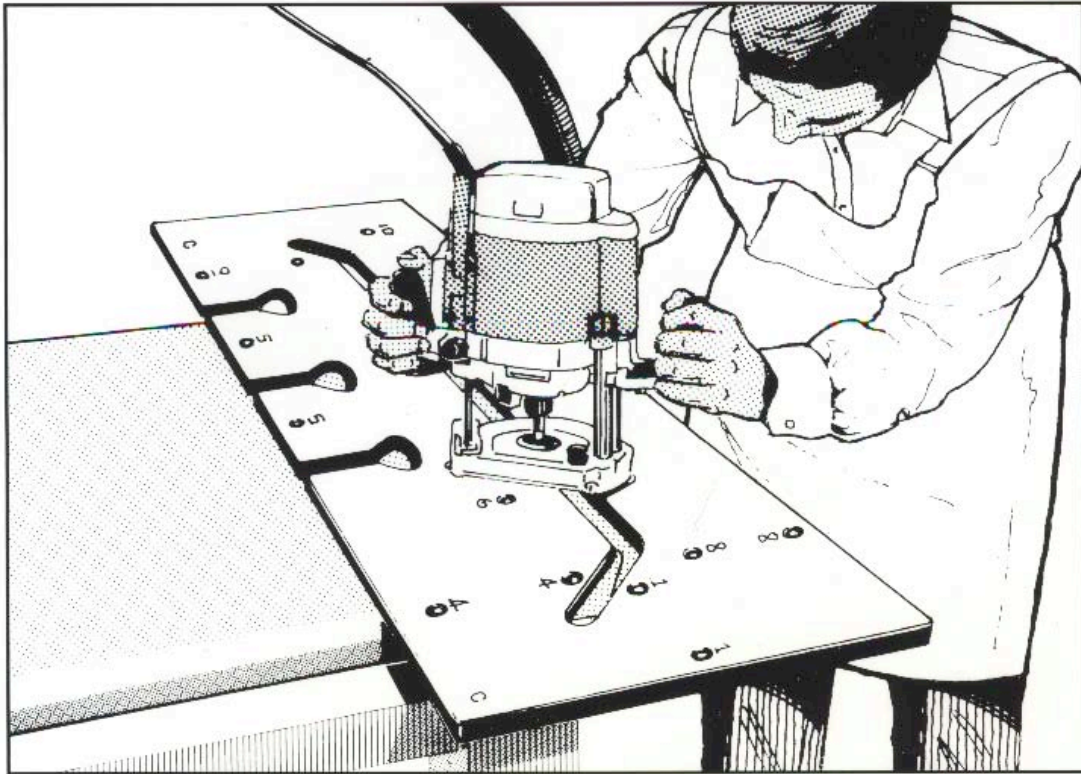




## KITCHEN WORKTOP JIG



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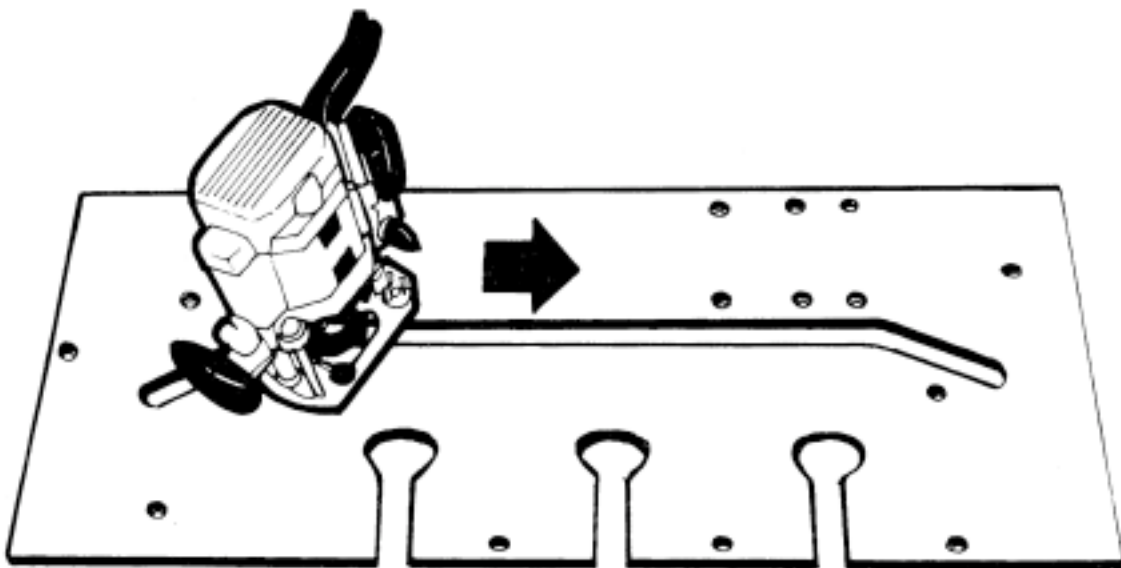
# MASON MITRE JIGS

The jigs are designed by kitchen fitters and are sold worldwide for use in the quality installation of kitchen, bedroom and bathroom furniture. The jigs are manufactured to the highest tolerances on CNC machinery, using the latest in diamond tooling to ensure a perfect finish. The best compact grade

composite material is used which offers similar wear characteristics to metal but without the weight. This material will withstand water, heat and light as well as accidental spillages of products used in the installation of kitchens, such as solvents, adhesives and cleaning agents.

Before you start please take some time to read through these instructions carefully. While we have taken time to design the jig to be as easy as possible to use we must recommend that you practise with the jig on off cuts prior to using the jig on the first installation. Please observe all relevant

safety requirements for the use of routers. This jig will work with most hand routers including De-Walt, Bosch and Makita. **A 30 mm guide bush and a 1/2" (12.7mm) tungsten cutter (Titman, H122, Freud 12-128) are required. No other combination will work satisfactorily.** Two G-clamps are needed to hold the work firmly.



**Figure 1.**

It is important that you work the router from left to right. Working from right to left is *against* the cutter's direction. This might cause lack of control resulting in damage to the jig or even injury. Don't plunge more than 15 mm at a time or use blunt tools. The cutter should always enter work by post-formed edge.

## SAFETY FIRST

1. Make sure all cables are clear of the router.
2. Make sure the work piece is correctly supported.
3. Always use protective goggles when using the router.
4. Do not switch router on with blade touching the work.
5. Never remove the router when it is switched on and moving.
6. Make sure there are no obstructions to the path of the router.
7. READ INSTRUCTIONS CAREFULLY BEFORE STARTING THE WORK.

### Conventions and Important Points

- Always use a sharp cutter and ensure the guide bush is firmly attached to the base plate.
- Always work from left to right *never the other way round*.
- Make sure the pegs are well seated and are not proud of the surface of the jig.
- When working with the centre slot, *always* use the side *nearest* to you *first* for the waste removal, followed by the side *furthest* from you for the finished edge.
- When clamping in position check the pegs are still in contact with the worktop. Certain types of clamp, if over tightened, can cause the jig to creep out of position.
- If you are using a router with an adjustable guide bush set this at a depth of 11mm to allow maximum protection for the jig.
- Take care to ensure the router cutter remains absolutely perpendicular when performing all cuts; this is particularly important when performing cuts with the worktop face down.
- The bolt slots will accommodate most common patterns of 150mm joining bolt.
- When making many of the cuts you may find it more convenient to remove larger pieces of waste with a jigsaw prior to making the router cuts. This is particularly relevant when you are unable to support waste which will fall away in the cutting process.

## Section 2. 90° Corner Joints.

### 2.01 Right-hand Female Joint

As shown in Figure 2, place two pegs in the length stop holes which match the width of *male section* of worktop you wish to set in, i.e. holes **3** for 500mm, holes **2** for 600mm or holes **11** for 650mm. Other widths must be positioned manually, e.g. use holes **11** with a 34mm shim against the right hand edge of the worktop for a 616mm worktop.

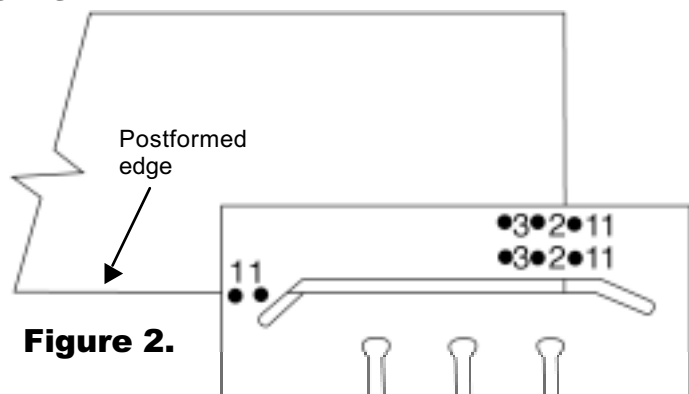


Figure 2.

Figure 2.

Place pegs in holes marked **1**, to the left of the centre slot. With the worktop face-up offer the jig against the post form edge and rest the length stop peg

against the right-hand edge of the worktop or the shim. Ensure all pegs are touching the worktop; clamp in position with G clamps then check again.

Position the router in extreme left-hand point of the centre slot. Set the cutting depth to 10-15mm and start the router. Pass the router steadily along the centre slot using the side of the slot *nearest* you to guide the router. Repeat this process increasing the depth of cut by 10-15mm for each pass until the post-form edge has been removed. With the cutter set to maximum depth use the side of the slot *furthest* from you to guide the router. Make one pass which will remove approximately 1mm leaving a perfectly cut edge.

**Switch off the router at the end of each pass and do not remove the router from the jig until you are sure that the router has stopped. Avoid contact between tool and jig.**

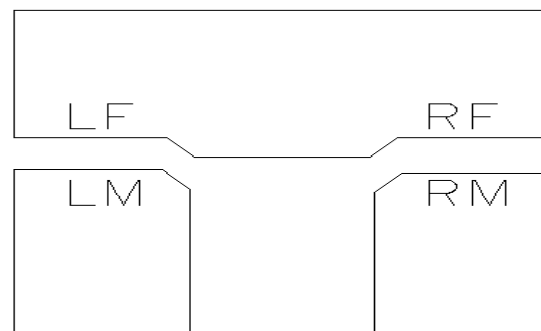
*Note* The jig is set to cut 90° corners. If you wish to allow for slightly out of square walls, remove 1 or more of the pegs and adjust the angle of the jig against the post-form edge. A corresponding adjustment is require when cutting the male component. You should be fully conversant with the functions of the jig before attempting this type of adjustment.

## 2.02 Left-hand Female Joint

Place the worktop face down, post-form edge towards you and follow the instructions as per 2.01.

## 2.03 Measuring & cutting the male component to length

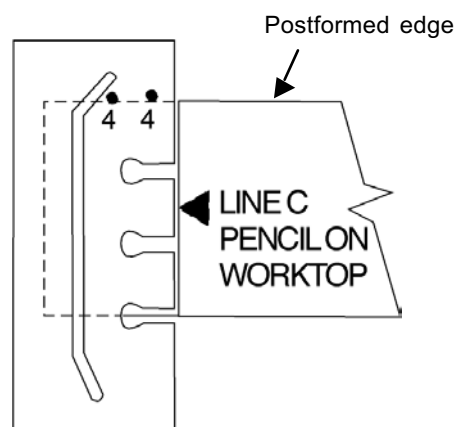
Your jig will inset one worktop 23mm into the post-form edge of the other. When measuring up an allowance must be made for this on the male section of the worktop (LM and RM). Refer to the two diagrams below to help calculate your measurements. The first diagram depicts the optimum layout. This arrangement is easy to measure and leaves the greatest margin to recover from mistakes in measurement. Providing you have sufficient worktop, simply perform a male cut on the appropriate end and cut to length (allowing for the 23mm inset as mentioned above.



**Figure 3.**

## 2.04 - Right-hand Male Joint

Place the worktop face down on suitable supports. Place pegs in the holes 4 and offer the jig as shown in Figure 4 firmly against the post-form edge. (If you are using measurements as calculated in the box below (Figure 5), mark line C on the worktop in pencil and align the edge of the jig with this line.) Clamp the jig in position and check again to ensure all pegs are in contact with the post-form edge and the jig is in position. Position the router in extreme left-hand point of the centre slot. Set the cutting depth to 10-15mm and start the router.



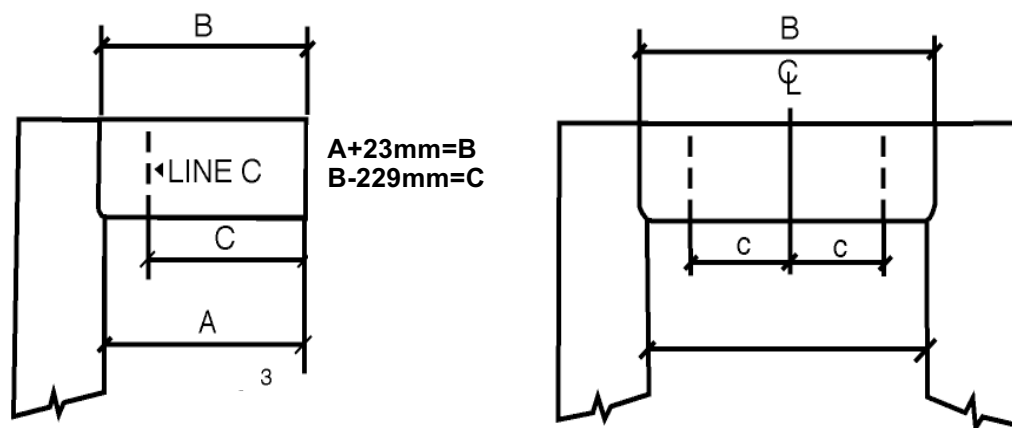
**Figure 4.**

Pass the router steadily along the centre slot using the side of the slot *nearest* you to guide the router. Repeat this process increasing the depth of cut by 10-15mm for each pass until the waste has been removed. With the cutter set to maximum depth but this time using the side of the slot *furthest* from you to guide the router, make one final pass which will remove approximately 1mm, leaving a perfectly cut edge.

## 2.05 - Left-hand Male Joint

Place the worktop *face up* and the jig as shown above then follow the instructions in 2.04.

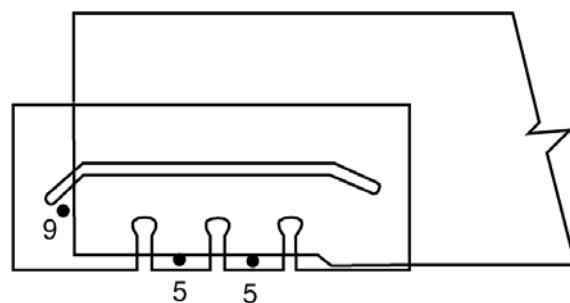
If, however, you are forced to arrange the worktops as per figure below you should carefully study the diagram. Please exercise extreme caution when cutting the centre section. As mentioned above the jig will inset one worktop 23mm into the post-form edge of the other. Calculations and measurements for the jig position are made from a worktop end (for an L shape set up) or the centre line for the U shape set up shown below. The line marked C is used in section 2.04 and 2.05 above to set up the jig for the male joints.



**Figure 5.**

## 2.06 Joining bolt slots in 90° Females

Place pegs in the holes marked **5** and **9** in the jig. Place the worktop face down and present the jig to the back of the worktop with the number **5** pegs against the female edge of the joint face and the number **9** peg against the end of the worktop length. Figure 6 shows the set up for cutting bolt slots in a Right Hand Female. For a Left Hand Females the jig should be presented to the worktop upside down to that shown in Figure 6 (Hole 9 will be to the right of holes 5) and the worktop end to the right of the female cut edge. Clamp the jig in position with G clamps. Set your plunging depth to about 20mm which should be sufficient to accommodate your joining bolt. Starting with the mushroom shaped recess closest to the **9** pin, guide the router clockwise around the slot removing all the waste. Repeat with the other mushroom shaped recesses. Worktops of widths 400 to 550mm will only accommodate 2 slots.

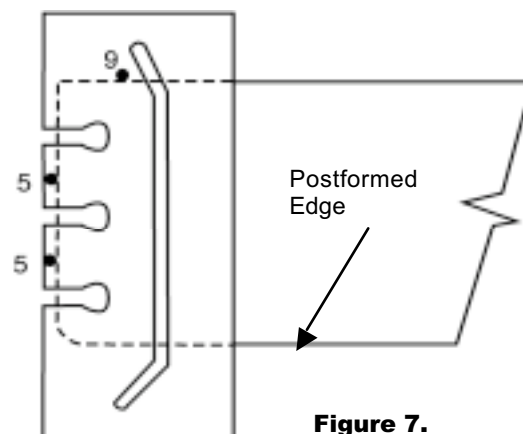


**Figure 6.**

## 2.07 Joining bolt slots in 90° Males

Place pegs in the holes marked **5** and **9** in the jig. Place the worktop face down and present the jig to the back of the worktop with the number **5** pegs against the male edge of the joint face and the number **9** peg against the back edge of the worktop. Figure 7 shows the set up for cutting bolt slots in a Left Hand Male. For a Right Hand Male the set-up will be the mirror image of that shown (the jig will have its other face up).

Clamp the jig in position with G clamps. Set your plunging depth to about 20mm which should be sufficient to accommodate your joining bolt. Starting with the recess closest to the **9** pin guide the router clockwise around the mushroom shaped slot removing all the waste. Repeat with the other mushroom shaped recess.



**Figure 7.**

# Corner Cooking Solution Joints

## 3.0 45° Corner Joints

### 3.01 Right-Hand Female

The minimum length of worktop required for a corner piece is 1600mm. Place the worktop centre piece face-up; mark a centre line in the middle and mark two lines 640mm either side on the back edge of the worktop. Tip: the jig used in straight edge mode can help with your marking out on this type of corner, see Figure 8 below. Place pegs in the holes, one marked **5** and the other hole **10** as shown in Figure 8. Offer the jig up against the post-form edge and align the top edge of the jig with the right-hand 640mm mark. Clamp in position and check again for correct alignment. Position the router in extreme left-hand point of the centre slot. Set the cutting depth to 10-15mm and start the router. Pass the router steadily along the centre slot using the side of the slot *nearest* you to guide the router. Repeat this process increasing the depth of cut by 10-15mm for each pass until the post-form edge has been removed. With the cutter set to maximum depth use the side of the slot *furthest* from you to guide the router. Make one pass which will remove approximately 1mm leaving a perfectly cut edge. When finished remove the jig. Measure 600mm from the post-form edge and accurately remove this section using a saw.

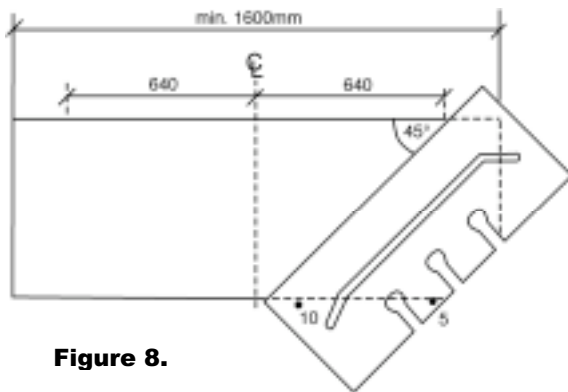


Figure 8.

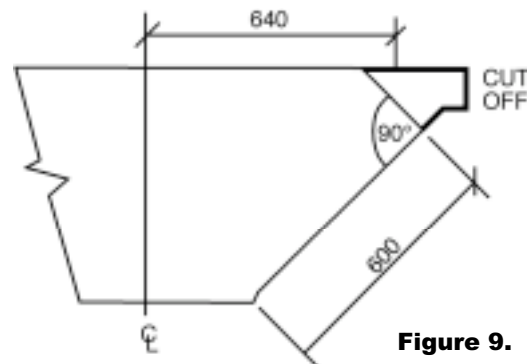


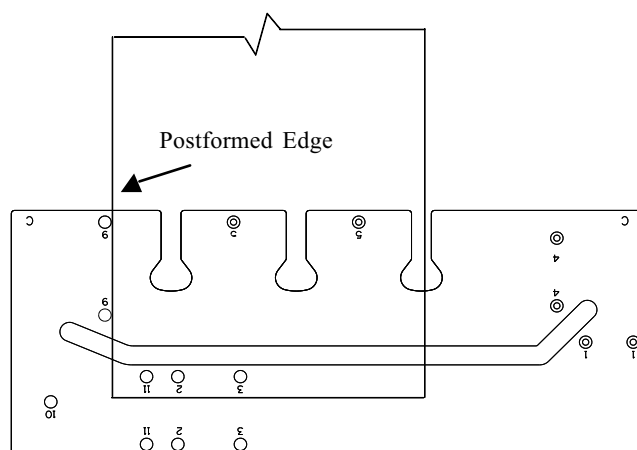
Figure 9.

**NOTE: - The dimensions shown above are based on a 600mm corner unit.**

### 3.02 Left-Hand Female

Use the measurements above, place the worktop face down then follow the instructions in 3.01. The jig must be turned over also.

### 3.03 Left-Hand Male



**Figure 10.**

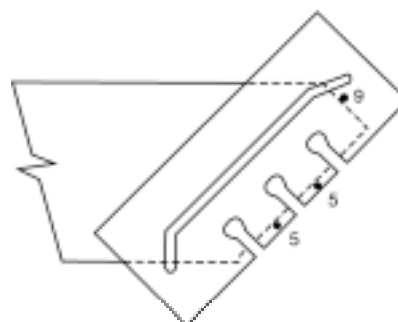
Place the worktop face up on suitable supports. Place pegs in the holes 9 and offer firmly against the post-form edge as shown in Figure 10. Clamp in position and check again to ensure all pegs are in contact with the post-form edge and the jig is in position. Position the router in extreme top left-hand point of the centre slot. Set the cutting depth to 10-15mm and start the router. Pass the router steadily along the centre slot using the side of the slot *nearest* you to guide the router. Repeat this process increasing the depth of cut by 10-15mm for each pass until the waste has been removed. With the cutter set to maximum depth but this time using the side of the slot *furthest* from you to guide the router, make one final pass which will remove approximately 1mm, leaving a perfectly cut edge.

### 3.04 Right-Hand Male

Place the worktop face down and follow the instructions above

### 3.05 Corner Cooking Solution - Female bolt slots

Place the centrepiece face down. Place pegs in the holes marked 5 and 9 and offer the jig to the back of the worktop with the number 5 pegs against the female edge of the joint face and the number 9 peg against the end of the worktop length as shown in Figure 11. Clamp the jig in position with G clamps. Set your plunging depth to about 20mm which should be sufficient to accommodate your joining bolt. Starting with the mushroom shaped recess closest to the 9 pin guide the router clockwise around the slot removing the waste. Repeat with the other mushroom shaped recesses.



**Figure 11.**

### 3.06 Corner Cooking Solution - Male bolt slots

Follow instructions as in 2.07 Joining bolt slots in 90° Males



## 4.00 Troubleshooting Guide

From listening to Kitchen Fitters and Carpenters over the years we have compiled this guide to help you overcome the more common faults encountered. Used correctly, your jig will give perfect results every time.

Problem	Probable Cause	Remedy
Poor finish on male/female joint faces	Incomplete routing process	Ensure final stroke against <i>far</i> edge of centre slot is performed.
Sharp angle near post-form edge on male/female.	Incomplete routing process	Ensure final stroke against <i>far</i> edge of centre slot is performed.
Good finish but male & female don't match up.	Incorrect size of cutter and/or guide bush	Ensure 12.7mm cutter and 30mm guide bush – <b>nothing else is suitable</b>
Inconsistent results - wandering edges	Loose guide bush	Ensure guide bush is firmly attached to the router base.
Irregular gaps on RH male and/or LH female face.	Poor router control.	Ensure the cutter remains absolutely perpendicular on these cuts.