honing angles to be obtained for chisels and plane irons, with a 45° cut out specifically intended for scraper plane blades. Supplied with a board, strop, paste and instructions.





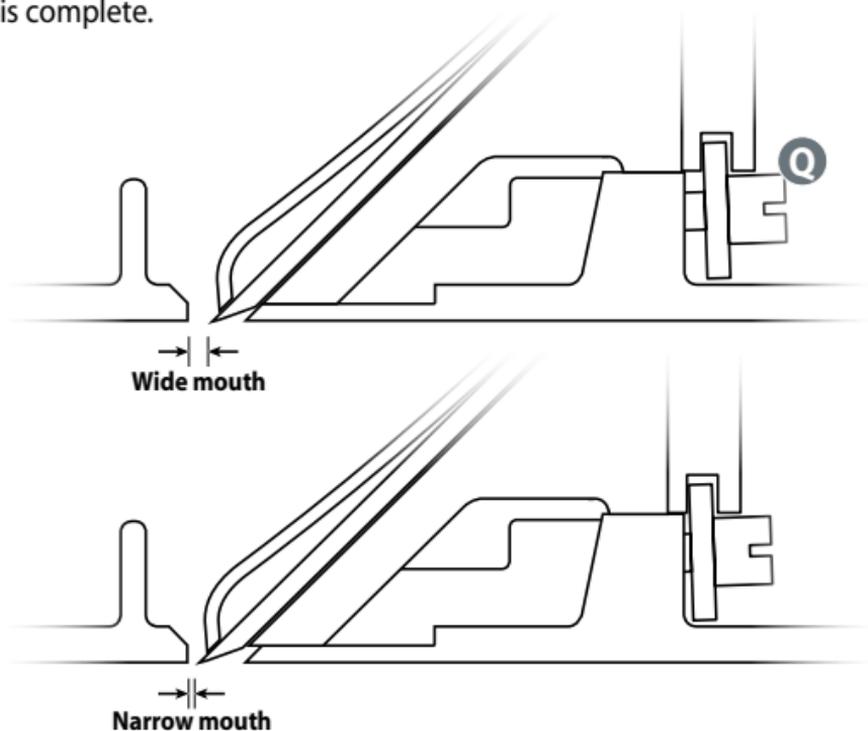
**Axminster Rider
Sharpening Station Kit**
Code **717767**

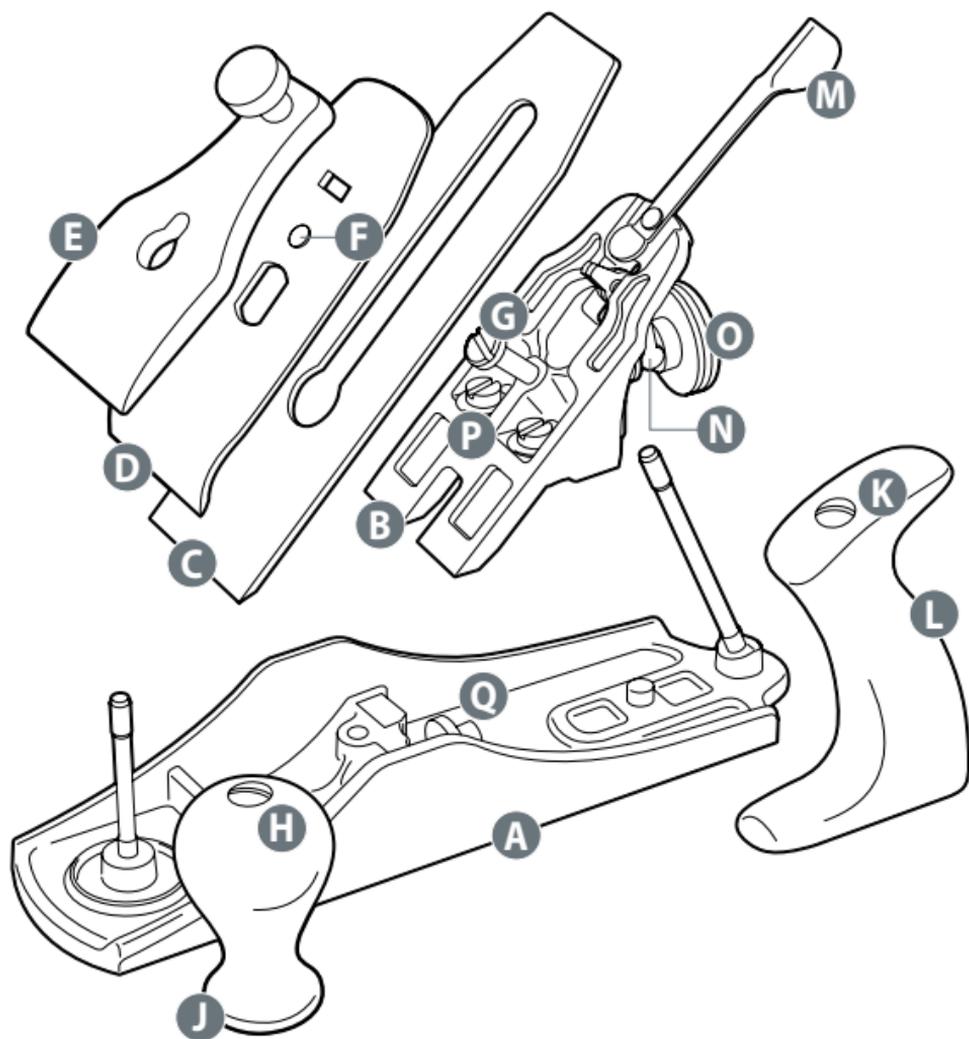
This version of the Sharpening Station is supplied with everything required to produce a sharp working edge on all plane and chisel blades: a resin laminate board; Double Sided Diamond Bench Stone (1000 and 400g), leather strop, honing compound and complete instructions.

Adjusting a bench plane

Setting up an Axminster Rider plane is quite straightforward as there are really only two controls that alter the presentation of the blade. The first is the large circular Blade adjustment nut (O) immediately in front of the handle. Spinning it clockwise will make the blade protrude slightly more; producing a thicker shaving whilst turning it anti-clockwise will retract it. The second is the Lateral Adjustment Lever (M), situated just over the top of the handle and is used to ensure the cutting edge is parallel to the plane's sole.

Removing the entire blade assembly, slackening off the two Frog screws (P) and turning the Frog adjusting screw (Q) with a screwdriver will regulate the effective width of the mouth (i.e. the distance between the honed edge of the blade and the forward edge of the oblong slot in the sole). However, it's essential to remember to re-tighten both Frog screws when the adjustment is complete.





- A** Body
- B** Frog with parts M, N and O
- C** Blade
- D** Chip breaker
- E** Bronze cap
- F** Chip breaker screw
- G** Bronze cap screw
- H** Nut and screw for knob

- J** Knob
- K** Nut and screw for handle
- L** Handle
- M** Lateral adjustment lever
- N** 'Y' adjusting lever
- O** Blade adjustment nut
- P** Frog screws with washers
- Q** Frog adjusting screw

Bench Planes

The smallest bench plane in the range is the No. 4 Smoothing Plane; this is probably the commonest size and is generally used for taking finer cuts prior to finishing.

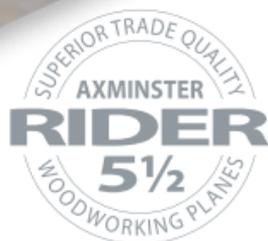




The No. 5 is universally called a Jack Plane, derived from the expression 'jack of all trades' and would be used to flatten, size and square the workpiece.



The No.5½ is slightly larger than the No.5 and can be used for the same applications. Many users prefer this size of plane as it has a little more 'heft' when used at the bench.





The No.6 Fore Plane can be used for swift stock removal similar to a Jack Plane or it can be used to true up longer edges where high spots can be levelled out.



The No.62 is a single iron, low angle (12° bed) jack plane with fully adjustable mouth. It can be used for the same purposes as a No.5 or 5½ and is suitable for those who prefer a plane with a low angle configuration.

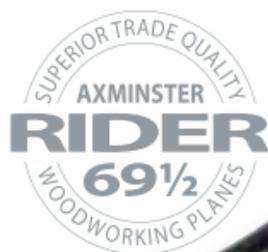


The No. 7 Try or Jointer is now the longest bench plane made and is used to remove the last shavings to level the joining surfaces of a pair of boards.



Block Planes

There are five block planes and all use a single cutter mounted with the ground bevel uppermost. The blade is bedded either at 20° ($9\frac{1}{2}$ and $9\frac{1}{2}$ Deluxe) or 13.5° ($69\frac{1}{2}$, $60\frac{1}{2}$ and $60\frac{1}{2}$ Deluxe). The lower angle block plane is generally intended for end grain work, as the blade will slice more easily through the fibres. Block planes are intended to be used one handed, though whichever one is chosen, it's bound to be an almost indispensable part of the tool kit and used for all types of small, fine work.



SUPERIOR TRADE QUALITY
AXMINSTER
RIDER
9 1/2
WOODWORKING PLANES



SUPERIOR TRADE QUALITY
AXMINSTER
RIDER
9 1/2
DELUXE
WOODWORKING PLANES



SUPERIOR TRADE QUALITY
AXMINSTER
RIDER
60 1/2
WOODWORKING PLANES



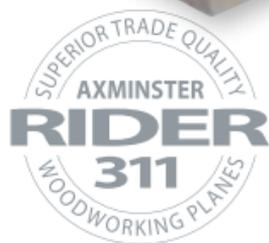
SUPERIOR TRADE QUALITY
AXMINSTER
RIDER
60 1/2
DELUXE
WOODWORKING PLANES



Shoulder Planes

There are four shoulder planes in the Axminster Rider range, a No. 90 Bull Nose Plane and No. 92 Shoulder Plane, each with an adjustable mouth. There is also a pair of identical planes with removable front sections. The No. 211 can either be used as a bull nose or chisel plane whilst the No. 311 can also be used as a full sized shoulder plane. Each of these multi-purpose planes is fitted with a bronze lever cap that fits comfortably into the palm of the user's hand.



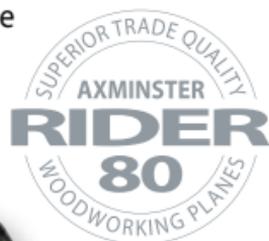


Specialist Planes

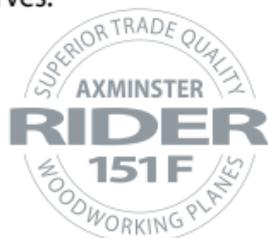
There are a number of specialist planes in the Axminster Rider range, the first of which is the traditional pattern No. 778 Rebate Plane, with twin rods to support the adjustable fence. It is designed to cut rebates up to 38mm wide and the blade can be located either at the front (to work into a corner) or in the usual centre position.



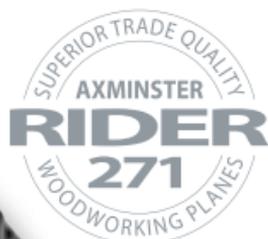
A useful addition to the range is the No. 80 Cabinet Scraper used to smooth surfaces such as panels and table tops without tear out, digging in or gouges in the surface. It can also be used where tricky grain prevents the use of a smoothing plane.



Two adjustable spokeshaves are included as well, the No. 151C with a curved sole for concave shapes and the No. 151F for flat work or convex curves.

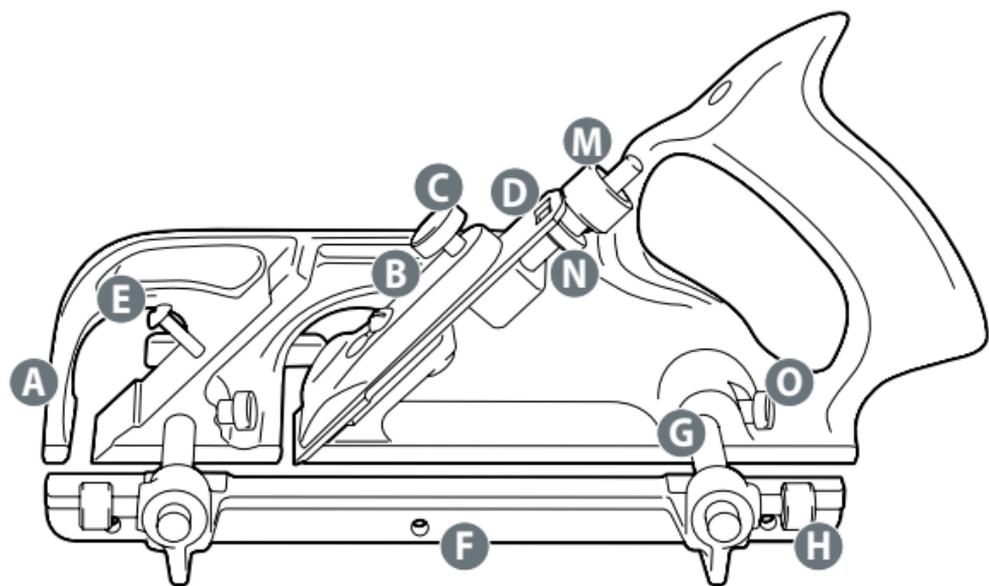


The final specialist plane is the No. 271 Small Router Plane which is an excellent choice for levelling the bottom of grooves and housings.



Using the No. 778 Rebate Plane

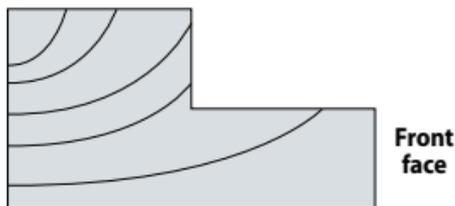
The No. 778 is used to cut rebates up to 38mm in width. The depth is controlled by an adjustable depth stop (J) and the width by a square, parallel fence. It has two locations for the blade, the rear one for normal work and the front position for bull nose work. When used in the rear position, the blade is adjusted by a screw (M) that is both accurate and positive. The double arm fence simplifies accurate setting of the fence and holes are provided for the attachment of a wooden sub-fence.



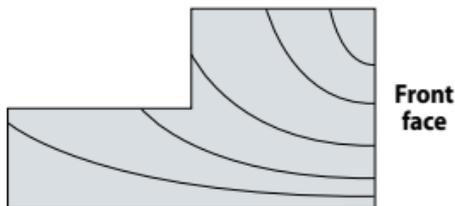
- | | |
|----------------------------------|---------------------------------------|
| A Body | H Knurled fence screw |
| B Lever cap | J Depth gauge |
| C Lever cap knurled screw | K Depth gauge screw and washer |
| D Blade | L Spur and screw |
| E Lever cap screw | M Blade adjustment nut |
| F Fence | N Blade adjustment screw |
| G Fence arms | O Body arm screw |

What the 778 will do

1 By using the depth stop (J), rebates (cut with the fence on the face edge) may be cut to a depth of 17.5mm.



2 Without the depth stop (working to a gauge line) the depth is virtually unlimited. When cutting a fillister (i.e. the rebate that holds the glass and putty in a window frame) the depth is limited by the distance of the fence arms from the sole. Gauge first to increase the depth to the gauge line, remove the fence together with the fence arms and continue the cut as required.



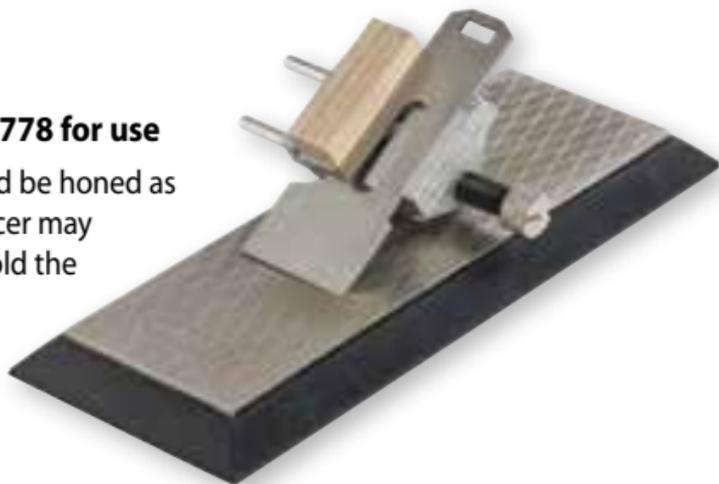
3 When both the depth stop and fence are removed, the plane becomes an efficient square plane.

4 Using the spur (L), rebates may be cut across the grain.



Preparing the 778 for use

The blade should be honed as indicated. A spacer may be needed to hold the blade securely.



1. Replace the blade in the plane ensuring that it is flush with or very slightly proud of the side of the plane, never inside.
2. Insert the two fence rods into the holes provided and secure with the screws. The rods must not protrude on the depth stop side.
3. Slide the fence onto the rods and set to the required distance to cut the width of the rebate required (i.e. from the fence to the edge of the cutter).
4. Screw on the depth stop (not forgetting the washer) and adjust the depth of cut as required (i.e. from the depth stop to the cutter).
5. To adjust the thickness of the shaving, operate the blade adjusting nut (M) after slightly easing the cap iron knurled screw, (C) after which re-tighten the cap iron screw finger tight.
6. When using the plane for bull nose work, use the blade in the forward position and sight along the sole for the thickness of the shaving.
7. Lubricate the sole, fence and depth stop sparingly with paraffin wax (a wax candle).





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or call **0800 371822**

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