

***ULTIMAT***

***MANUAL***



# CONTENTS

## INTRODUCTION

Thank you for choosing a Keencut ULTIMAT. Every effort has been made to bring you a superbly built product with the promise of many years of good service. Please read these instructions carefully in order to obtain maximum benefit from your machine and remember, in case of difficulties ask your distributor or Keencut Limited for assistance.

## CONTENTS

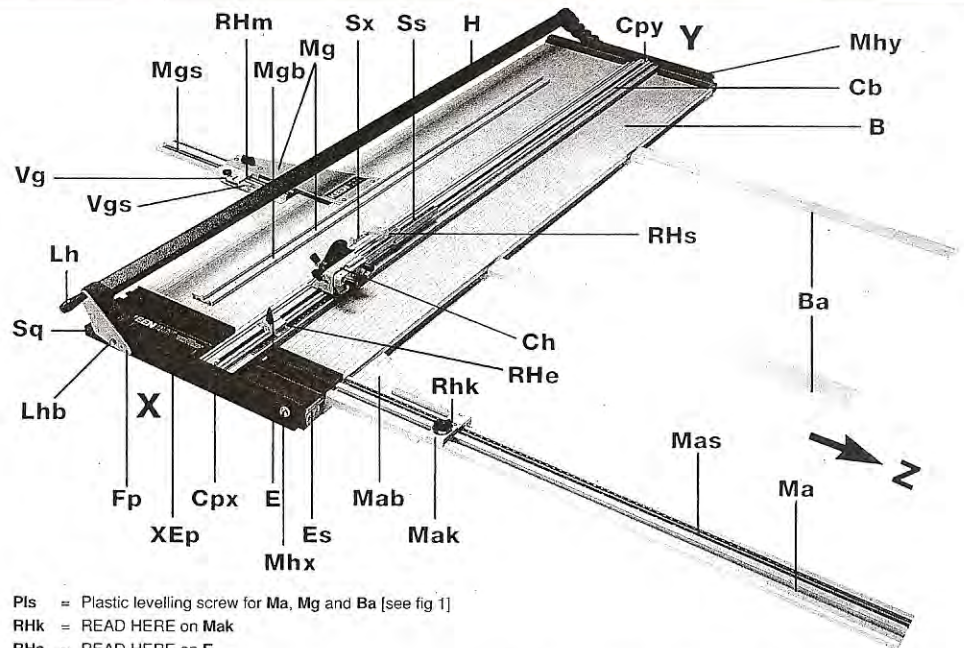
Contents	2	Cleaning	12
Identification	3	Lubrication	13
<b>Preparation</b>		Squareness	13
Useful notes	4	Measuring arm [Ma] square adjustment	13
Precautions	4	Margin guide [Mg]	14
Bench requirements	4	Blade types	14
Fitting the measuring arm [Ma]	5	Pivot adjustment for Vertical blade holder [Vbh]	15
Lift and Hold [Lh]	6	Pivot adjustment for Bevel blade holder [Bbh]	15
T-Bar Margin guide [Mg]	6	Imperial or Metric ?	15
<b>Calibration &amp; Adjustments</b>		<b>Fault Finding</b>	
Vertical blade depth [Vbd] adjustment	7	Faults / Causes & Suggestions	16
Measuring arm scale [Mas]	8	<b>Mount Cutting Techniques</b>	
Measuring arm [Ma] adjusting for accuracy	7	Cutting techniques	17
Bevel blade [Bb] information	8	Cutting a bevel mat	17
Bevel blade [Bb] depth	9	Unequal margin mats	18
Limit [production] stops [S,E & Mg]	10	Cutting a V-groove	19
Adjusting the Limit stops [S,E & Mg]	10/11	Changing the V-groove width	19
<b>Maintenance</b>		Offset corner mats	20
Measurement scales	12	Double offset corner mats	20
Cutter Head [Ch]	12	Multiple openings and title boxes	21

page 2

**N.B!** Please fold out the front flap when reading the instruction manual.

# IDENTIFICATION

- B = The aluminium base
- Ba = Clip in board supports (optional extra)
- Bb = Bevel blade [see fig 10]
- Bbh = Bevel blade holder [see fig 8]
- Bas = Slide adjustment screws for Ch [see fig 18]
- Bda = Blade depth adjustment knob [see fig 10]
- Bdh = Bevel head shaped hand grip [see fig 18]
- Bdk = Black knob on Bbh [see fig 22]
- BTs = Thumb screw for locking Bb [see fig 10]
- C = M6 nuts on Ma [see fig 20]
- Cb = Combined rail and clamp on which Ch moves
- Ch = Complete sliding block including both blade holders
- Cs = Slip mat
- Cpx = Cutter bar Cb pivot X
- Cpy = Cutter bar Cb pivot Y
- E = End of cut limit stop mounted on Cb
- Es = Adjustable measuring scale for E
- F&R = Front & Rear stops for unequal margins (optional) [see fig 6]
- Fp = Oval slot in Lh for attachment of foot pedal (optional extra)
- G = Pivot screw on Vbh [see fig 22]
- H = Full length handle for lifting the cutter bar Cb
- He = Black helical knob for locking Vb up or down [see fig 5]
- Lh = Roller mechanism for lifting the cutter bar Cb
- Lhb = Fixing bolt for lift & hold mechanism
- M = Border width setting controlled by Mg
- Mab = Mounting bracket for Ma
- Mak = Limit stop for presetting mat sizes on Ma
- Mas = Adjustable measuring scale for Ma
- Mg = Long T-bar mechanism parallel to Cb
- Mgb = Margin guide bar set parallel to Cb
- Mgt = Margin guide running track [see fig 6]
- Mgy = Locking bracket for Mg [see fig 6]
- Mhx = Main hinge screw at X
- Mgs = Adjustable measuring scale for Mg
- Mhy = Main hinge screw at Y



- Pls = Plastic levelling screw for Ma, Mg and Ba [see fig 1]
- RHK = READ HERE on Mak
- RHe = READ HERE on E
- RHs = READ HERE on S
- RHm = READ HERE on Mg
- S = Start of cut limit stop mounted on Ch [see fig 11]
- Sft = Shaft for S [see fig 28]
- Ss = Adjustable measuring scale for S
- Sq = Squaring screw for XEp
- Sx = Finger lever for S
- Ts = Thumbscrew for Vbh [see fig 5]
- Vb = Vertical blade [see fig 5]
- Vbc = Vertical blade clamp [see fig 5]
- Vs = Socket screw for V-Groove adjustment [see fig 30]
- Vbh = Vertical blade holder [see fig 5]
- Vgs = V-Groove limit stop
- X = End from which machine is operated
- XEp = End plate at X
- Y = Opposite end of machine to X
- Mat = Bevel cut aperture Mount
- Fallout = Piece that is cut from the centre of a mat
- Sizing = Cutting to size with the vertical blade Vb

page 3



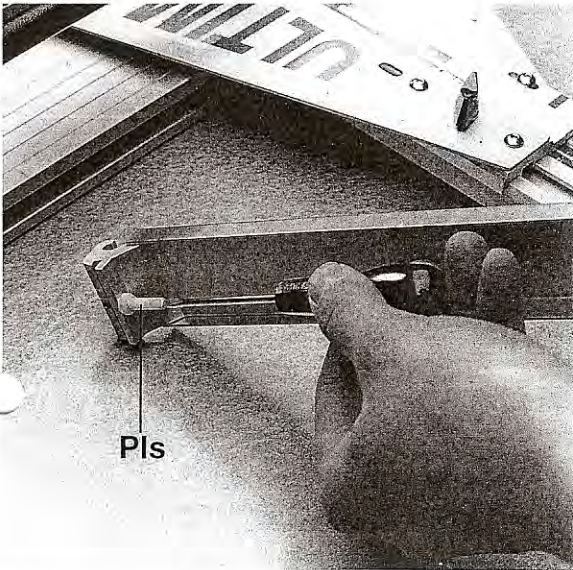
# PREPARATION

**PRECAUTIONS** Please remember the blades are very sharp take care and dispose of them safely.

- Do not lift or carry the machine by the long handle H.
- Do not use oil.
- Do not put hand pressure on the handle H when matcutting.
- Do not assume that new sheets of matboard are square.
- Use the recommended matcutting blades.

## USEFUL NOTES

- The elimination of over and undercuts at the mat corners should be the aim of every framer.
- The Keencut ULTIMAT is designed to cut without overcutting or undercutting. Please read the instructions.
- Always use a new blade for V-grooves, museum and black core matboard.
- Routinely check and adjust **S**, **E** and **Mg** scales with an accurate rule.
- Do not use discarded blades from the bevel cutter in the vertical cutter because Keencut 080 or regular utility blades are more rigid.
- Mats are always cut face [coloured side] down
- The end plate **XEp** adjusts for square with just one socket screw **Sq**.
- The ideal BENCH for the ULTIMAT will be very rigid, flat and 88cm [35"] high for most operators. Low benches cause operator discomfort  
A 30mm recess in the bench would set the ULTIMAT base and the bench top at the same level making large board handling simpler with no sag - but remember to make provision for the measuring arm **Ma**.  
ULTIMAT does have base extension arms available for the same purpose.
- Adjusting the level of Base fitting components and accessories [Fig 1].  
It is better for the function of the machine and particularly **Mg** if the Margin guide track **Mgt** and other components that fit into the edge of the base are set level with the top of the base **B**. The plastic screw **Pls** and lock nut fitted to the appropriate components provides the means to adjust the level.

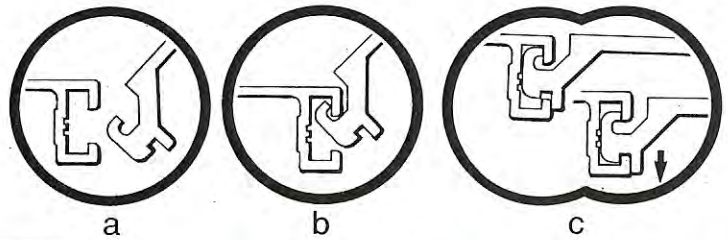


page 4

# PREPARATION

## FITTING MEASURING ARM [Ma]

- Fit the MEASURING ARM **Ma** for cutting Matboard to size [Fig 2].
- a. Hold **Ma** at 45° approximately 15cm [6"] from **XEp**.
- b. Present the mounting bracket **Mab** to the slot in the edge of the base.
- c. Engage **Mab** upwards into the base slot and lower **Ma** to horizontal. Lift **Ma** and slide it towards X until it stops.

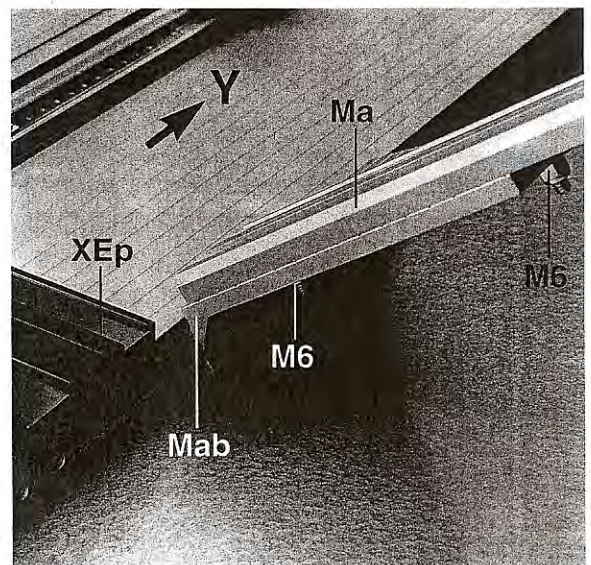


**NOTE** Lifting of **Ma** [see fig.c] will ensure that **Mab** drops into proper engagement

- To remove MEASURING ARM **Ma**
- a. Lift **Ma** a little and raise **Mab** in the base slot until it stops. Slide **Mab** 15cm [6"] towards **Y** to let **Ma** clear the end of **XEp**.
- b. Swing **Ma** up to 45°.
- a. Keep **Ma** at 45° and drop **Mab** down and away to clear the base slot.
- The OPERATOR POSITION is at X.

## PREPARATION OF SLIP MAT [Cs]

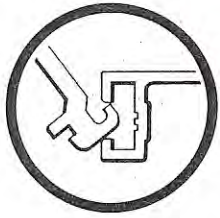
- A SLIP MAT **Cs** provides a cutting surface of matboard on which mats should be cut to ensure crisp clean cutting. **Cs** can be up to 15cm [6"] wide and the cutting length of the ULTIMAT. Cut on the reverse [white side] of **Cs**. Replace **Cs** when the surface damage is obvious.



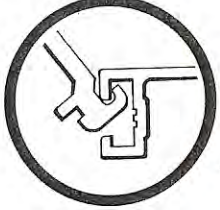
page 5



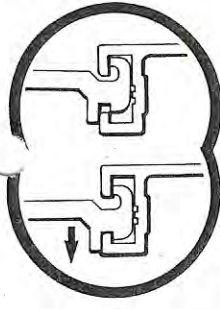
# PREPARATION



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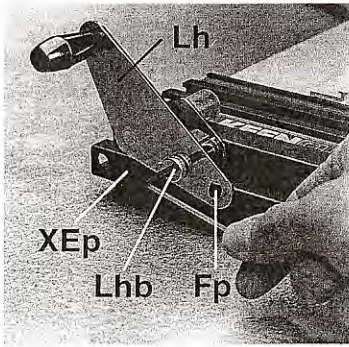


b



c

page 6



## LIFT AND HOLD

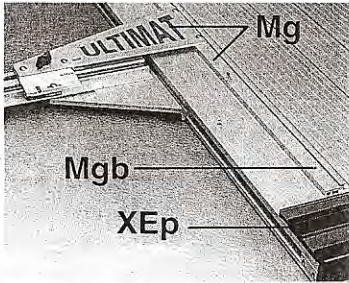
The Lh roller mechanism is separate for safe transit and must be fitted to the XEp section by Lhb.

- Raise Cb to its vertical rest position.
- Place Lh in position and fit Lhb to threaded hole.
- Use a 5mm hexagon wrench to tighten Lhb.
- The oval hole in Lh engages the footpedal cord Fp.

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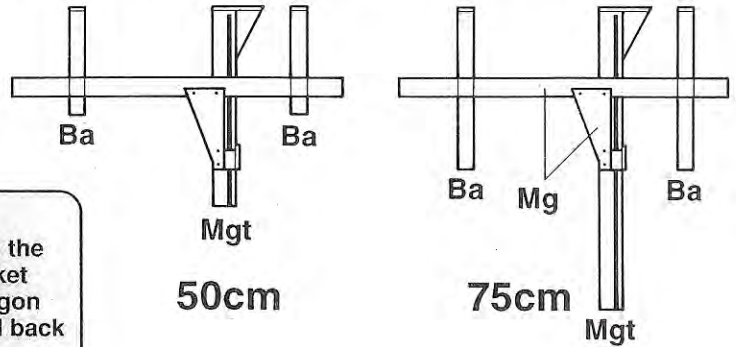
## T-BAR MARGIN GUIDE assembly [Mg].

- Clips into the base edge from 45° and holds rigidly with no fixing.
- Slide Mg so the end of Mgb is near to XEp.
- For sizing matboards Mg may be unlocked and removed from its track Mgt.



4

For larger margins two kits are available each featuring a longer Mg track Mgt and two base extensions Ba. The options enable the Mgb to operate up to 50cm [20"] or 75cm [30"] respectively away from Cb.



### NOTE

At regular intervals check all points on the ULTIMAT. Check and tighten the socket screws attaching H using a 5mm hexagon wrench. To do this it is necessary to fold back the plastic covers

# CALIBRATION & ADJUSTMENTS

The blade Vb is loaded from the front or back of the blade holder Vbh and held by pressure from the thumb screw Ts applied to the blade clamp Vbc. Cutting effort will be reduced if the penetration of Vb through the matboard is kept to a minimum.

## VERTICAL BLADE [Vb] DEPTH ADJUSTMENT

### METHOD 1

- Raise H to park Cb in a vertical position.
- Twist Cb to place Vbh uppermost.
- Rotate Vbh and lock it in the down [operating] position by twisting He.
- Unlock Ts and using a thickness of board as a gauge move Vb and lock Ts when tip of Vb extends sufficiently to pass through the board.

### METHOD 2 [Not illustrated]

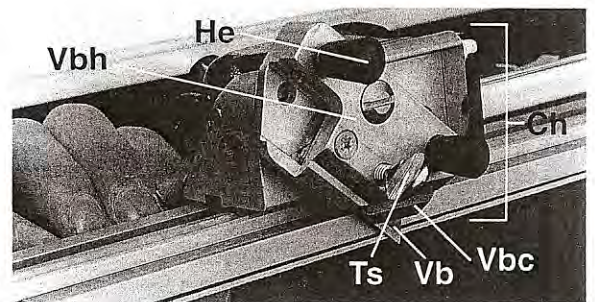
- Place two thicknesses of matboard under Cb with the slip mat in place [Adjusting for thick board use one thick and one regular matboard].
- Rotate Vbh and lock it in the down [operating] position by twisting He.
- Slide Ch until it is near the two spacing matboards but not above them.
- Slide the blade Vb through Vbh until the tip contacts the slip mat.
- Tighten Ts to lock the blade Vb.

## USING [Optional] UNEQUAL MARGIN STOPS F & R

- to preset margins of say 4 and 5.

- Move Mg to fit into the track Mgt on the inside of Mgy.
- Slide R into Mgt on the other side.
- Set Mg to 4 and lock it.
- Slide F up to contact the inside of Mg and lock using the 3mm hexagon wrench through the slot Fs.
- Set Mg to 5 and lock it.
- Slide R in Mgt track to make contact with the back of Mg and lock using the thumb screw Rs.

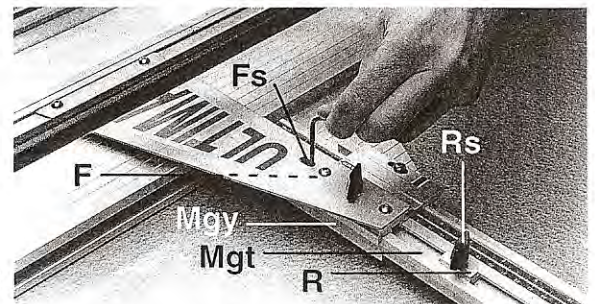
■ Mg will now move backwards and forwards between the two set stops for repeat cutting of an equal borders. Remove F & R for convenience when not needed.



5

### IMPORTANT

When cutting very thick board with the vertical blade Vb it is not unusual to make several cuts to reduce the effort.

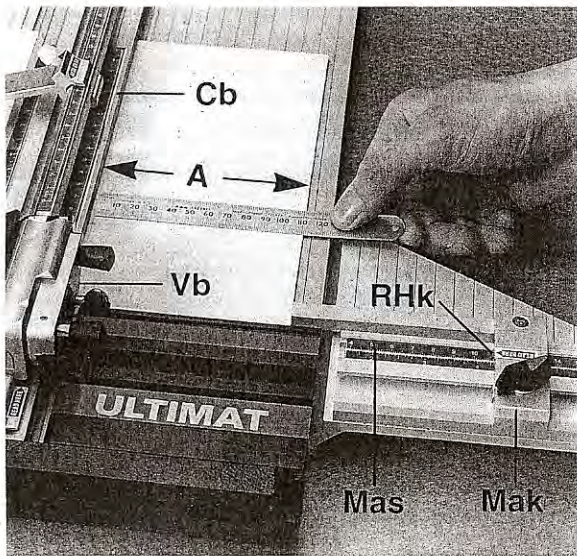


6

page 7



# CALIBRATION & ADJUSTMENTS

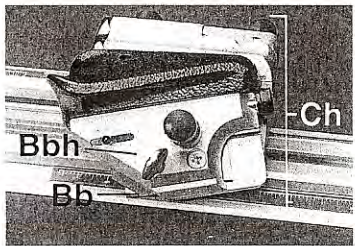


## MEASURING ARM SCALE [Mas] - Adjusting for accuracy.

- Take a square piece of matboard, say 20 x 30 [not a bevelled fallout]. Lock **Mak** at say 15.
- Place the matboard under **Cb** positioned against **Mak** as normal for cutting to size.
- Score a line on the matboard with **Vb**. DO NOT MOVE **Mak**.
- Measure from the cut line to the matboard edge [A]. (just for this example say the distance is 14.75).
- Move **Mas** to 14.75 at **RHk**.
- **Mak** may now be set to any required size.

### NOTE

The friction on all scales may be increased to lock them firmly [see Maintenance]



## BEVEL BLADE [Bb] - Information.

The bevel blade **Bb** in the ULTIMAT loads from the back to the front to maintain the tip position when blades are changed.

To achieve optimum mat cutting results the blade depth is critical. Too deep and hooking [curving] will occur at the start, too shallow and the cut will not penetrate or meet at the corners.

Adjustment of the depth is necessary when the thickness of matboard is changed and sometimes when the texture of the surface changes.

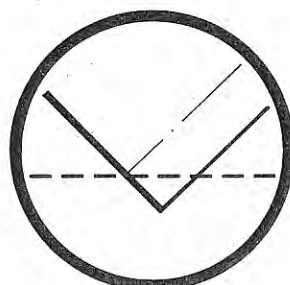
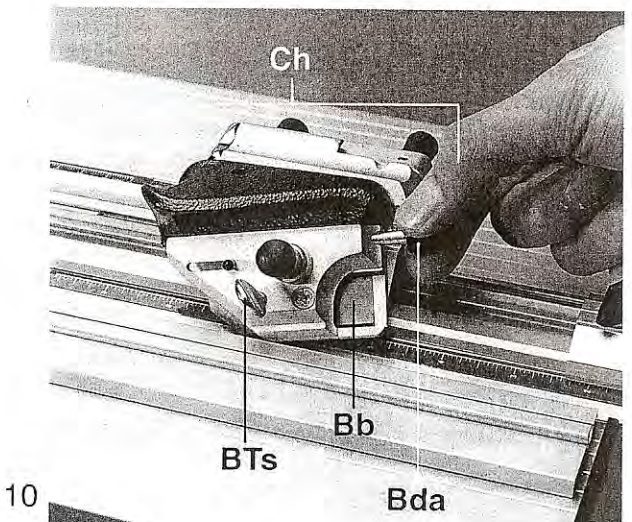
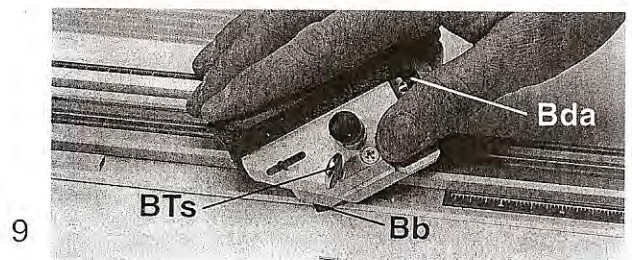
# CALIBRATION & ADJUSTMENTS

## BEVEL BLADE [Bb] DEPTH

- Place a sized matboard in the machine as for normal cutting.
- Slide **Ch** towards the edge of the matboard.
- Depress the blade **Bb** fully to penetrate into the slip mat at a point close to the edge of the matboard.
- Look to check the blade penetration into the slip mat.
- If it is correct at approx 0.8mm [1/32"] try a test mat. If not - ADJUST

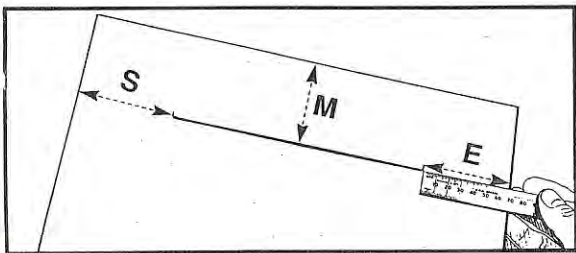
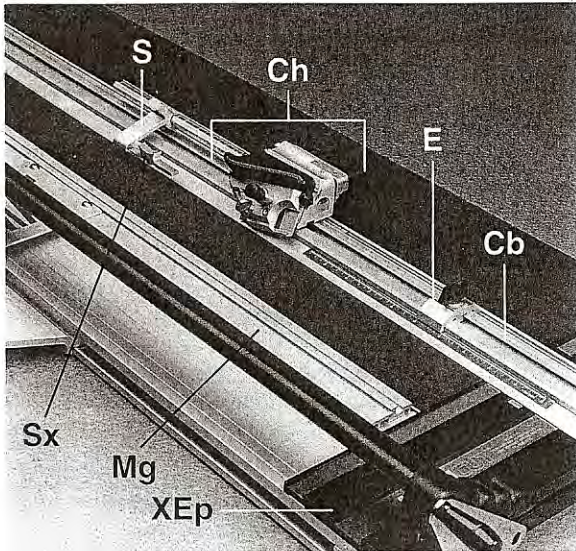
THE BLADE DEPTH as follows:-

- Slacken the locking screw **BTs**.
- Turn **Bda** clockwise to reduce the blade depth, anti-clockwise to increase it.
- Press the blade **Bb** forward against the ejector stop, tighten **BTs** and check the depth setting.





# CALIBRATION & ADJUSTMENTS



## LIMIT [PRODUCTION] STOPS

Start **S**, End **E** and Margin **Mg** Limit [production] Stops are fitted to provide control of the cut position to enable mats to be cut accurately without overcuts or undercuts and without special skill.

Limit stops are often called production stops but it is a feature of the Keencut system that when correctly set they will save much time and add certainty to cutting all mats from the most simple to very complex multiples and even title openings.

The ULTIMAT uses measurement scales that can be moved to adjust the stops because the method is faster, more positive and tools are not needed.

The limit stops need to be adjusted because the point at which the matcutter blade tip penetrates through the underside face of a matboard is different when a thicker or different textured board is cut.

### NOTE

If the adjustments are to be made owing to a different thickness of board adjust the blade depth first.

## ADJUSTING THE LIMIT STOPS

- The entire adjustment procedure should take less than 60 seconds.
- Use an accurate rule preferably steel with zero at the end.
- For the following examples the discrepancies are exaggerated.
- It is very important that **Ch** is held firmly in place by the thumb pressure on **Sx** until the blade has fully penetrated through the mat. Any sliding movement will spoil the cutting and the adjustments.

### The adjustable limit stops:

- S** Connects with the matboard edge to arrest **Ch** and determine the exact point for the blade tip to cut through the mat at the start of the cut.
- E** Clamps to **Cb** and arrests the moving **Ch** and blade tip at the exact set distance from **XEp** for the end of the cut.
- Mg** Controls the placement of the mat under **Cb** and ensures that the cut is made parallel and at the correct distance from the mat edge.

11

12

page 10

# CALIBRATION & ADJUSTMENTS

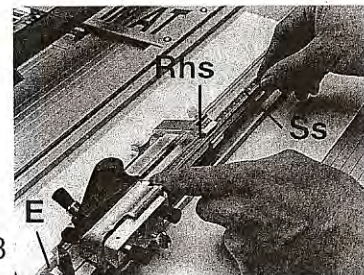
- a. Take an accurate squared matboard and check **Bb** depth.
- b. Set **S**, **E** & **M** at say 10cm or 4" for example.
- c. Using the stops make one precise bevel cut.
- d. Turn the mat over.

### NOTE

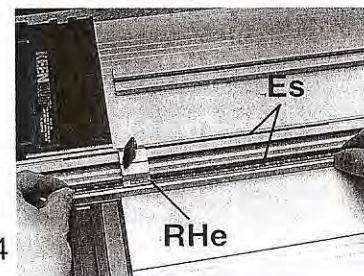
Do not move stops **S**, **E** or **M** until the scales are adjusted.

- e. **Check and adjust S.** On the coloured face measure from the mat edge to the start point of the cut.
- f. For this example we will say that **Ss** is not adjusted and measures 10.3cm or 4 1/8".
- g. Move the scale **Ss** so that it reads 10.3cm or 4 1/8" or **RHs**. [fig 13]
- h. **Check and adjust E.** On the coloured face measure from the mat edge to the end of the cut.
- i. For this example we will say that **Es** is not adjusted and reads 10.1cm or 4 1/16".
- j. Move the scale **Es** so that it reads 10.1cm or 4 1/16" at **RHe**. [fig 14]
- k. **Check and adjust Mg.** On the coloured face measure the margin from the parallel mat edge to the cut in the coloured face. Exclude the bevel. [fig 15]
- l. For this example we will say **Mgs** is not adjusted and measures 9.7cm or 3 7/8".
- m. Move the scale **Mgs** until it reads 9.7cm or 3 7/8" at **RHm**. [fig 16]
- n. Check the adjustments by setting **S**, **E**, & **M** to a smaller margin say 9cm or 3 1/2" and cut an aperture in the same matboard. The corners should all be cut without over or undercuts. If they are not use a rule to identify the stop which is not correct and re-adjust.

The limit stops will now be accurate and with square matboard the ULTIMAT will cut the full range of sizes without over or undercuts.



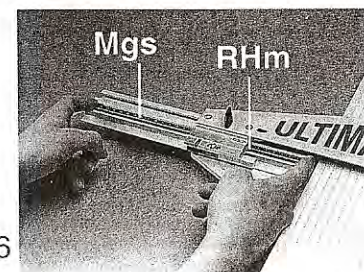
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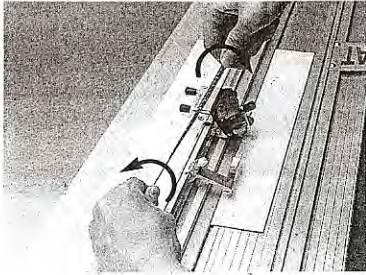
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16

page 11

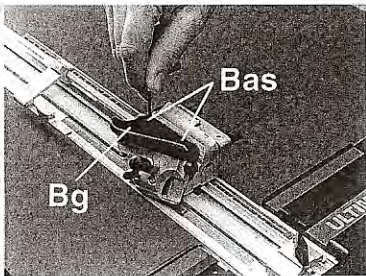




17

### IMPORTANT

If the screws are tightened unevenly the wobble will persist but Ch will stick on Cb. If this happens tighten both screws reasonably firmly and then release them very evenly. At each adjustment, test Ch for smooth sliding.



18

The ULTIMAT has been designed to enable the framer to carry out all servicing and adjustments. For spare parts contact your distributor or Keencut Ltd.

### MEASUREMENT SCALES - Adjustment for tightness.

- Set the appropriate stop to zero at **READ HERE**
- Remove the scale by sliding it from its groove.
- Grip the scale with the hands about 10cm apart.
- Turn the hands in opposite directions and twist the scale enough to lightly distort the stainless steel strip.
- Try the scale in the groove and adjust the twist accordingly.
- Replace the scale to zero at **READ HERE**

Ch runs on opposing tapered bearings for smooth straight running. After a little use the bearings will settle in and become smooth and silent. If side movement occurs ADJUST THE BEARINGS as follows:- [fig 18]

- Remove the slip mat and lower Cb flat on B.
- The shaped grip Bg on Bbh has two holes in the top.
- Place the 3mm hexagon wrench in either of the holes and it will engage with one of the bearing adjustment screws Bas.
- Turn each Bas alternately clockwise no more than 1/16th of a turn at a time to adjust Ch on Cb. Adjust evenly until the sideways movement has been removed but Ch can move easily and smoothly on Cb.

### IMPORTANT

In only very exceptional circumstances and probably never will it be necessary to remove Ch from Cb. Do not remove Ch to clean the machine because the sliding bearings will remain smooth and only need adjusting occasionally as they settle down with use.

**CLEANING** Clean the ULTIMAT regularly. Dirt will spoil the machine performance and the mats cut upon it. Use a dry or damp [not wet] cloth. Solvents will remove the silicone from Cb.

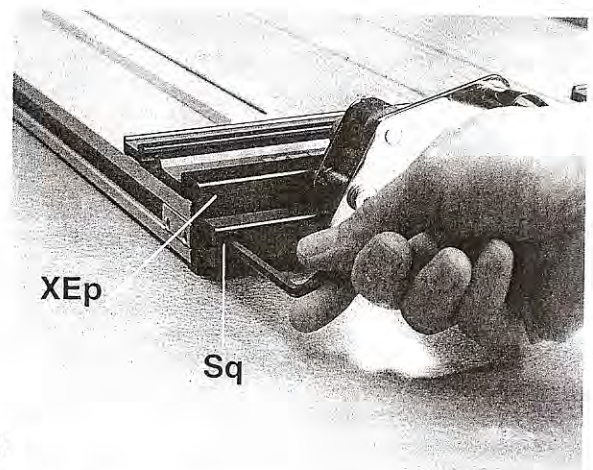
**LUBRICATION** - Use Silicone on Cb preferably applied with a pad or a spray applied to a cloth first. Wipe off any surplus liquid with a clean cloth. Special dry lubricant applied by spray is also suitable. Follow the Health Instructions on spray cans. [If no special lubricants are available - use a hand cream applied with a tissue]. Do not use Oil, Grease or Multi-purpose Penetrating Oil on Cb. Oil or Grease may be used lightly on Lhb, hinges Mhx and Mhy and pivots Cpx and Cpy.

**SQUARENESS** - Adjusting the squareness of the machine by adjusting XEp.

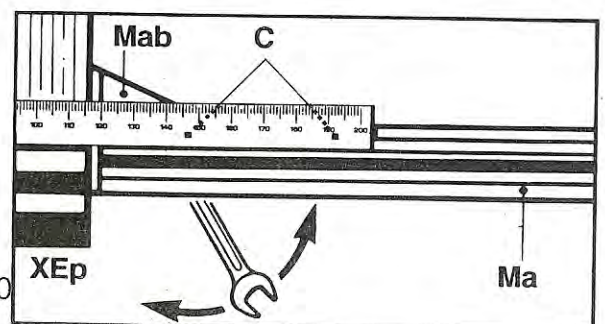
- Remove Ma, Mg and the slip mat.
- Take a matboard at least 65 x 65cm [25 x 25"] in size.
- Clamp it under Cb in close contact with XEp with approx. 2.5cm [1"] protruding from the right Z of Cb.
- Cut the matboard with the vertical blade Vb.
- $\Delta$  Cut the same amount off the other three sides rotating the matboard clockwise to place the previous cut precisely against XEp each time.
- $\blacklozenge$  Rotate the matboard 90° clockwise once more but this time place the two edges in precise contact with the back [Z] edge of Cb and XEp.
- If there is a gap at either edge it represents the error multiplied by four and XEp will need to be adjusted using screw Sq as follows:-
- Keep the matboard in position against Cb and XEp as in steps  $\Delta$  and  $\blacklozenge$  described above.
- Use a 5mm hexagon wrench to turn the screw and reduce the gap by 25%.
- Repeat test and adjust as necessary.

**MEASURING ARM [Ma]** - Adjusting for square.

- Use a steel straight edge placed across B, under Cb and against the squaring edge of XEp and Ma.
- Slacken both M6 nuts C holding Ma to Mab using a 10mm spanner.
- Move Ma to position it exactly against the - straight-edge in line with XEp and tighten M6 nuts C.

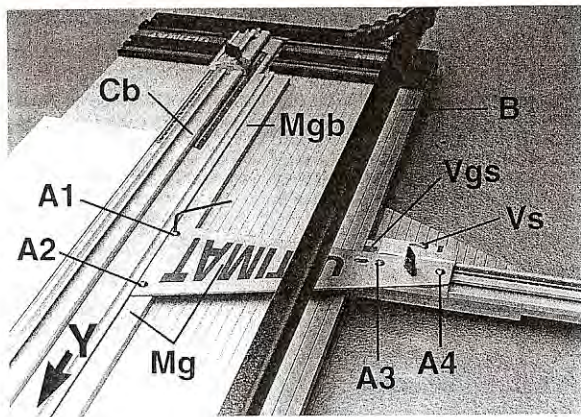


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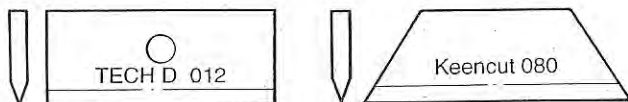




21

### NOTE

When changing Mg to an optional extension Mgt adjust the new Mgt for square if necessary by loosening the two holding nuts underneath Mgt, not by screws [A1,2,3,4].



### MARGIN GUIDE [Mg]

Checking the MARGIN GUIDE [Mg] for parallel to Cb.

- Place a long matboard in the machine against Mg.
- Cut a strip from the matboard using Vb.
- Double the strip over and compare the width of the ends against one another. They should be the same. If not proceed as follows:-

### MARGIN GUIDE [Mg] adjustment.

- Place a slip mat under Cb but not over the slot in B.
- Move Ch to Y.
- Note the Vgs position on its scale then move it by loosening the screw Vs with 3mm hexagon wrench.
- Loosen one of the socket screws [A1,2,3,4] with 3mm hexagon wrench.
- Move Mgb up to touch Cb and lock Mg.
- Manipulate Mgb until it is parallel to Cb. Loosen another screw if more adjustment is needed.
- Firmly re-lock the socket screws [A1,2,3,4].
- Replace Vgs to original position.

### BLADE TYPES

■ **Bevel cutting** - The ULTIMAT has been designed to use Keencut high performance Tech-d .012 blades but regular rectangular mat cutter blades may be used. For cutting extra thick board fit 080 type blades to give extra rigidity and tip length - without depth stop adjustment.

Matcutter blades are also available in .015 thickness for heavy duty cutting in tough boards.

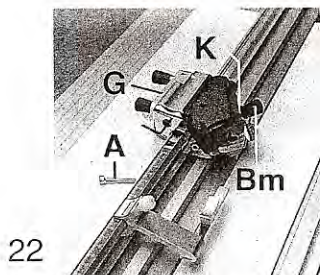
Chisel edge or single sided blades can be fitted without any modification and will have some different cutting qualities.

■ **Vertical cutting** - The .012 blades can distort and Keencut 080 trapezium blades or .017 utility blades should be used.

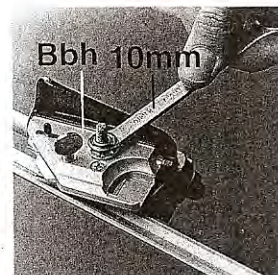
### ADJUSTING THE PIVOT G for the Vertical blade holder [Vbh] [fig 22]

The Vbh pivot G is adjustable to eliminate any side play as follows:-

- Remove socket screw [A] with a 3mm hexagon wrench.
- Insert 2mm hexagon wrench into the vacant hole to locate and loosen the hidden socket grub screw at the bottom.
- Use a coin or broad screwdriver to adjust G by turning until all play is eliminated but Vbh can still rotate easily under its spring pressure.
- Hold G in position and lock the grub screw.
- Replace [A].



22

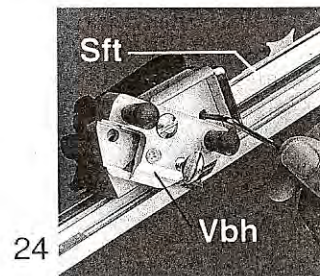


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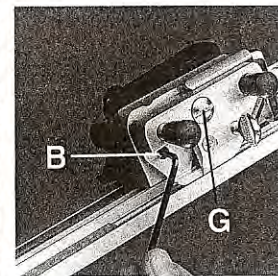
### ADJUSTING THE PIVOT for the Bevel blade holder [Bbh] [fig 23]

Bbh rotates on two ball bearings, one of which is adjustable as follows:-

- Remove Bm from the Bbh spindle with the fingers.
- Unscrew with the fingers or pliers the round nut cover K on the spindle.
- Using a 10mm spanner tighten the hexagon nut by very small increments.
- Eliminate all play ensuring Bbh is free to rotate with only its spring pressure.



24



25

### REMOVING THE LIMIT STOP S complete with shaft [Sft] [fig 24] & [fig 25]

- Set Vbh in the down position.
- Place a 3mm hexagon wrench in the screw [A] and loosen it.
- Set Vbh in the up position.
- Place the wrench through the hole [B] to loosen the other screw.
- Remove the shaft from the Y end of Ch.
- If the machine is to be used without S for any reason adjust the screws inwards to ensure they do not interfere with Vbh.

### IMPERIAL or METRIC ? - Changing over.

All scales have dual calibration except Ss which has centimetres on one face and inches on the reverse. Change over as follows:-

- Set S to zero at Rhs.
  - Slide out the scale, turn it over and slide it back.
  - Move the scale until the zero is against Rhs.
- The machine is now ready to use.



# FAULT FINDING

FAULT	Causes and Suggestions	FAULT	Causes and Suggestions
Frayed mount surface	Change blade <b>Bb</b> Replace slipmat <b>Cs</b>	Blade not cutting through on the last cut	Worn blade
Over or undercuts in some corners only	Matboard out of square Apply even hand pressure on cutter head	Blade not cutting through consistently	Change blade <b>Bb</b> Adjust blade depth Avoid any pressure on handle <b>H</b>
Machine starts to undercut without apparent changes	Matboard not the same texture Worn slip mat Change the blade <b>Bb</b> Check under <b>Cb</b> for tape or offcuts Adjust for any adhesive tape thickness on the mat	Erratic cutter head movement	Clean and lubricate <b>Cb</b> as instructions Adjust the sliding of <b>Ch</b> on <b>Cb</b>
Distortions at start of cut	Blade <b>Bb</b> set too deep Change blade <b>Bb</b> Avoid any hand pressure on handle <b>H</b> Sideplay in cutter head <b>Ch</b> - adjust Do not release the lever <b>Sx</b> until the blade has fully penetrated	Cut line not straight	Change blade <b>Bb</b> Uneven hand pressure on <b>Bbh</b> Apply no pressure to the handle <b>H</b> Blade too thin for the mat [see Blade types]
Blade will not	Push the blade forward and try again	Matboard not cutting through in centre of the cut	Avoid putting any pressure on the handle <b>H</b> when cutting as it causes <b>Cb</b> to curve up in the middle which affects the line of cut and clamping
		Matboard not clamping	Check clearance between <b>H</b> and <b>Lh</b> Check rubber grip strip under <b>Cb</b> Check under <b>Cb</b> for tape or offcuts

**IMPORTANT** At the first sign of any cutting defect change the blade. Do not adjust blade depth before changing the blade.

page 16

# MOUNT CUTTING TECHNIQUES

## ULTIMAT CUTTING TECHNIQUE - See contents for more details.

- Put a good slip mat **Cs** in position.
- Lock the limit stops **S**, **E** and **Mg** at a chosen margin width.  
Lift **Cb** with either **Lh** or **H**.
- Place a squared matboard coloured face down on slip mat **Cs**.
- Ensure that two mat edges are aligned against both **Mg** and **XEp**.
- Lower **Cb** to clamp the matboard in precise contact with **Mg** and **XEp**.
- Move **Ch** beyond the far edge of the matboard. Depress **Sx** with the thumb of the left hand until it touches the surface of **Cs**.
- Pull **Ch** until **Sx** connects with edge of the matboard and stops.
- Hold **Sx** down and fully insert the blade **Bb** with a firm downward pressure on **Bbh**.
- Release **Sx**.
- Make the cut by pulling **Ch** until it is stopped by **E**.
- Release **Bbh**.
- Repeat 3 more times turning the mat anti-clockwise each time.

### NOTE

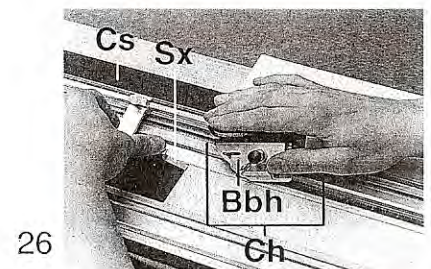
Use downward pressure on **Sx** at the start to prevent **Ch** from moving at all until the **Bb** is fully penetrated through the matboard or a curve will occur at the start of the cut.

## CUTTING A BEVEL MAT - with equal borders 5 wide.

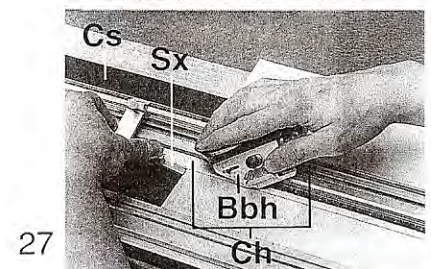
- Be sure that **Bb** is sharp and is O.K. for depth.
  - Move **Mak** clear of the working area.
  - Set **S** to 5.
  - Set **E** to 5.
  - Set **M** to 5.
- Cut precisely as described from item [c.] in cutting techniques.

### NOTE

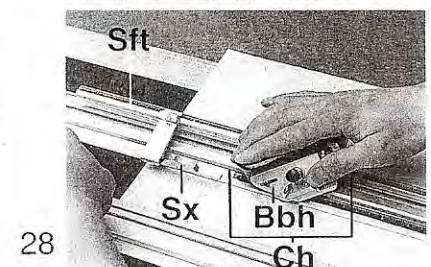
Dimensions are mentioned for example only and could be either centimetres or inches.



26



27



28

page 17



# MOUNT CUTTING TECHNIQUES

## UNEQUAL MARGINS - Cutting a mat with UNEQUAL MARGINS, for example 3,3,3 & 4

- Mark the back of the mat with the margin widths 4 at the appropriate edge and 3 on each of the other three edges.

1. Place the mat on the machine with 4 nearest to X.

- Set **S** to 3.
- Set **E** to 4
- Set **Mg** to 3.
- Place the matboard for cutting and make a cut in the normal way.

2. Turn the mat 90° anti-clockwise.

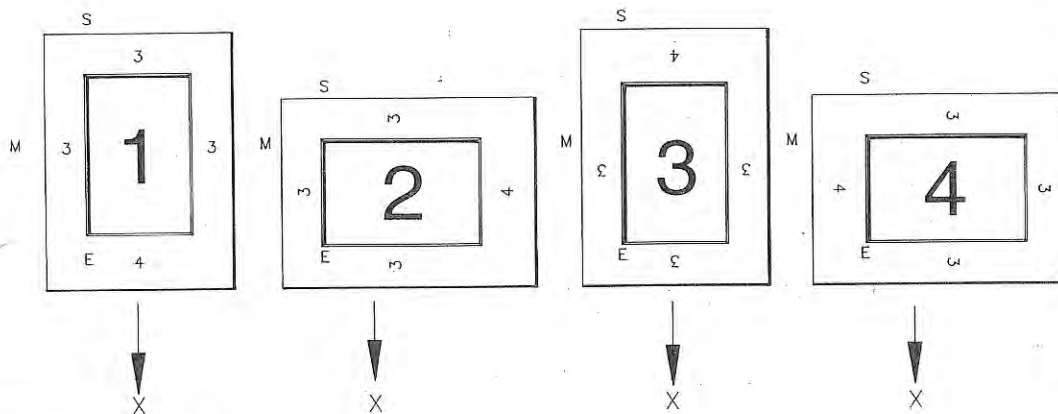
- Now the nearest number to **E** is now 3, so move **E** to 3.
- S** and **Mg** remain the same - 3.
- Make the second cut.

3. Turn the mat 90° anti-clockwise.

- The mark nearest **S** is now 4, so move **S** to 4.
- E** and **Mg** remain the same - 3.
- Make the third cut.

4. Turn the mat 90° anti-clockwise.

- The mark nearest **S** is now 3, so move **S** to 3.
- E** remains the same - 3.
- The mark nearest **Mg** is now 4, so move **Mg** to 4.
- Make the fourth cut.



**NOTE**  
If more than one mat of the same specification is required make one cut in each of the mats before changing the stops for the second cut.

**NOTE**  
Dimensions are mentioned for example only and could be either centimetres or inches.

# MOUNT CUTTING TECHNIQUES

## CUTTING A V-GROOVE

- Lightly mark the back of the matboard with a pencil and then cut a mat.
- Remove the mat and fallout and retain both.
- Remove slip mat **Cs**.
- Set **Mg** forward as far as **Vgs** permits.
- Place the fallout (coloured face up) under **Cb** against **Mgb**.
- Fully depress the blade **Bb** at the edge of the fallout and draw it through the card.
- Take care to remove the trimming.
- Repeat on the remaining three edges of the fallout.
- Place the fallout face down and position the mat on it using the light pencil mark to place the pieces back the same way around.
- Tape the mount and the fallout together along the cut lines.

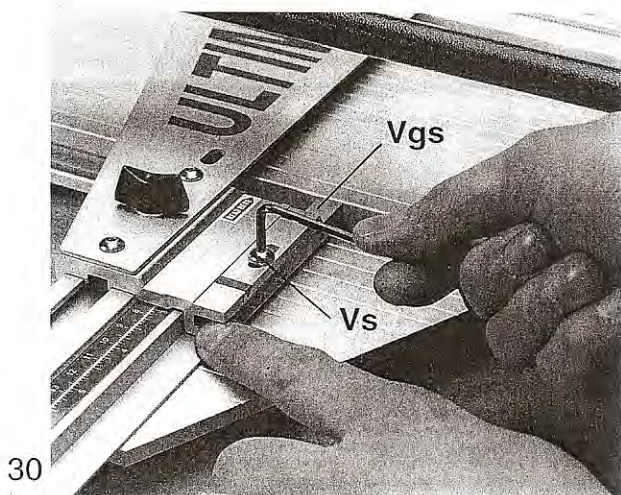
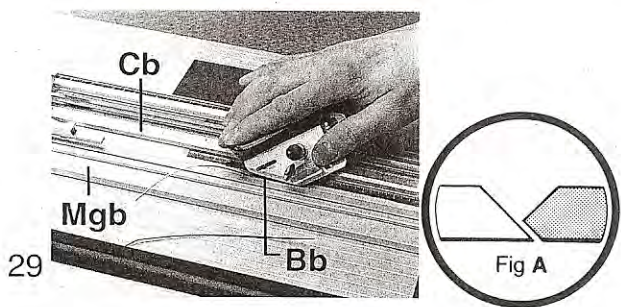
**NOTE**  
Use thin tape or the thickness could upset the blade depth.

- Take the assembled matboard and cut a mat inside the V-Groove in the normal way.

## CHANGING THE V-GROOVE WIDTH

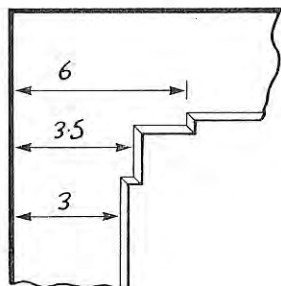
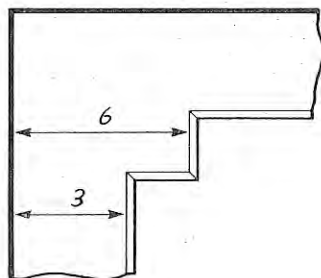
To widen and deepen the V-groove move **Mg** slightly away from **Cb**. Moving **Mg** closer to **Cb** will make the groove thinner and less deep. Too deep and the cut will fray and discolour in the centre and so part of the original bevel must remain on the fallout [fig A]

- Undo the dome socket screw **Vs** to release **Vgs**.
- Using scrap fallouts, experiment with different settings of **Mg** until a new width of cut has been selected.
- Without moving **Mg** place **Vgs** firmly against the base and lock **Vs**.





# MOUNT CUTTING TECHNIQUES



## NOTE

Whilst making cuts 1 and 3 the blade may be lifted to pass the centre of the mat and reinserted. The fallout will remain in one piece and the cutting accuracy improved [c].

## OFFSET CORNER MATS

- a. Set **Mg** to 6.
- b. Set **S** to 3.
- c. Set **E** to 3.
- d. Cut all four sides as for normal mat.
- e. Set **Mg** to 3.
- f. Set **S** to 6.
- g. Set **E** to 6.
- h. Cut all four sides as for a normal mat taking care to remove all small offcuts from under **Cb** as they occur.

## DOUBLE OFFSET CORNER MATS

1. Set **Mg** to 3.5.
  - a. Set **S** to 3.5.
  - b. Set **E** to 3.5.
  - c. Cut all four sides as for normal mat and check for good corners.
2. Set **Mg** to 3.
  - a. Set **S** to 6.
  - b. Set **E** to 6.
  - c. Cut all four sides.
3. Set **Mg** to 6.
  - a. Set **S** to 3.
  - b. Set **E** to 3.
  - c. Cut all four sides taking care to remove all small offcuts under **Cb** as they occur.

# MOUNT CUTTING TECHNIQUES

## CUTTING MULTIPLE OPENINGS AND TITLE BOXES

The limit stop **S** can be used to great advantage after just a little practice to accurately cut multiple openings and openings so far from the mat edges to be beyond the normal scope of the stops.

Pencil mark the back of the matboard with the required layout and place a cross in each intended aperture or use other identifying marks to ensure that the correct lines are cut and the bevel is cut the correct way.

- a. Place the matboard under **Cb** so the blade **Bb** will cut along the pencil line.
- b. Set **S** to slightly less than zero.
- c. Depress **Sx** and move **Ch** until the tip of **Sx** reaches the horizontal line at the beginning of a marked aperture.
- d. Insert **Bb** fully.
- e. Cut until the depressed tip of **Sx** reaches the horizontal line at the end of the marked aperture.
- f. Repeat until all the apertures are complete.

