

# MICRO MACHINE



PHOTOGRAPH COURTESY OF BRIMARC



ROBERT INGHAM

**Robert Ingham** checks out the ingenious Micro Fence Edge-Guide



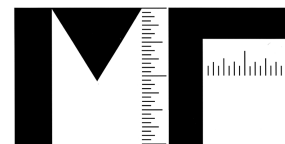
**T**here is no doubt in my mind that of all the applied arts and crafts, woodworking is the most equipment-intensive. With all the tools and machines that are available and the costs involved in equipping a workshop, it can take a long time to amass a compliment of goodies to be fully effective in making things efficiently and with the satisfaction that

is representative of the deep involvement that many of us have with the craft. I have been in my own workshop for five years now and have reached a point where I have almost everything that I need to make the pieces that challenge me.

My main limitation now is space, and while amongst other things a thickening speed sander would make veneered carcass

**Using the Micro Fence in conjunction with the Elu parallel fence**

MICRO FENCE



**“It didn't take me long to be convinced that here was a system that extends the potential of the router...”**

work faster to produce, it would take up more space than its inclusion would justify. So I do not go to woodworking trade shows any more with the intention of buying more equipment! However, in my capacity as a judge for the competition organised by *Furniture & Cabinetmaking* and the Axminster Power Tool Company, I have had the opportunity to look at the new goodies on offer from the many tools and equipment suppliers who take part in the Axminster Show. My list of things to buy consists mainly of replacement items and this is always a great opportunity to check out what developments have taken place since last year.

I certainly was not prepared for the pleasant experience that occurred when the GMC Publisher, Paul Richardson, invited me to accompany him to the Brimarc stand where Richard Wedler was demonstrating a range of equipment that went under the impressive title of 'Micro Fence'. It didn't take me long to be convinced that here was a system that extends the potential of the router into realms of accuracy and control that the machine rightfully demands. While many of the accessories manufactured and supplied with routers leave a lot to be desired, here was a sophisticated piece of equipment that really looked the part. So, without further ado I took out my cheque book and made the purchase.

The Micro Fence fitted in perfectly with my working philosophy of accuracy and control of dimensional settings that much of my workshop equipment represents. The engineering machines that I find essential for some of my work have calibrated dials that enable me to establish settings to dimensions that I measure with dial callipers. There is only so much that one can do with a lathe and milling machine, whereas a router offers a multitude of different options. At last I had found a calibration system that gave me accuracy and, equally important, the ability to reset dimensions that may need to be used later.

## ROUTER RICHARD WEDLER — THE MAN AND THE MAKER

Richard Wedler, who developed the Micro Fence system, has a custom furniture-making business in North Hollywood! Yes, this is the Hollywood of movie stars and film-making and as you would expect, Richard has a list of celebrities on his database. But he went to California initially to explore the potential for his other passion, music. He played guitar and sang with music groups in the evenings and worked with the cabinetmaker, Robert Stevenson, during the day.



**An example of Richard's work using the Micro Fence system**

Although Rich, as he is known, still enjoys making music, he has enjoyed greater success making furniture and when show biz failed to provide the standard of living he had anticipated, he decided to set up his own workshop. I have not yet visited his premises but with a floor space of 1,000 square feet it is no factory, so most of the time Rich works on his own.

I found it fascinating to learn that he had a background in precision engineering. The creative potential in engineering when one first engages this field of expertise seems to be limited to the imposition of the equipment on processes. The outcome seems to be predictable. As your knowledge and skill in using the equipment grows the design and creative potential becomes more apparent and this is what I feel happened to Rich. When he began to experience the frustrations of using woodworking machines like the router he brought his engineering knowledge to bear on the problems and developed the Micro Fence.

## ON TEST

### A COMPLETE PACKAGE

The first in a series of evolving tools is the Micro Fence Edge-Guide, to give it its official title. It has the aesthetics and presence of a well designed product. The main body is machined from bar stock aluminium to which an underhung wooden fence is attached. The kit is supplied with deep and shallow wooden fences but the instruction booklet encourages experimentation with the development of your own additional fence, should occasion demand.

The main body also carries a pair of stainless steel guide rods that are in turn held by the spindle bar and moved by a stainless steel lead screw spindle.

But this is no ordinary adjuster. It includes a precision screw thread that works smoothly and with absolutely no backlash due to the pair of compressible thrust washers that have been incorporated. Furthermore the lead screw is fitted with a dial calibrated either for the American market, in thousandths of an inch, or for metric users, in tenths of a millimetre.

The instruction book is clear and concise, starting with "the core philosophy of the Micro Fence" which

emphasises the precision and reliability of adjustment made available. It then goes on to describe the method of setting up and follows with optional edge guide accessories. In one short paragraph Richard sums up what is probably the most important reason why he developed the Micro Fence in the first place – to address the problem of the dimensional variables that exist in the different standards and manufacturing tolerances of materials, hardware, tools and router cutters.

### METHOD — 'DIAL THE DIFFERENCE'

The principle is stunningly simple. In most situations involving the use of a router fence the resultant cut is made to hold or house an insert. With the Micro Fence fitted to your router, first measure the thickness of the insert with a precise measuring tool such as dial callipers. Then select a cutter that is the next size smaller than this measurement. Set the dimension of the distance from the edge of the component to the groove, zero the dial and make a cut. Then using the micro adjuster, reset the fence to the difference between the insert and the cutter and make a second cut. All dimensions can be accurately measured with dial callipers and a simple sum can be carried out if necessary with a calculator. It is even

possible to add a couple of thousandths or 0.1mm to allow for a sliding fit or the addition of glue to a joint.

The instruction booklet lists many processes for which the fence can be used including the fitting of hinges, inserting inlays, cutting mortice and tenon joints, cutting housing joints or dados and parallel grooves, edge profiling, sliding dovetails, circles, curves, arcs, the list is extensive.

The Micro Fence Edge-Guide is supplied with an assortment of accessories that are designed to be used, as the title suggests, from the edges of components whether they be straight or curved. With the range of routers made by different manufacturers, a selection of mounting bars is available to fit any of the popular makes.

I used the word 'evolve' earlier in this article. After the basic edge-guide had been developed and put into production, Richard put his mind to the evolution of a series of other jigs that use the Micro Fence adjustment system. These include a circle jig and an ellipse jig. If they offer the accuracy and control of the Micro Fence, then Richard and his cohorts could very well be on to something.

**“The instruction booklet is clear and concise, starting with the core philosophy of the Micro Fence”**

## ROUTER THE VERDICT

To conclude, I do not think of this article as a product test, but more of an appraisal of a comprehensive system that has a considerable degree of potential. It will make your use of the router so much easier and more enjoyable and will extend options for the development of your skills and expertise. That should be welcomed by all router users out there.



**The Micro Fence Edge-Guide and a DeWalt 621K**