The LOGAN Surface V-Groover
Models 705 Logan and 706 Universal
(patent pending)

INSTRUCTION AND OPERATION MANUAL

Purchase Date

I.D. Number
(inside of box lid)
**INTRODUCTION**

*Congratulations on your purchase of the Logan Surface V-Groover.* You will find this tool to be a tremendous time saver and profit generator along with opening up creative potentials never before possible. This instruction manual is written to acquaint you thoroughly with this product. Please take some time to familiarize yourself with it before V-Grooving. You will find that the time taken will be well worth it and you will be cutting quality V-Grooves in no time.

**GENERAL**

1. All V-Grooving is done on the surface of the matboard using measuring stops eliminating need to mark the mat.
2. To cut successful V-Grooves, all V-Grooves must be cut before cutting the window with the matcutter.
3. Due to variations in your matcutters calibration, it will be necessary to adjust overcuts until correct.
4. The V-Groover will cut 1/2" away from the cutting bar rail, not next to as your mat cutting heads do. Compensating for this always will be necessary.

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**Warranty**

Logan Graphic Products, Inc. ("Logan") warrants the **705 LOGAN V-GROOVER** and the **706 UNIVERSAL V-GROOVER** to be free from defects in parts and workmanship for a period of one year 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.

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#705 Logan V-Groover-
Works in conjunction with stops on Logan professional matcutters including models #310, #350, #500, #650 & #660.

#706 Universal V-Groover-
V-Groove Cutting Head, Adjustable V-Groove Stop, Guide Rail Stop, Logan Screwdriver, 3/32" Allen wrench and 6-pack of #1258 V-Groove blades. Works on professional mat cutting systems using a 5/8" cutting bar rod including Fletcher® and C&H® brand matcutters.

IDENTIFICATION OF MACHINE COMPONENTS

V-Groove Cutting Head
- Blade Holders - Retractable blade holders.
- Blade Holding Screws - Hold #1258 blades in place.
- Sliding Block - Part which attaches V-Groover to rail.
- Overcut Adjustment Screws - Screws to fine tune overcuts to zero.

Adjustable V-Groove Stop
- Stop Lock Knob - Knob which locks V-Groove stop in place on the Guide Rail.
- Scale Lock Knob - Knob which allows adjustment of scale.
- Stop Foot - Used to position stop at end of matboard.

Guide Rail Stop
(included with 706 Universal only)

SPECIAL INSTRUCTIONAL STEP FOR MODEL 706 UNIVERSAL V-GROOVER

If you have purchased the model 706 Universal V-Groover, you must first set the V-Groove base to a proper setting appropriate to the brand of matcutter you own.

1. Looking at the underside of the V-Groove cutting head you will see two holes that connect the V-Groove blade holding assembly to the V-Groove slide barrel. They are marked in the illustration as screw hole A and B. Fig 1.

2. Check to see that screw hole A is being used if you are operating a Fletcher® brand professional matcutter or that screw hole B is being used if you are operating a C&H® brand professional matcutter.

3. If an adjustment is needed, use the screwdriver provided to loosen the screw and re-attach using the appropriate hole.
ORIENTATION
The procedure detailed in the following instructions refer to the right, left, top and bottom of the machine. Always operate the V-Groover from the same position as you would to cut mats.

BLADE INSTALLATION
1. Start on either side. Loosen upper and lower knurled screws 3 full turns. **Fig 1**

2. Note position of the blade design on the cover plate. Insert the blade into the blade holder on reverse side of the cover plate with the blade point facing the same direction as its corresponding design. **Fig 2**

3. Insert the blade so that the round end is past the upper knurled screw. Turn the upper knurled screw clockwise to tighten. Tighten the lower knurled screw so that it passes through the hole in the blade. Repeat procedure for the other side. **Fig 3**

**PLEASE NOTE:**
THE LOGAN V-GROOVER REQUIRES A LOGAN #1258 BLADE. THESE BLADES ARE SPECIALLY GROUND FOR USE IN THIS V-GROOVER. NO OTHER BLADE WILL WORK.
Setting The Cutting Head Tension

Checking the Tension
1. Place the V-Groove cutting head onto the Guide Rail with the blade assembly on the left side of the Guide Rail.

2. Check the cutting head for looseness or play. If significant play occurs, a tension adjustment is needed.

Adjusting the Tension
1. Using the 3/32” Allen wrench provided, evenly tighten each of the two tension screws located on the barrel of the V-Groove cutting head until no play occurs. Fig. 1 Do not overtighten the tension screws as this could prevent the V-Groove cutting head from properly seating on the Guide Rail.

OPERATION
EXAMPLE: Cutting a 2” V-Groove

A. Setting the Stops

NOTE: This V-Groover cuts 1/2” away from the left side of the Guide Rail. This must be taken into account when setting the Mat Guide measurement only.

1. Set the Guide Rail Stop on the Guide Rail to the 2” mark on the scale. Fig. 2

2. Set the Adjustable V-Groove Stop on the rail with the stop foot up against the edge of the matboard. Lock the stop in place by tightening the guide rail stop screw. Slide the scale bar to the 2” mark and tighten the scale lock knob. Fig. 3

3. When setting the mat guide, an extra 1/2” must be added to the number of the V-groove measurement desired. In this example of a 2” V-Groove, set the matguide to the 2 1/2” mark to compensate for the off-set. This extra 1/2” is only needed on the mat guide measurement. Fig. 4

NOTE: This step must be done to avoid a 1/2” undercut at every corner.
4. Place the V-Groove cutting head on the Guide Rail with the blade assembly to the left side of the Guide Rail. **Fig. 4**

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**Cutting A V-Groove**

**EXAMPLE: Cutting a 2'' V-Groove**

**NOTE:** It is important to use square mat board in order to achieve accurate V-Grooves.

1. Slide V-Groove cutting head down against the bottom Guide Rail Stop and depress left blade lever as shown. Keeping downward pressure on the Cutting Head Base, slide the V-Groove cutting head until it makes light contact against the Adjustable V-groove Stop. **Fig. 1**

2. Lift the left blade holding lever completely up to remove the blade. **Fig. 2**

3. Depress the right blade holding lever. Keeping downward pressure on the Cutting Head Base, slide the V-Groove cutting head until it makes light contact against the Guide Rail Stop. **Fig. 3**
4. Lift the right blade holding lever completely up to remove the blade. Turn the mat 180 degrees to cut the opposite side and repeat steps 1 through 4. **Fig. 4**

5. To cut remaining sides turn the mat 1/4 turn, loosen the Adjustable V-Groove stop and slide until the Stop Foot makes contact with the edge of the matboard. Retighten and continue steps 1 through 4 until V-Groove is finished.

**NOTE:** Overcuts and/or undercuts may appear on the first try. This shows that a fine tuning adjustment must be made. See below.

### Adjustments & Maintenance

#### A. Overcut/Undercut Adjustment

1. First locate the top and bottom overcut adjustment screws on the V-Groove Cutting Head. **Fig. 1**

**NOTE:** For additional bottom overcut adjustments on model 706 see step 4.

2. Use the Logan screwdriver to fine tune the screws for perfect corners. For example, if an overcut appears at the bottom of the cut, turn the bottom overcut screw out (*counter clockwise*) to decrease.

3. If an undercut appears at the bottom of the cut, turn the bottom overcut screw in (*clockwise*) to increase.

4. To adjust bottom overcut for model 706 Universal V-Groover, find the adjustment screw on the Guide Rail Stop enclosed to fine tune the overcut or undercut. **Fig. 2**

#### B. V-Groove Width Adjustment

1. Locate the width adjustment screw on the underside of the V-Groove Cutting Head. Loosen the screw and slide the blade holder either direction to achieve the desired V-Groove width. Use the V-Groove width scale as reference for blade holder position. **Fig. 3**

### Helpful Hints

- Always be sure opposite lever is **UP** while cutting, or blade may scratch matboard surface.
- While cutting, always keep even downward pressure on V-Groove cutting head to ensure the most accurate cut.
- Blades are dull when you feel a crunching or dragging during cut or when you notice frayed V-Groove strips.
- If V-Grooved channel in matboard is not free of matboard debris, clean out with the tip of a blade.
- When cutting a V-Groove do not allow the strips of V-Grooved matboard to roll under the V-Groove cutting head while cutting. This will result in an inconsistent V-Groove width. One way to prevent this is after cutting a V-Groove, tear all but 1/2" of the V-Grooved strip away from the corner making it impossible for any strips to interfere with the sliding of the Cutting Head.
- Always remember that the V-Groove cutting head will cut an extra 1/2" away from the left side of the guide rail. Take this into account when setting the mat guide measurement only.
- Always use matboard that is as square as possible for the best result. If you find that the Stop Foot does not line up with the edge of the mat board after turning it 180 degrees, this means the matboard is slightly out of square. To correct, loosen the Adjustable Stop and slide until the foot makes contact with the edge of the matboard and continue cutting.
# Trouble Shooting

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