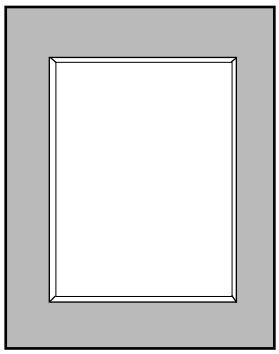
Model 700-S

Simplex Studio

MAT CUTTER



22 1/2" Mat cutting system with production stops, parallel mat guide, flush cut squaring arm, including straight and bevel cutting heads.

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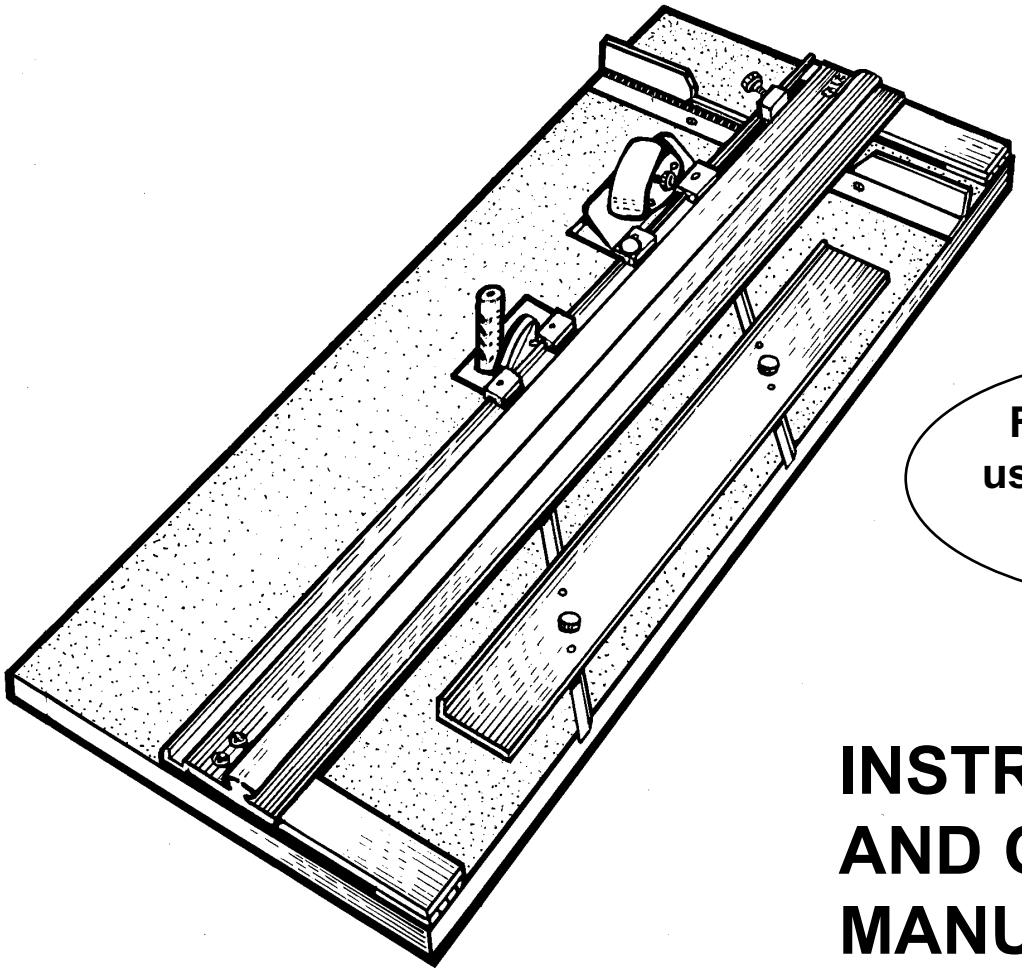


For best results use only authentic Logan blades

INSTRUCTION AND OPERATION MANUAL

INTRODUCTION:

Congratulations on your purchase of the Logan Simplex Studio Mat Cutter. The Simplex Studio is a well designed mat cutter aimed for use by photographers or others needing a small transportable mat cutter for 16x20 mats and less. Features like production stops, parallel mat guide and anti-crawl pin make the Simplex Studio an efficient yet cost effective tool for artists, photographers and crafters alike. This instruction manual is written to acquaint you thoroughly with this product. Please take some time to familiarize yourself with it before cutting. You will find that the time taken will be well worth it and you will be cutting quality mats in no time.

TABLE OF CONTENTS:

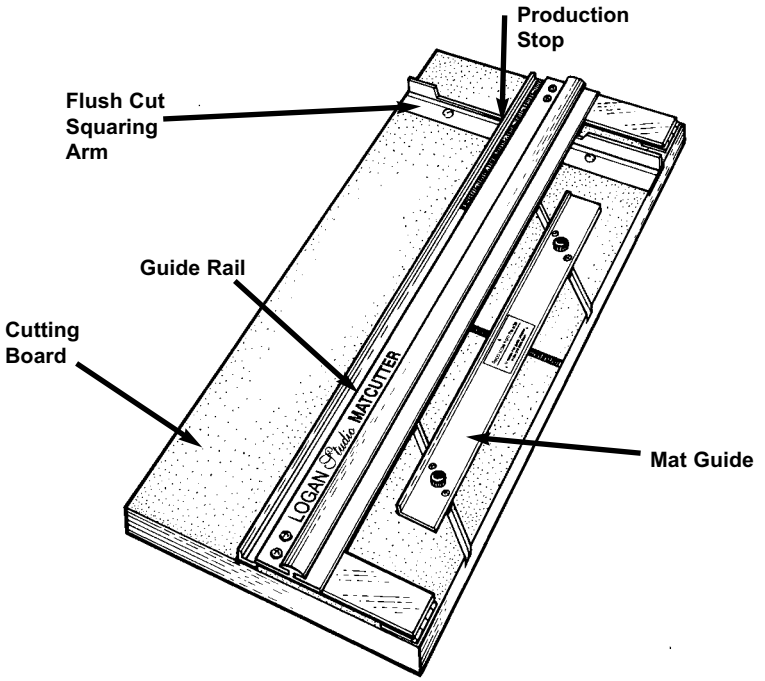
Warranty

Logan Graphic Products, Inc. ("Logan") warrants the **700-S Studio** to be free from defects in parts and workmanship for a period of two years from the date of original purchase. Logan warrants that it will either repair or replace, in its sole discretion, any necessary replacement parts found to be defective. Should the product need to be returned to Logan for repair or replacement parts, authorization for any return must come from Logan in writing. Costs of returning the product to Logan, including insurances, shall be borne by the purchaser. Logan shall not be liable for any damages or losses, incidental or consequential, direct or indirect, arising from the use of this product. This warranty extends only to the original purchaser and is not assignable or transferable. This warranty is in lieu of all other warranties, expressed or implied.

CHECK OF CONTENTS:

700-S Simplex Studio 22 1/2" Cutting board with Parallel Mat Guide, guide rail stop, Flush-Cut Squaring Arm, Backing Sheet, Straight and Bevel Cutting Heads and 1 five pack of Logan #270 blades.

IDENTIFICATION OF MACHINE COMPONENTS:



Simplex Plus Cutting Board

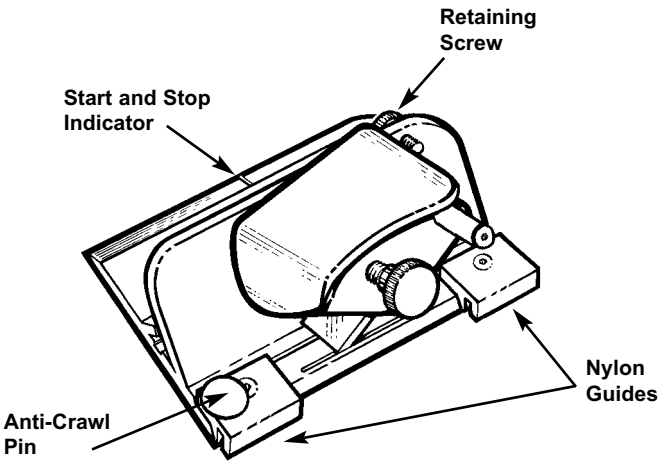
Guide Rail- Used to guide cutting heads while in use.

Mat Guide- Used to set the border width of a mat and keep the mat in position.

Flush Cut Squaring Arm- Board mounted 90 degree bar used to hold mats square when cutting and as stop when bevel cutting.

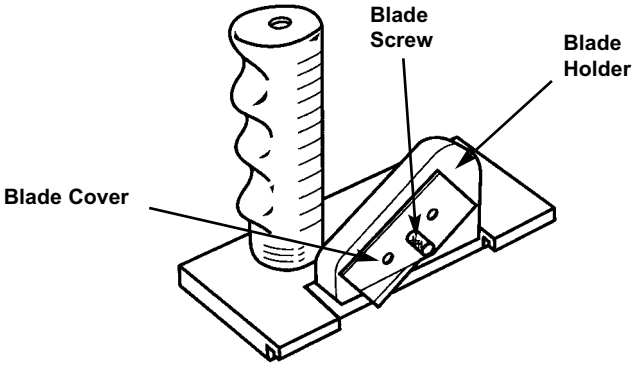
Cutting Board- Base board of machine.

Production Stop- Used when cutting same size borders.



702 Bevel Cutting Head

Start and Stop Indicator- Line which shows where to begin and end cut.
Retaining Screw- Screw which keeps blade safely in slot when not in use.
Anti-Crawl Pin- Prevents cutting head from creeping forward during initial penetration of blade into mat.
Nylon Guides- Guides which allow Bevel Cutting Head to hook onto Guide Rail.

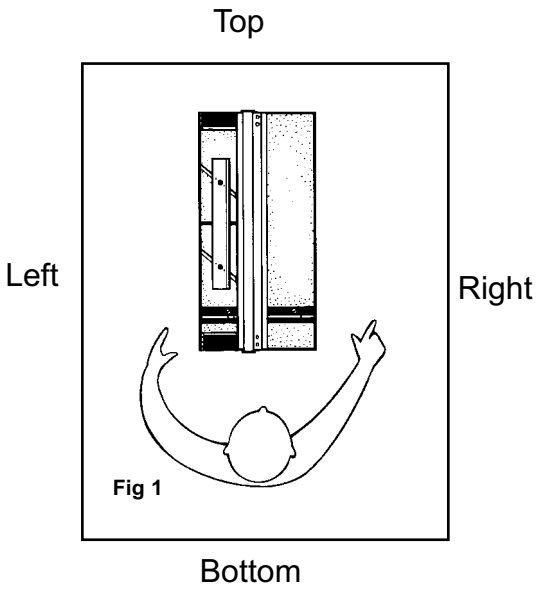


701 Straight Cutting Head

Blade Holder- Block which holds blade in place while cutting. Has three separate depth settings.
Blade Cover- Covers blade on Blade Holder.
Blade Screw- Holds blade in place inside Blade Holder.

ORIENTATION

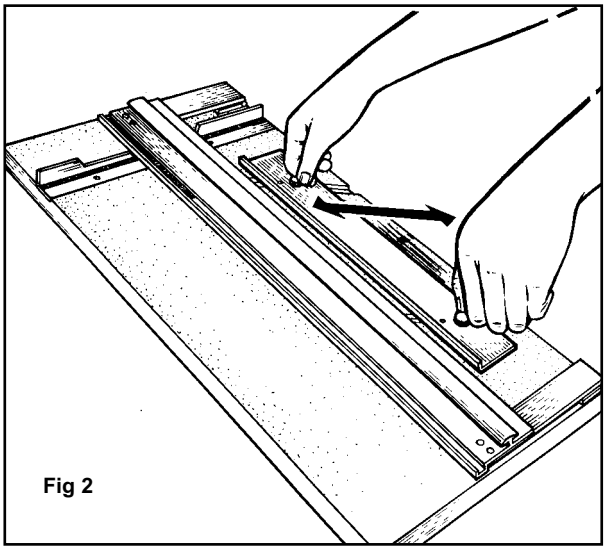
The Procedure detailed in the following instructions refer to the right and left side, and the top and bottom of the machine as shown. **Fig . 1**



A. Mat Guide

1. To install the Mat Guide loosen each knob three full turns. Hold the mat guide at either end and with your thumbs put some downward pressure on the knobs. Evenly drop the Mat Guide into the parallel board slots and tighten the knobs.**Fig. 2**

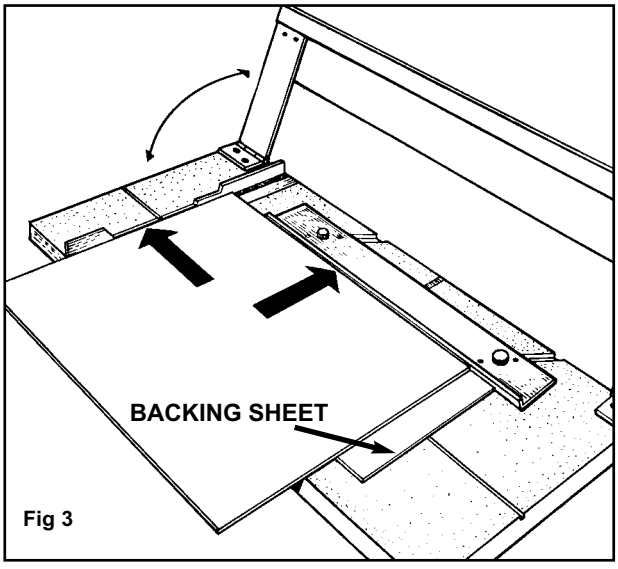
2. To loosen, turn knobs and slide.



B. Backing Sheet

A Backing Sheet is a piece of scrap matboard placed underneath the mat to be cut when bevel cutting. The Backing Sheet must be at least as long as the mat being cut and at least 4" wide. This protects the blades while cutting and
produces a better cut. **Fig . 3**

NOTE: *It is important not to continue to cut in the same spot of the Backing Sheet as this can cause curves in the cut. Replace Backing Sheet as necessary.*



C. Blade Installation

701 Straight Cutting Head

Remove the Blade Screw and the Blade Cover from the Blade Holder. Place one #270 blade, sharp edge down, in the slot on the Blade Holder and line up the hole in the blade with the desired depth setting. Replace the Blade Cover and Blade Screw. **Fig. 1**

NOTE: *Always have the three holes on the Blade Cover lined up exactly with the three holes on the Blade Holder before replacing the Blade Screw.*

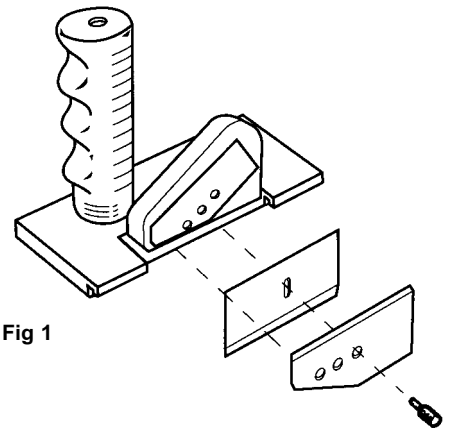


Fig 1

702 Bevel Cutting Head

Loosen the Retaining Screw found on the back side of the Cutting Head until flush with the surface of the base. This allows the Blade Holder to tilt back all the way for blade change. Slide one #270 blade all the way in the back of the Blade Holder as shown. **Fig. 2**

NOTE: *The hole in the blade is not designed to line up with the Blade Screw.*

Re-Tighten the Blade Knob and tilt the Blade Holder down allowing the tip of the blade to enter the Blade Slot. Retighten the Retaining Screw.

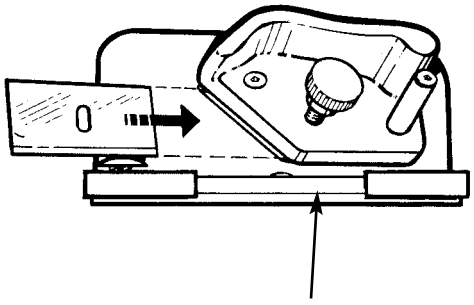


Fig 2

Blade slot

OPERATION

A. Straight Cutting A Board To Size

1. Remove the Mat Guide and Backing Sheet before straight cutting.

2.Using a ruler and a pencil, mark out the lines on the back of the mat board where the cuts should be to properly downsize the mat board.

3. Lift the Guide Rail and place a sheet of matboard down against the Squaring Arm. Line up one of the lines on the back of the mat along side of the Guide Rail.

4. Hook the Straight Cutting Head onto the Guide Rail past the end of the board to be cut. Grasp the handle as shown in the picture and pull the Straight Cutting head towards you. Keep constant downward pressure on the Straight Cutting Head and the Guide Rail as you make your cut. **Fig. 1**
CAUTION: Be careful to control the Straight Cutting Head as it breaks through the end of the matboard as it will tend to "jump" towards you.

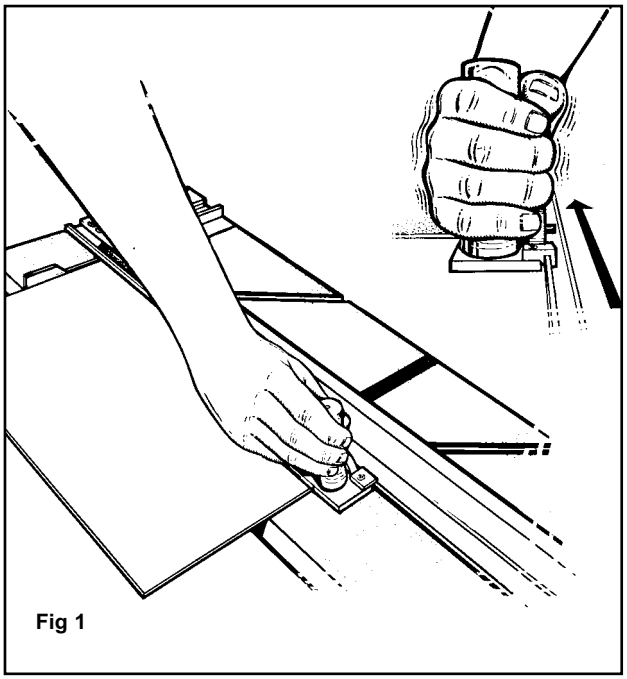


Fig 1

B. Cutting A Beveled Opening Using Marked Lines

EXAMPLE: Cutting a mat with a 2” border.

1. To re-install the Mat Guide, loosen the Black Knobs three turns and with the raised edge towards the Guide Rail, line up the Mat Guide with the parallel slots. Enter both sides at the same time keeping thumb pressure on the Black Knobs.

2. Set the Mat Guide to the desired border width. For example for a 2” border align the ***front*** of the Mat Guide at the 2” mark and tighten the black knobs. **Fig. 2**

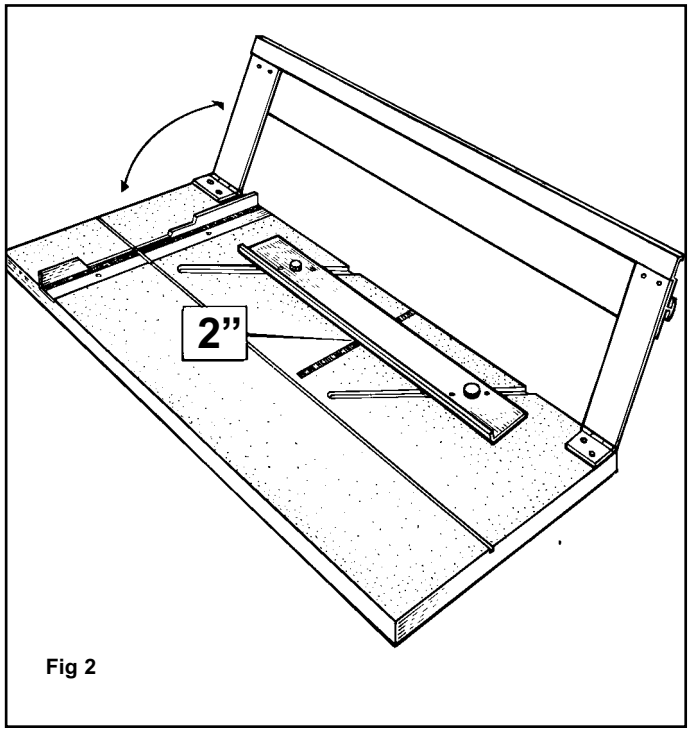


Fig 2

3. Make sure the Backing Sheet is in place before bevel cutting. You *must* use a Backing Sheet. The straight cut slot underneath the Guide Rail is used for straight cutting only.

4. Place the mat *color side down* under the Guide Rail, against the Mat Guide and down against the Squaring Arm. **Fig. 3**

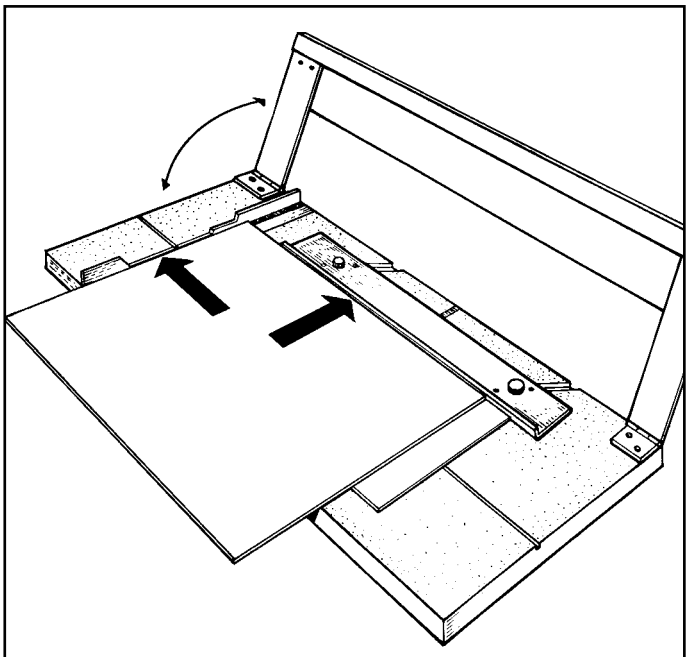


Fig 3

5. Using a pencil, draw a line down the full length of the back of the matboard. Repeat this for the remaining three sides. **Fig. 4**

6. Hook the 702 Bevel Cutter onto the Guide Rail.

7. Position the cutter so that the Start and Stop Indicator line lines up with the marked line closest to the top of the machine.

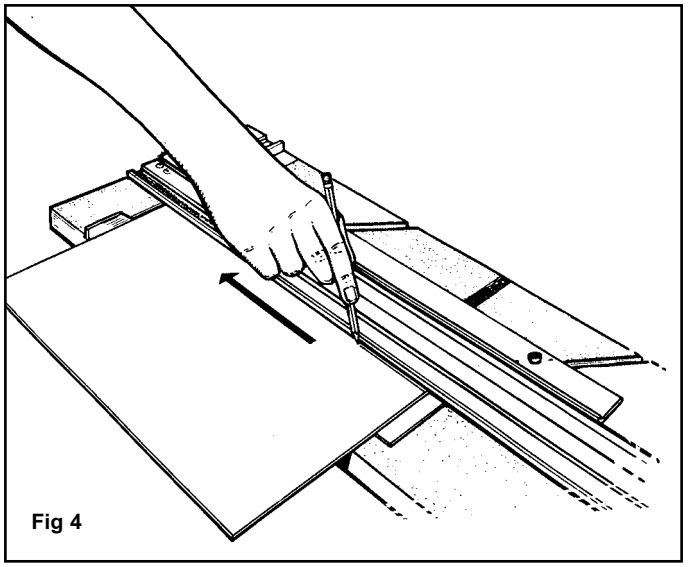


Fig 4

8. With the left hand, depress the Anti-Crawl Pin and firmly pivot the Blade Holder down into the mat. **Fig . 5**

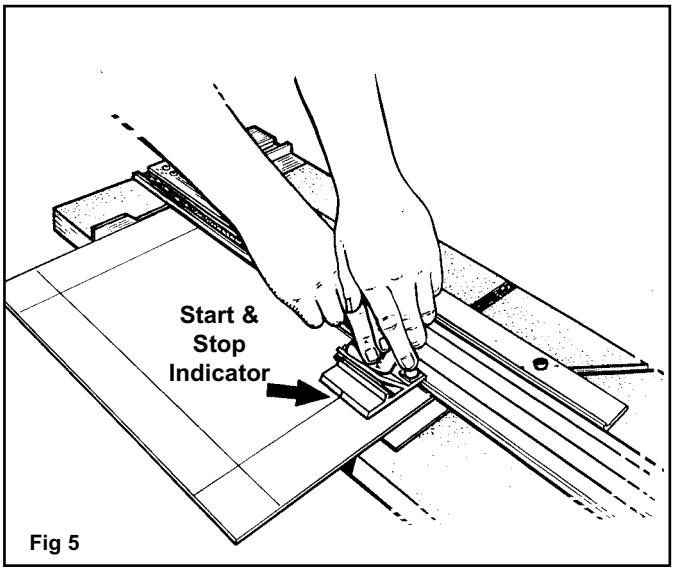


Fig 5

9. Release the Anti-Crawl Pin and pull the cutting head towards you until the Start and Stop Indicator line lines up with the line on the matboard closest to you. DO NOT GO PAST THE LINE! **Fig. 6**

NOTE: *It is essential to keep even downward pressure on the Blade Holder as you cut.*

10. Rotate the Blade Holder back up the neutral position, turn the mat 1/4 turn to the right and repeat steps 7 through 9 for the remaining three sides.

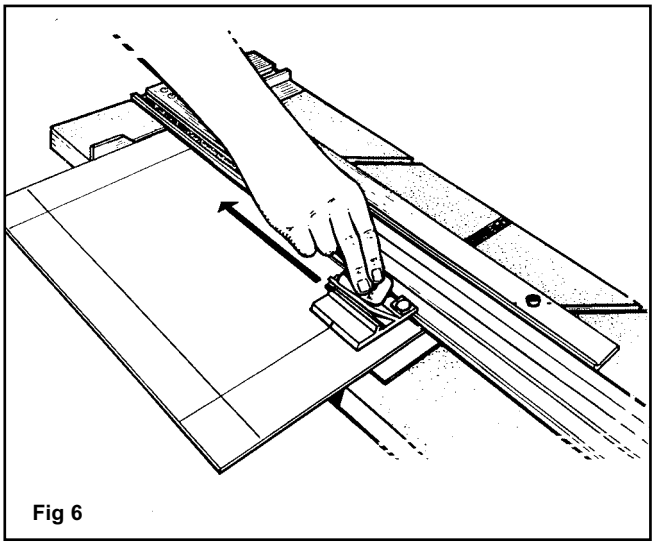


Fig 6

C. Cutting A Beveled Opening Using The Production Stop

EXAMPLE: Cutting a mat with a 2” border.

1. Set the Mat Guide to the desired border width. For example, for a 2” border align the ***front*** of the Mat Guide at the 2” mark and tighten the Black Knobs. **Fig 1**

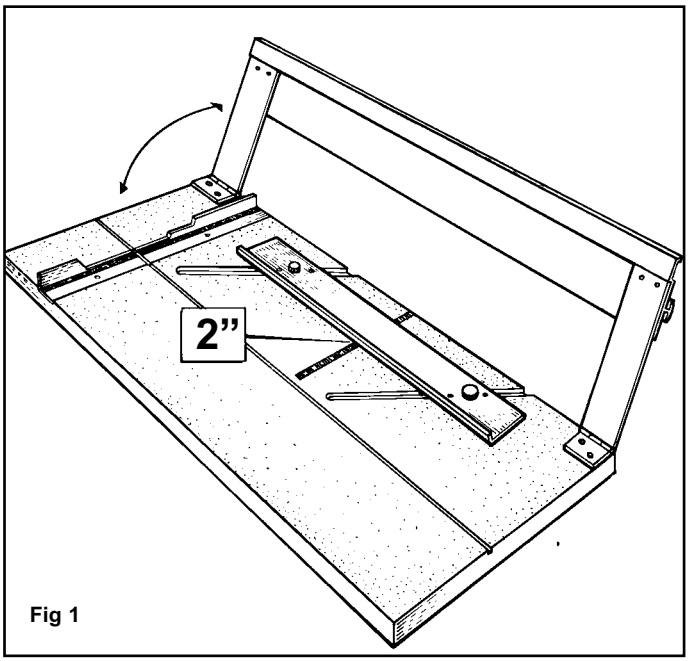


Fig 1

2. Place the mat to be cut into the machine colored side down with the backing sheet underneath and lower the guide rail. **Fig 2**

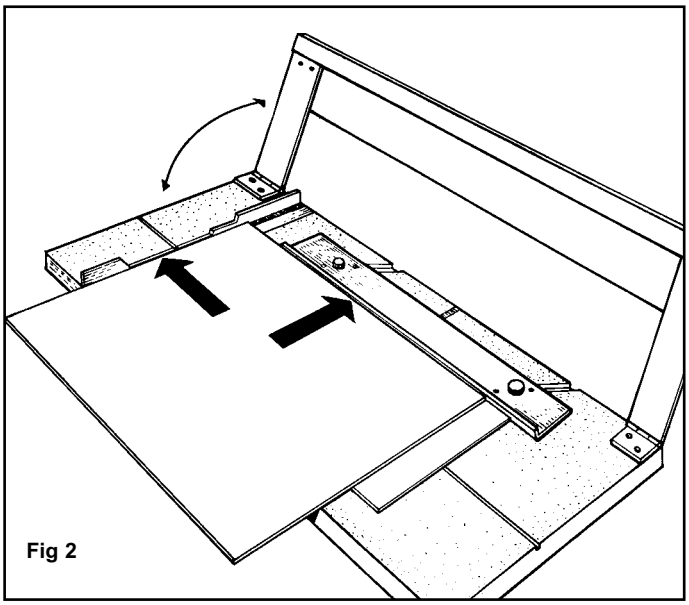


Fig 2

3. Install the guide rail stop onto the guide rail and tighten at the 2” mark on the scale. **Fig 3**

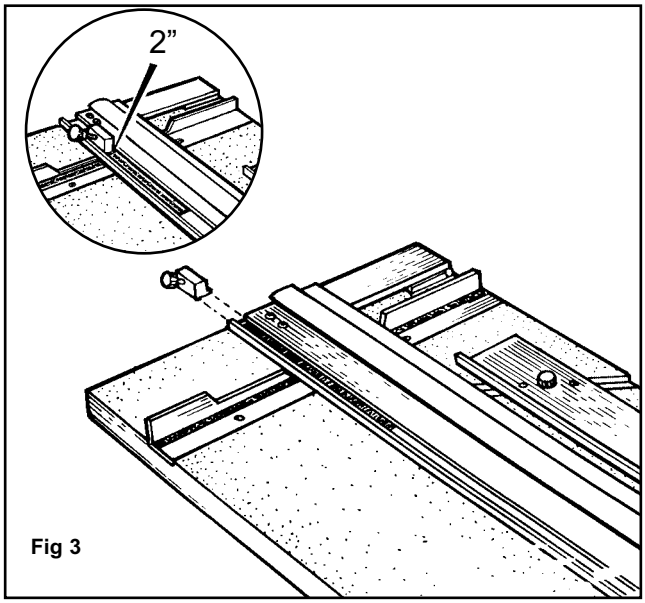


Fig 3

4. Using a pencil, mark a line along the full length of the mat board using the guide rail as a guide. **Fig 4.** Turn the mat 1/4 turn to the right 90 degrees before cutting.

5. Hook the bevel cutting head onto the guide rail and slide it up until the start & stop indicator lines up with the marked line closest to the top of the machine.

6. Depress the anti-crawl pin and pivot the blade holder to insert the blade into the mat.

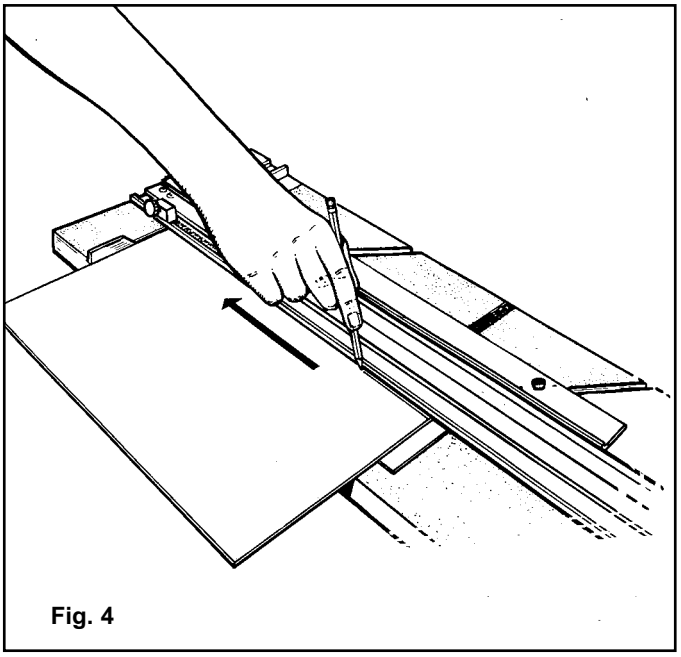


Fig. 4

7. Release the anti-crawl pin and pull the bevel cutting head towards you until it gently contacts the guide rail stop. **Fig 5**

8.Rotate the Blade Holder back up the neutral position, turn the mat 1/4 turn to the right.

9. Slide the bevel cutter up until the start & stop indicator lines up with cut just made in the mat towards the top of the machine.

10. Repeat steps 6 through 9 until all four sides are cut.

NOTE: In order for the production stops to be accurate, the blade depth must be set properly. If using the stop produces an overcut or undercut, a blade depth adjustment may be needed. (see pg 9)

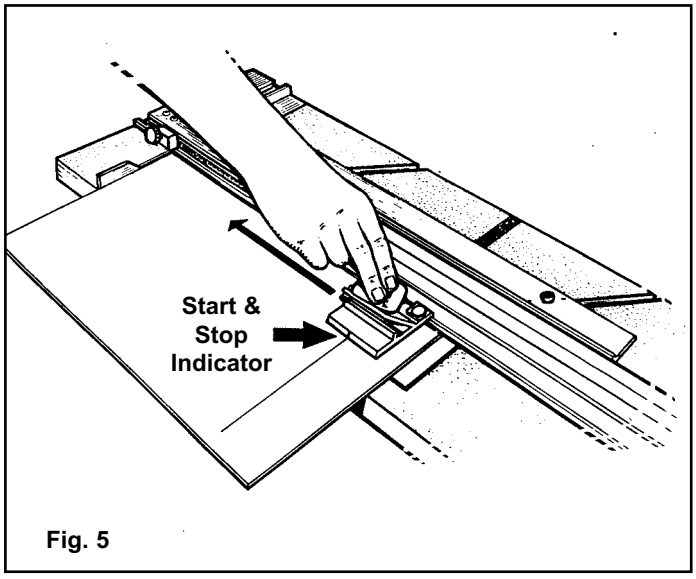


Fig. 5

D. Cutting A Straight Opening

EXAMPLE: Cutting a mat with a 2" border

1. Set the Mat Guide to the 2” mark on the scale and retighten the black knobs.

2. Place the mat to be cut into the machine colored side down with the Backing Sheet underneath and lower the Guide Rail.

3. Using a pencil, mark a line along the full length of the matboard using the Guide Rail as a guide. Repeat this for remaining three sides.

4. Using the Straight Cutting Head, align the top scribe line with the top border line and press down on the handle until the cutting head sits flat on the matboard. **Fig 1.**

5. Pull the Straight Cutting Head until the bottom scribe line lines up with the bottom border line. Repeat until all borders are cut. **Fig. 2**

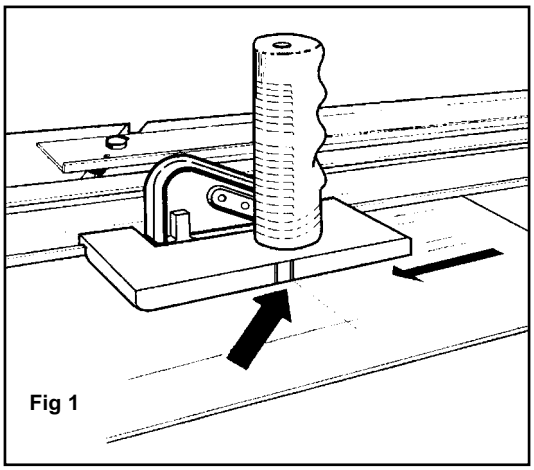


Fig 1

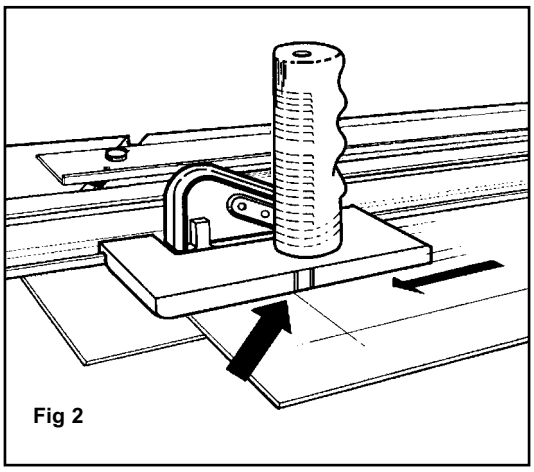


Fig 2

ADJUSTMENTS & MAINTENANCE

A. Blade Depth Adjustment- Bevel Cutting Head

TOOLS NEEDED: Screwdriver, Ruler

1. Hold the 702 Bevel Cutter upside down in your hand with the blade activated in the cutting position.

2. Looking at the tip of the blade, measure the exposed amount with a ruler at the same angle as the blade. For standard thickness mat board (4 ply) only 1/8” of blade should be seen. To adjust, find the screw head recessed below the bottom of the surface of the cutting head near where the blade is coming out. **Fig. 3**

3. Turning the screw to the right *(clockwise)* will decrease the blade depth, the left *(counterclockwise)* will increase the blade depth. Not all matboard requires 1/8”. Thicker matboard will require more. Always have the blade depth set so that the Backing Sheet is scored only slightly. Cutting even half way through the Backing Sheet is entirely too much blade depth. This extra blade depth allows the blade tip to flex and cause hooks and curves in the cut. Extra blade depth can also cause the Start and Stop indicator to be incorrect which results in overcuts. This test and adjustment needs to be done periodically as mat board has many variances of thickness and the depth can increase itself over time with regular use.

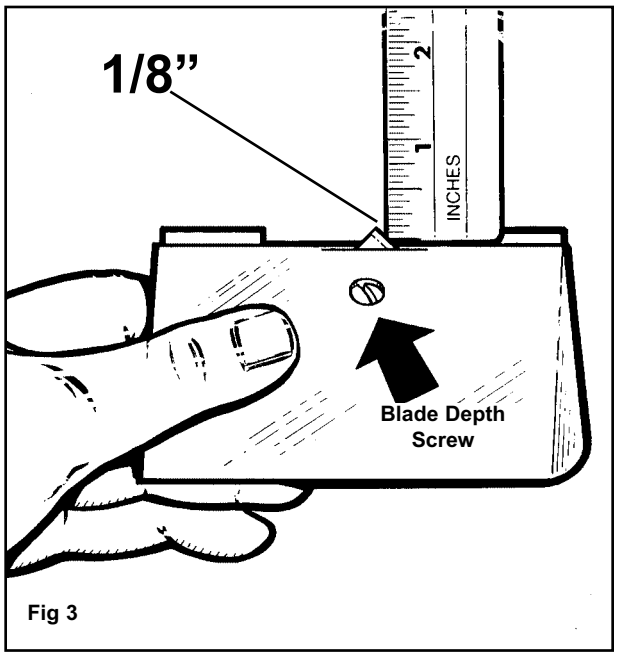


Fig 3

B. Re-Parallel The Mat Guide

TOOLS NEEDED: Phillips Screwdriver, Ruler.

To re-parallel the Mat Guide, first determine that the Mat Guide *is* out of parallel by doing a parallel test.

Parallel Test:

1. Lock the Mat Guide at the 2” mark on the scale. **Fig. 1**
2. Place a scrap piece of matboard under the Guide Rail and up against the Mat Guide at the far end of the machine.
3. Using a pencil, mark a line across the mat.
4. Slide the mat all the way down near where you are standing keeping under the Guide Rail but not against the Squaring Arm.
5. Draw another line across the mat.
6. The piece of matboard should now appear to only have one single line across it. If the two lines drawn do not line up with each other, the Mat Guide needs to be re-paralleled.

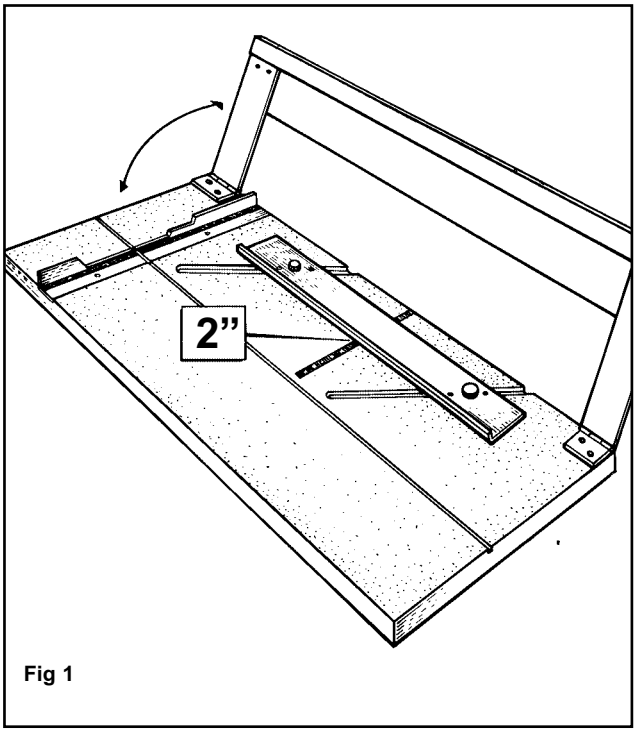


Fig 1

TO RE-PARALLEL:

1. Release the Mat Guide.
2. Use a Phillips head screwdriver to loosen the screws on either side of the black knobs one turn.
3. Place a ruer or straight edge between the Mat Guide and the Guide Rail. **Fig. 2**
4. Slide the Mat Guide against the straight edge and the Guide Rail. Make sure both the Mat Guide and the Guide Rail are making solid contact on both sides of the straight edge.
5. Re-tighten the ***Black Knobs*** first.
6. Re-tighten the four screws. Do another parallel test to ensure the Mat Guide is now parallel.

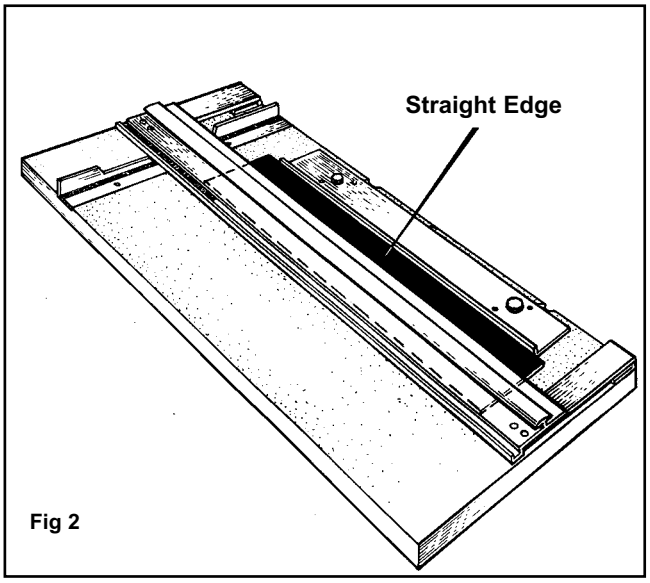


Fig 2

C. Re-Square the Flush-Cut Squaring Arm

TOOLS NEEDED: Screwdriver, Carpenter's Square.

ATTENTION: *It is common for store bought sheets of mat board to be un-square when new. Take this into account before making any adjustments to the Squaring Arm.*

Before making any adjustments to the squaring arm, make sure that the machine is ***truly out of square,*** not the matboard, by using the squareness test.

SQUARENESS TEST

1. Place the carpenter's square against the right hand side of the guide rail and down against the squaring arm, Look to see if there are any gaps between the framing square and the squaring arm. If so, the squaring arm needs to be adjusted. **Fig. 1**

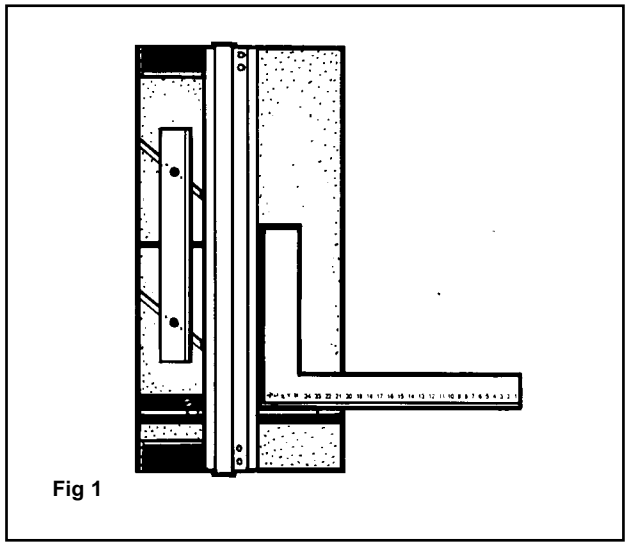


Fig 1

TO RE-SQUARE

1. By looking at where the gap is you can determine which way the squaring arm needs to go in order to be square again.

2. Remove the squaring arm and locate the three screws inside of the slot.

3. Adjust only two screws A&B. **DO NOT ADJUST C**. To adjust you must turn screws A & B in equal but opposite directions. To move the far right end of the squaring arm towards the top end of the machine, turn adjustment screw B inward *(clockwise)* about a quarter turn and adjustment screw A outward *(counter-clockwise)* a quarter turn. **Fig 2**

4. Re-install the squaring arm and check for square. This is a trial and error method, in some cases more than a quarter turn is needed, in some cases less.

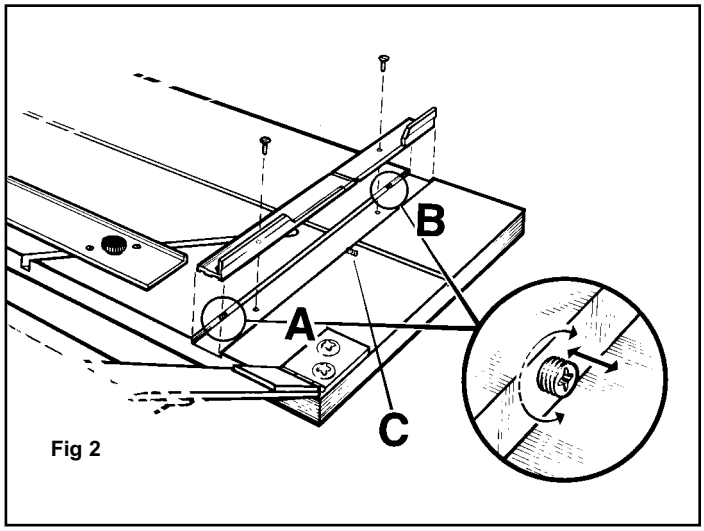


Fig 2

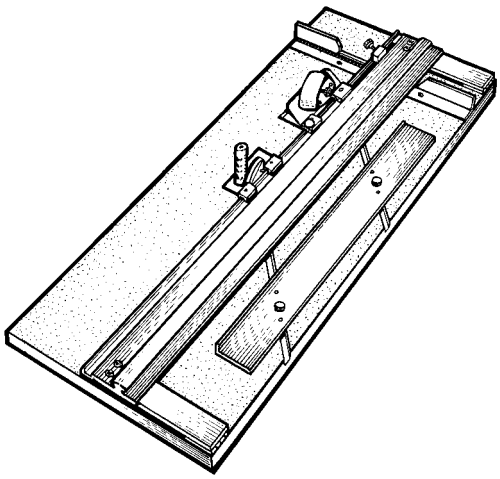
D. Helpful Hints

1. Always store your Simplex Studio Mat Cutter flat. Never stand the Mat Cutter up against a wall for any period of time. This can cause the Mat Cutter base to bow.

2. If you need to clean the Guide Rail, only use an evaporating solvent (lighter fluid, alcohol) that will leave no residue. Do not lubricate the Guide Rail as the substance will soften the Nylon Guides causing them to bind on the Guide Rail.

3. The Bevel Cutting head has a "spring back" feature installed. This spring action is ***not*** intended to pull the blade up out of the mat after a cut. It is a safety device to prevent the blade from dropping down into the blade slot and cutting into a table, your hand, etc. when not in use.

4. A NOTE ON BLADE LIFE
No two blades will last the same. It is a good idea to install a new blade before starting a new project to insure best cutting results.
Use only Logan blades.



Creative Matting Guide

Detailed Instructions on how to cut more creative style mats.

Including: The Double Mat
The Off-set Corner Mat
The Inlay Mat

LOGAN
GRAPHIC PRODUCTS, INC.

DOUBLE RECTANGLE MAT

(Example 8' x 10" w/3 1/2" x 5 1/2" opening)

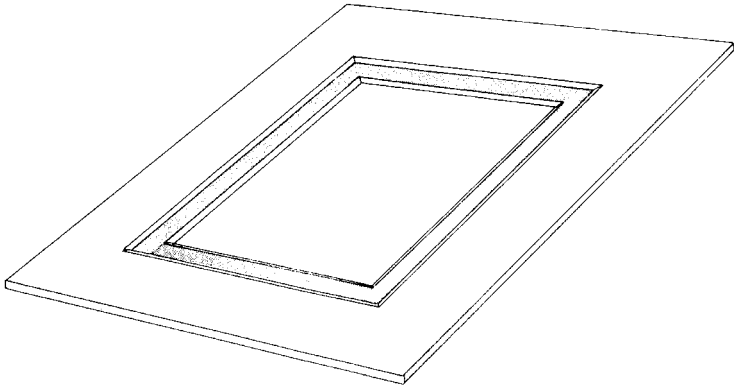
Step 1: Set the Mat Guide to 2" and cut an opening in the mat from the BACK.

Step 2: Keeping the fallout piece in place, run double sided tape around the back of the window border. Do not put tape on cut line. Also put a small swatch of tape in the center of the fallout.

Step 3: Straight cut a second piece of matboard of a different color to an outside dimension 7 1/2" x 9 1/2".

Step 4: Affix the second mat FACE DOWN to the taped back of the first mat being sure it is centered reasonably well.

Step 5: Set the Mat Guide to 2 1/4" and cut the second opening. The double fallout will drop from the window and the mat will be finished and perfectly aligned. NOTE: Triple mats can be achieved by repeating the above procedures again.



Double Mat

OFF-SET CORNER MAT

(EXAMPLE: 8" x 10" w/ 7" x 5" opening)

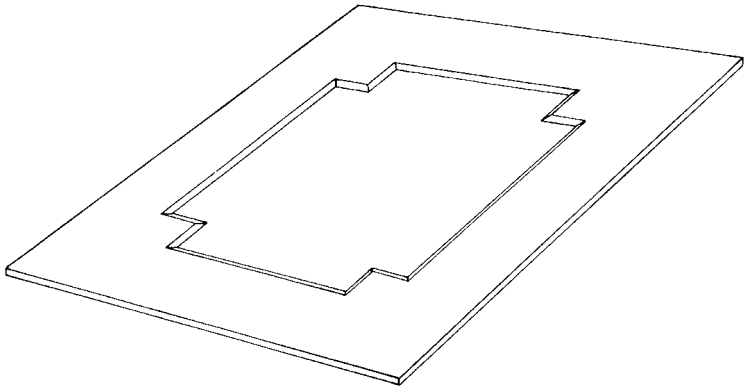
Step 1: Set the mat guide at 2" and draw all four lines.

Step 2: Reset the Mat Guide at 1 1/2" and draw another set of lines.

Step 3: Leaving the Mat Guide at 1 1/2", place the mat in the cutter, put on the Bevel Cutting Head and line up the silver indicator line with the bottom pencil line closest to center of the mat. Cut until the silver indicator lines up with the top pencil line closest to the center of the mat. Using the same procedure, cut all four sides. IMPORTANT: At this point the fallout will not drop from the window. Continue.

Step 4: Remove the mat and reset the Mat Guide to 2". Reinsert the mat.

Step 5: Line up the silver indicator line on the Bevel Cutting Head with the drawn pencil line furthest from the center of the mat. Cut until the silver indicator line lines up with the line at the top of the mat furthest from the center of the mat. Using the same procedure, cut all four sides. NOTE: Be careful to hold the fallout piece in place as you turn the mat for the last cut.



Off-Set Corner Mat

Inlay May

(Example 8" x10" w/7x5 opening.)

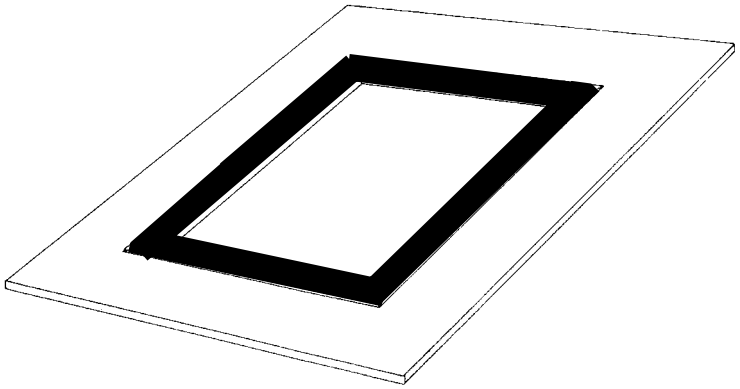
Step 1: Set the Mat Guide at 2" and cut as per regular instructions.

Step 2: reset the Mat Guide at 1 1/2". Keeping the fallout in place, cut the mat again as per regular instructions. You may keep the fallout piece in place by taping it on the back.

Step 3: Discard the outer border piece and fallout. Retain the inside border cutout.

Step 4: Leaving the Mat Guide in place at 1 1/2", cut a second mat of a different color as per regular procedures. IMPORTANT: The second mat must be of the exact same outside dimension as the first mat.

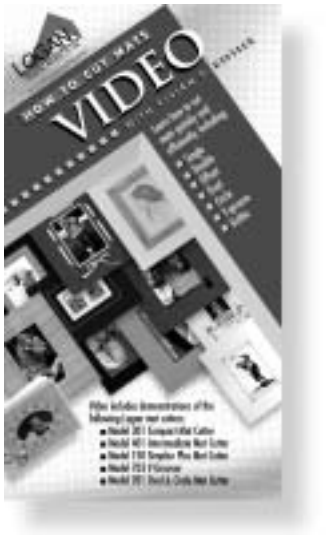
Step 5: Remove the fallout piece from the second mat and place the inside border cutout from the first mat in the window opening from the second mat. The two pieces should fit together like a puzzle creating a flush surface across the front of the mat. Put tape on back to hold it in place.



Inlay Mat

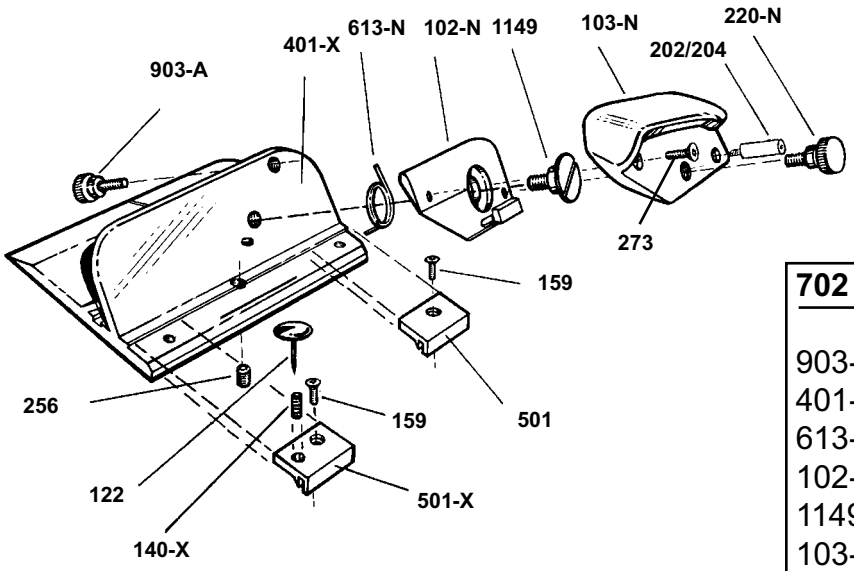
For more creative ideas in matting, pick up a copy of Logan's "How To Cut Mats" Video by Vivian C. Kistler, cpf. Item #237

Available through Logan dealers



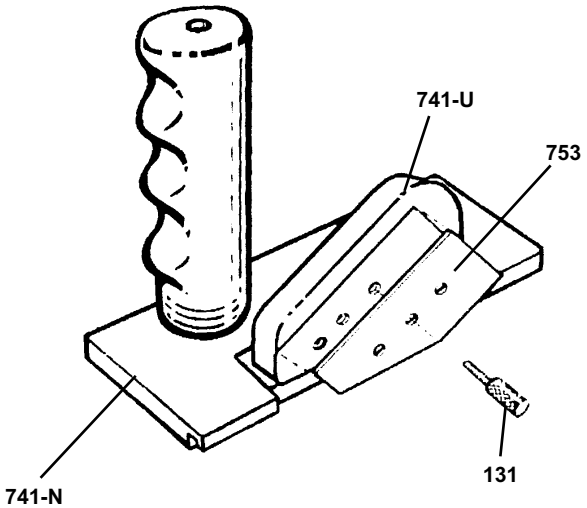
Parts List

A. Cutting Heads



702 Bevel Cutting Head

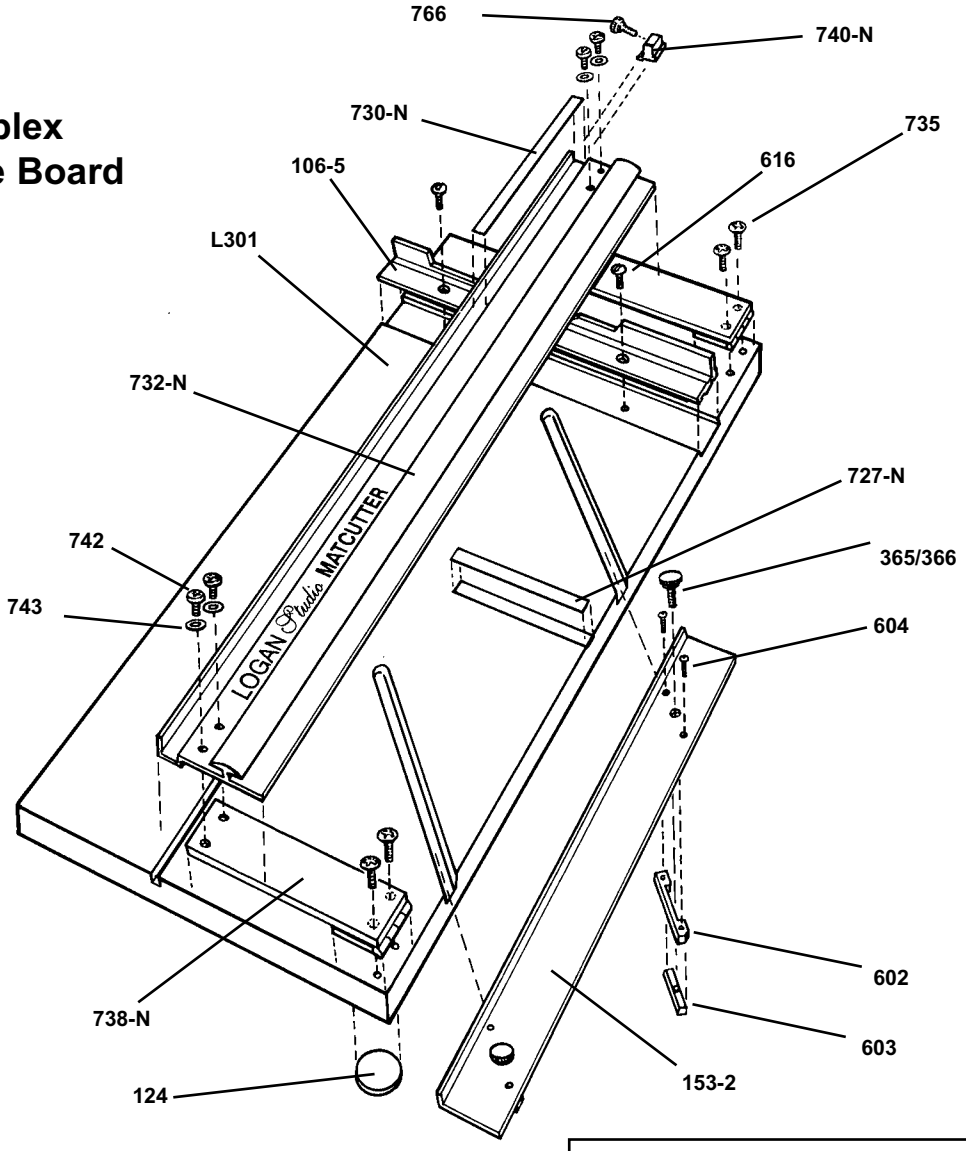
903-A	retaining screw
401-X	cutting head base
613-N	torsion spring
102-N	bevel blade holder
1149	shoulder screw
103-N	bevel blade cover
273	blade cover screw
220-N	blade holding screw
501	bearing
501-X	bearing
140-X	spring
122	anti-crawl pin
256	blade depth screw
159	bearing screw (2)
202/204	knob screw



701 Straight Cutting Head

741-U	upright base
753	blade cover
131	knurled screw
741-N	straight cut base

#700-S Simplex Studio Base Board



#700-S Simplex Studio Base Board	
106-5	Squaring Arm
153-2	Mat Guide
124	Rubber feet
301	Base Board
365/366	Mat Guide Screws x 2
602	Slide x 2
603	Wedge x 2
604	Screws x 4
616	Squaring Arm Screws
727-N	Mat Guide Scale
730-N	Guide Rail Scale
732-N	Guide Rail
735	Screw x 6
738-N	Hinge x 2
740-N	Stop
742	Screws x 4
743	Washers x 4
766	Knob

Trouble Shooting

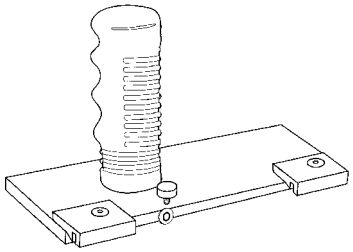
Problem	Solution
Hooks or Curves	**Blade depth set too deep.** ***(see page 9)*** **Blade is dull.** **Blade is catching on previous cut in Backing Sheet.** ***(see page 3)*** **Uneven pressure being applied to Cutting Head during cut.** ***(see page 6)***
Overcut on Top Cut	**Cutting Head crawling forward as you insert the blade. Use Anti-Crawl Pin** ***(see page 6)*** **Blade depth set too deep.** ***(see page 9)*** **Stops not set properly.**
Overcut on Bottom Cut	**Adjust where you start and stop in relation to Start and Stop indicator.**
Mat Borders Uneven	**Not keeping mat squarely against Squaring Arm when cutting.** **Mat Guide not parallel** ***(see page 10)***
Ragged Bevel Cut	**Cutting without a Backing Sheet** ***(see page 3)*** **Backing Sheet is worn out.** ***(see page 3)*** **Not changing the blade often enough.**
Not Cutting Through	**Machine not on a level surface (see page 11)** **Not using a Backing Sheet as least as long as the mat you are cutting.** ***(see page 3)*** **Backing Sheet not as wide as Guide Rail.** **Blade depth set to shallow.** ***(see page 9)*** **Uneven pressure being applied to cutting head during cut. (See page 6)**

LOGAN
GRAPHIC PRODUCTS, INC.

Other Great Logan Products,

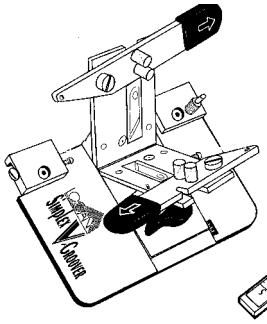
Logan Glass Cutter Simple and easy to use, this handy tool provides the ability to cut glass for framing right on your #401 Intermediate. Uses a hardened steel wheel and cuts glass up to .090” thick.

Glass Cutter-Item #704
Replacement Wheels-Item #786

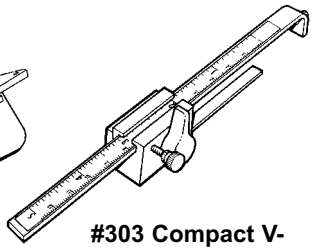


Simplex Surface V-Groover Offers a way to cut surface V-Grooves quickly and accurately with zero overcuts. Push-Pull action cuts V-Grooves right on the surface of the matboard eliminating any need for trimming or taping. Works entirely with stops. #303 Compact V-Groove Adapter Stop needed to successfully operate Simplex V-Groover on any Logan #301 Compact or #450 Intermediate.

Simplex V-Groover-Item #703
Replacement Blades-Item #1258
Compact V-Groove Adapter-Item #303



#703 Simplex V-Groover



#303 Compact V-Groove Adapter

3-Step Oval and Circle Mat Cutter Easy to use, fast and portable. Cuts ovals or circles on the surface of the matboard using a patented 3-step mechanism for gradual increase of blade depth. Converts from oval to circle cutter with a turn of a knob. Ovals from 3 1/4” x 4 3/4” to 20” x 23”. Circles from 4 1/2” to 20”.

3-Step Oval and Circle Matcutter-Item #201
Replacement blades #324

See Your Local Logan Dealer For Availability Or Call Logan At 800/331-6232 For A Dealer Near You

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