

Little Rat



John Bailey *evaluates the LittleRat, a smaller version of the WoodRat*

PHOTOGRAPHS BY THE AUTHOR

As an amateur woodworker I have owned and used a full-sized Woodrat with a Bosch router for several years, and was thus very intrigued when asked to review the updated version of its smaller brother, the LittleRat. Would it really be different and improved, or would the quality, compared to its larger sibling, be compromised for the sake of delivery at a lower price?

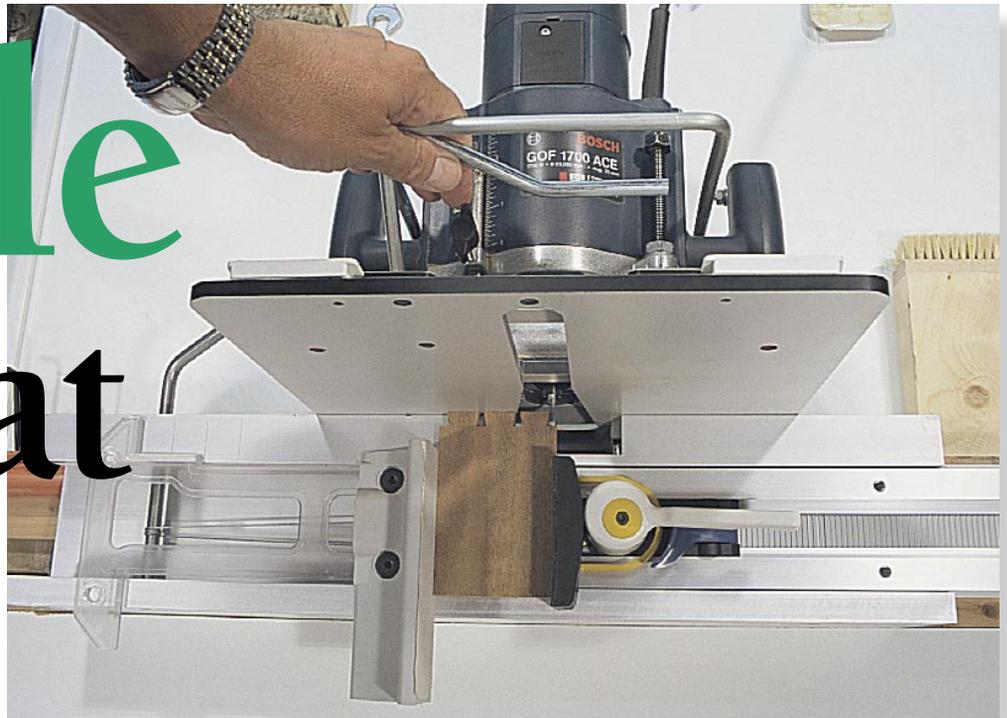
Assembly

The parcel containing the LittleRat duly arrived, and a quick inspection of the contents confirmed that the quality of components is as good as ever.

The main body of the machine, a heavy anodised aluminum extrusion with well



above Cutting end grain



above A dovetail slot being cut in a table leg. The center line is now removed

engineered sliding parts, is every bit as good as the original. The combination of a baseplate and a new router plate, on which you mount your own router, is a distinct departure from the previous form, incorporating a radically new method of dovetailing.

The new instruction manual for the LittleRat runs to over 100 pages. It has very clear, detailed drawings, and a concise informal text which reads almost like having a conversation with its author – very reassuring. When it comes to setting up the LittleRat, the first chapter of the manual will lead you by the hand until the machine is there, hanging on your workshop wall and ready for use. In fact, the last time you will probably need to use your router hand-held will be for making the rabbeted wooden

blocks which support the LittleRat.

Sliding Dovetails

I like the latest WoodRat method of producing accurate sliding dovetails, a new and simple innovation which employs a transparent acrylic slat, cut with the required dovetail slot, then temporarily fixed to the router plate to accurately mirror what is going on with the actual router bit and wood. It would be overkill to reiterate the workshop manual's detail, but be assured,

FUNCTIONS

To test the machine's scope, I decided to produce some test joints in a small stock of different sizes of timber, following the progression in the workshop manual, although I limited my choice to those most commonly used.

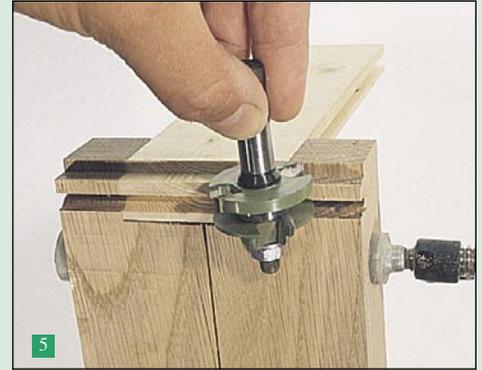
To begin with, end grain and its preparation is probably the first operation you need to carry out on any piece of wood in the LittleRat. The jig cuts end grain superbly, producing a smooth, square face, without any breakout on the edges, using the WoodRat's 'power-feeding' capability; the bit slices into the face of the wood rather than out of it, as with a conventional router table.



above Feeding the wood past the bit by hand. The brush acts as a featherboard and a guard



above The vise has a sacrificial face that prevents breakout when cutting joints like this rail & stile



above The rail & stile joint made clear

from someone who has never employed this method before, that it works and is repeatable (see photo 2).

Profiling

WoodRat supplies a clever innovation with the LittleRat, a brush to fit in the camlocks, as a safety measure while feeding wood under the bit by hand. It acts as a finger guard and a very efficient featherboard, holding the wood firmly up under the router plate as it is pushed past the bit (photo 3). Rabbits and molded profiles are easy, so preparing moldings for custom picture frames is a great little by-product.

Edge Jointing

With the advent of biscuit wafers, the LittleRat comes into its own when jointing boards edge to edge. Using a slotting cutter, accurate mating grooves can be readily cut in the board edges to accommodate these wafers. This eliminates the time consuming process of marking up, a necessity when using biscuits.

Rail & Stile Joints

Producing a rail & stile joint on the LittleRat proved relatively easy, with the rail profile cut by hand, feeding the wood past the bit as previously detailed. I utilized a shop-made vice to hold the stile for the joint to be cut on the end grain (photos 4 and 5).

Panel Raising

By using a shop-made rail that is held in by the camlocks, onto which the workpiece is clamped at an angle relative to the bit, it becomes simple to form a raised panel. Make the cuts in succeeding steps with a long straight bit (see photo 6).

Mortises & Tenons

Yet another feature of the new machine is producing accurate mortise and tenon joints. The new technique again employs the acrylic slat method.

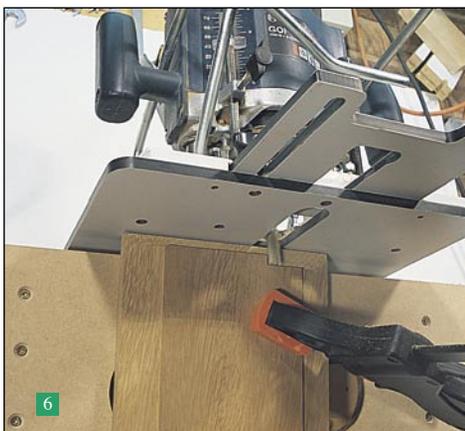
The new procedure is superior and as far as saving time is concerned, it's a real winner. The maximum length of tenon using the standard raising plate is $19/16$ " although this

could be increased by using shop-made plates to produce longer tenons for a particular job. The mortise is plunged with the wood clamped to the shop-made mortise rail (see photos 7 and 8).

Dovetails

At last we come to the one you have all been waiting for, and this is where the new LittleRat offers a radical departure from its big brother. A new baseplate/router plate arrangement allows fine through and stopped dovetails to be formed in any thickness of timber, provided you can mark and see a sharp pencil line and align a clear acrylic cursor to it. I used the range of WoodRat dovetail bits supplied and thus, can only give an opinion based on these. Also, I did not try any wide joints, though its maximum capability is approximately 18".

In brief, the tails are formed using a guided dovetail bit pulled through the wood, positioned by matching a clear acrylic cursor to pre-determined pencil lines marked on the machine face (see photo 9). The guide rails



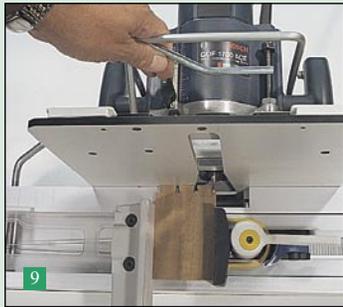
above Panel raising is made easy by employing a shop-made mortise rail and a straight bit



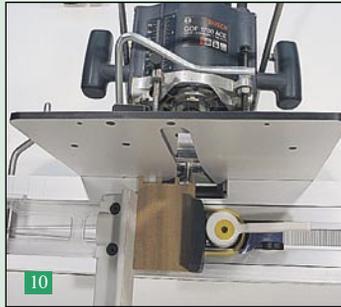
above Cutting a tenon with the LittleRat



above The mortise is cut with the wood clamped to the shop-made mortise rail



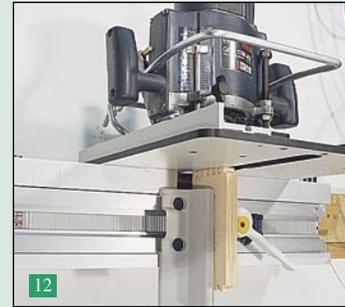
above The tails being cut with a dovetail bit



above The pins being cut



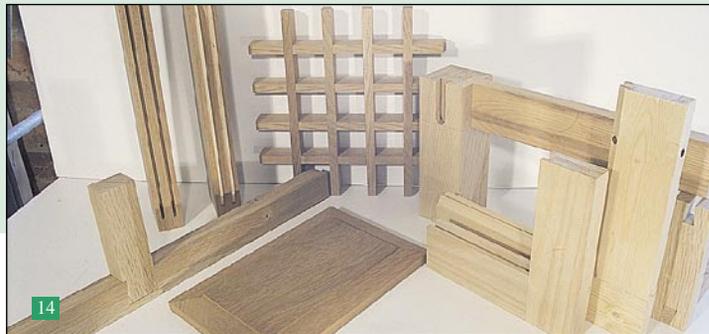
above My wife, a complete novice, cut these perfect dovetails with the LittleRat



above Aluminum guide rails can be used to cut comb joints



above A range of dovetails that can be cut with the LittleRat



above Just some of the results achievable with the LittleRat

are then swapped left to right and the pins cut with a straight bit at the pre-set 8° angle (see photo 10). Suffice to say that after trying the new sloping rails myself, I asked my wife (renowned more for her aesthetic, rather than practical attributes, at least as far as woodworking is concerned) to try her hand at some dovetails. After a quick run through of the method, the resultant dovetail can be seen in photo 11, and I think you'll agree with me in that it is a rather good effort.

Optional Extras

The one optional extra that I wouldn't like to be without is the plunge bar, which attaches in minutes to your own router, enabling it to be raised and lowered at will

with one hand using a squeezing action. The router raises and lowers smoothly and is infinitely controllably making every operation much more comfortable. The plunge bar is a good value, and any prospective purchaser of a LittleRat should write one into his budget calculations.

Other optional extras available include a miter box to enable miters to be accurately machined, although personally I have always wanted a large 45° bit, so that any length and width of wood can be mitered. I found the miter box was more helpful for clamping wood horizontally, out towards the operator for cutting sliding dovetails in the tops of table legs.

Also available is a set of Aluminum

guide rails. These replace the plastic guide rails supplied as standard, and can be used to machine accurate tenons, sliding dovetails, and a characteristically ingenious method for producing comb joints, using what the WoodRat company refers to as its 'inchworming' technique (see photo 12).

The rails, with their innovative design, are an excellent addition to the WoodRat's armory but not essential, at least not until the user is familiar with all the LittleRat's capabilities.

For more information, please contact an authorized WoodRat dealer, or contact them via the web at www.woodrat.com.



THE VERDICT

The new LittleRat is smaller than the WoodRat I've been used to, but its fundamental design is much the same. The new dovetail-friendly router plate and guide rails are a welcome development, especially for newcomers.

The LittleRat is essentially a jig that enables pretty much all of its advertised functions to be carried out, without the need for other shop-made jigs and fixtures. Once you stop thinking of it as a complicated machine (which it isn't) and see it for what it really is – a superbly controllable three axis router table – you are more than halfway there. It is necessary to practice thoroughly – the breadth of scope of the LittleRat means that many new techniques will need to be learned before a user becomes really proficient. None of these are difficult, but neither is riding a bike, unless of course, you have never done it before, so expect to fall off a few times.

The WoodRat video, although produced to demonstrate the capabilities of the larger WoodRat, is very instructive and well worth the \$4.00 it costs. I would thoroughly recommend it to anyone thinking of purchasing one of these machines. Having this machine in your workshop is not going to turn you into a James Krenov overnight. What it will do, if like me your ambitions far exceed your abilities, is enable you to make joints that fit and to produce work that you don't feel the need to hide if anyone comes to visit. In other words, it will enhance your current working limits. All in all, for around \$475.00, the LittleRat is a terrific machine.