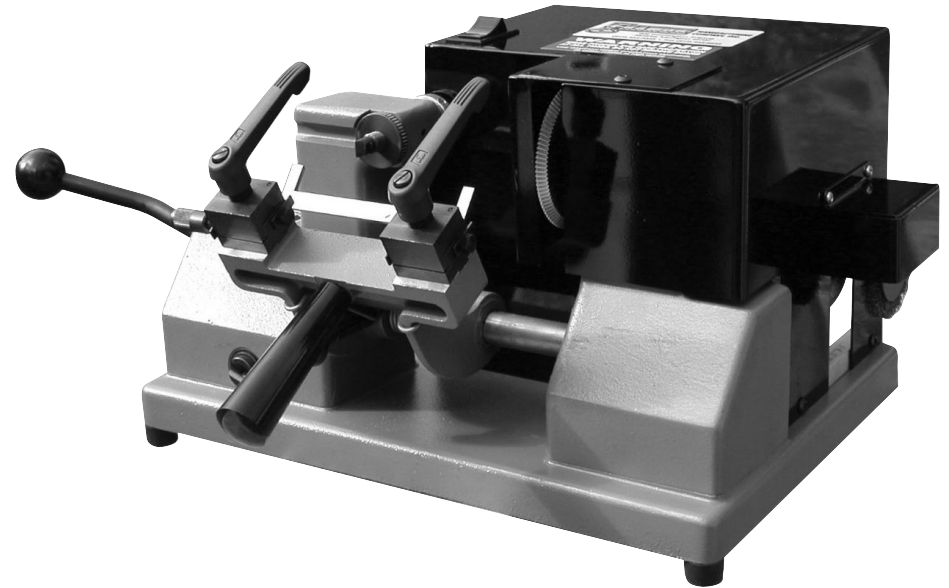


The FRAMON

EXPRESS



Semi-Automatic Duplicator
**Instruction Manual
&
Parts Book**



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CAUTION: The cutter supplied with your EXPRESS Duplicator is designed to cut brass keys only!

Do not attempt to cut steel keys!

Part No.	Description
LKMS076	Yoke Handle
LKMS004	LH Torsion Spring
LKSH002	Guide Casting
LKSH004	Yoke
CNCMS13	Knurled Thumb Screw
LKSH121	Key Stop Knob
LKMS077	Black Plastic Ball
LKSH112	Lever Handle
LKSH122/123	Vise Bottom/Top
LKSH024	Guide
LKSH108	Guide Shaft
LKMS450	Key Stop
ICMS561	Adj Handle
DCSH114	Calibrated Ring
LKSH109	Lock Knob
CNCMS06	Switch
LK84S	Cutter
LKSH471	Cutter Guard
LKMS460	Main Guard
ICMS452	Brush Guard
DCMS252	Wire Brush
DCSC090	Brush Washer
LKSH110	Yoke Rod
LKSH003	Spindle Casting
LKSH001	Base
DCMS603	Bumper
LKMS003	RH Torsion Spring
LKMS075	Push/Pull Knob

WARRANTY

The warranty on the Framon Express machine is in effect for a period of one year from the date of purchase. Framon Manufacturing will repair or replace, at our discretion, any machine found to be defective in material or workmanship within the first year. If any machine is returned to us in the first year, Framon will absorb all costs for the repairs, including shipping to and from our facility. After one year, Framon will charge the customer for parts, freight and a flat service rate for labor. Machines will be repaired and shipped within two days of receipt. This warranty is valid to the original purchaser of record only. Cutters are not covered by this warranty. Framon cutters are among the finest made today, but we have no control over their use.

If you do need to return a machine to us for repair, make sure of the following:

1. Contact us prior to returning the machine to advise us that it will be on the way.
2. All machines must be packaged properly. If you must use Styrofoam popcorn to package the machine, be sure to wrap the machine in a plastic bag before shipping. Styrofoam breaks down in shipping and the small pieces become lodged inside the motor windings and other parts of the machine. UPS recommends that at least two inches of packing be placed around each side of the machine. Use a sturdy shipping box to return the machine.
3. Be sure to insure the machine with the carrier for a reasonable amount.
4. Use a carrier that has tracking available.
5. We will not begin work on any machine that does not have a letter explaining what work is to be done to the machine, as well as a contact name, phone number, and address.

INTRODUCTION

Congratulations on the purchase of your new Framon EXPRESS semi-automatic duplicator. You now own what we believe is one of the finest duplicators available today. We are sure you will find the same built-in quality and precision enjoyed by Framon owners the world over. Take a few minutes to read through this manual to assure proper setup and use of your new machine.

MACHINE SETUP

CAUTION: Do not attempt to lower the yoke before completing these setup instructions. Damage to the machine may result.

For shipping reasons, the lever handle, push-pull knob, and yoke handle have all been removed. Prior to machine operation, these items must be installed:

1. Install the lever handle in the rear of the machine with the 1/4 - 28 socket head cap screw.
2. Install the push-pull knob into the yoke with a 5/16" wrench (see figure 1).

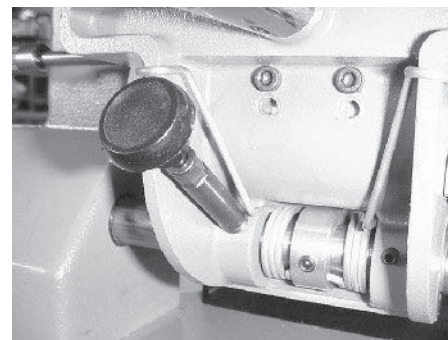


FIGURE 1

3. Screw in the yoke handle (see figure 2).
4. To check for proper installation of push-pull knob, lower the yoke slowly to assure the detent pin is seated properly. The yoke should now lock in the key load position.

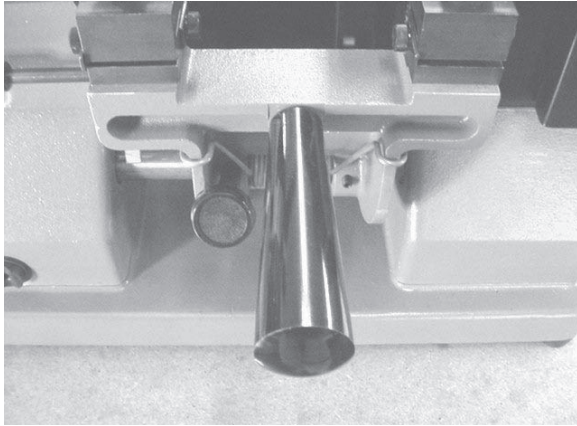


FIGURE 2

OPERATING PROCEDURE

Caution: Always wear proper eye protection.

To cut a standard cylinder key, insert the original key in the left vise and tighten to secure. Insert the blank key in the right vise, and tighten to secure. To assure proper key alignment, use the flip-up shoulder stop (see figure 3). You may have to loosen one of the keys to allow it to slide to the left or right to properly line up the key.

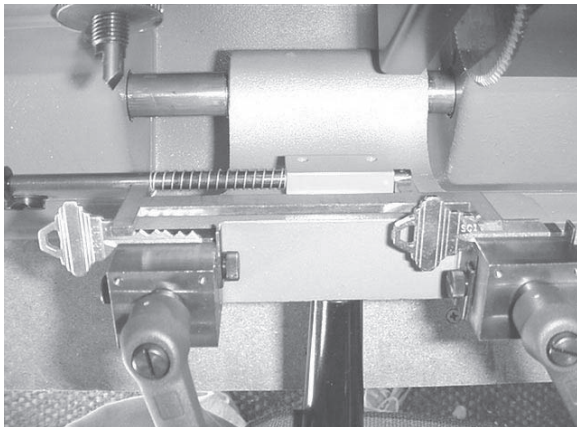


FIGURE 3

4. Loosen the cap screw located in the small channel in the front of the casting.
5. Load two identical blanks, one in each vise and raise the yoke so the guide is resting on the tip of the key.
6. With slight pressure, move the bearing assembly so that the cutter rests on the tip of the key blank (make sure a tooth on the cutter is touching, not the gap between the teeth).
7. Tighten the cap screw, maintaining proper alignment.
8. Tighten the $\frac{1}{4}$ - 28 cap screws in the rear of the casting.
9. Reinstall the cutter guard.

DEPTH

1. Unplug the machine.
2. Loosen the jam stop (see figure 5).

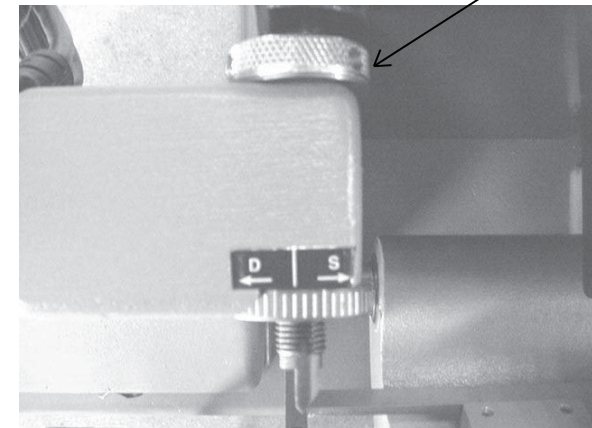


FIGURE 5

3. Push jam stop towards front of the machine to relieve pressure on the depth dial.
4. The depth dial is graduated in .001" increments. Rotate the dial deeper or shallower accordingly.
5. Tighten jam stop, maintaining proper depth.

Note: You can also use this procedure to add a few thousandths of an inch to a worn key that you are duplicating.

If you encounter any problems adjusting your machine, feel free to contact us at (989) 354-5623, 8:00 am until 4:30 pm eastern time.

SHOULDERLESS KEYS

A unique feature of the Express is the built-in tip stops for shoulderless keys. When cutting a key such as Ford, the long side of the tip stop, affixed to the right side of the vise with thumb screws, should be used as a gauge. Slide the key into the vise until it touches the tip stop and tighten the vise. Use normal cutting procedure as outlined above.

USING THE ROTATING VISE AND SHIMS

The Express features a rotating vise to accommodate a wide variety of keys. The wide side of the vise (the side without the dots) can be used to cut a key with cuts as deep as .200". If cutting a key with depths less than .200", rotate the entire vise (both top & bottom) around until it snaps into place. You can cut keys with root depths as small as .120".

Most keys will be held without tipping by one side of the vise or the other. In the rare case that a key tips in both sides of the vise, use the brass shims provided with your machine. If the key is tipping upwards, place the shim flat on the top of the key & clamp it in the vise. If the key tips down, place the shim underneath the key. Shims are made of brass and it is expected that you will cut into them. This will not affect the ability of the shims to hold the keys properly.

DEEP CUTS

The Express is adjusted so that the cutter and guide will not touch the vises when in the cutting position. If an extremely deep cut is found on a key, push the yoke forward while cutting to reach the proper depth of cut.

ADJUSTMENTS

Every key machine will eventually need adjustment. Follow the procedures below for spacing or depth adjustments.

SPACING

1. Unplug the machine.
2. Remove the cutter guard with the 1/8" Hex Key provided.
3. Loosen two 1/4 - 28 cap screws located in the counter bores to the rear of the casting.

CAUTION: Cutter damage may result if shoulder stop is not lowered!

Turn on the machine with the switch, located on the top of the guard. With the keys properly aligned, put a small amount of down pressure on the yoke handle, and pull out on the pull knob below. The yoke is spring-loaded and care should be taken not to allow the carriage to spring forward. Gently allow the carriage to rise until the guide is touching the original key to the left of the first cut on the key (see figure 4).

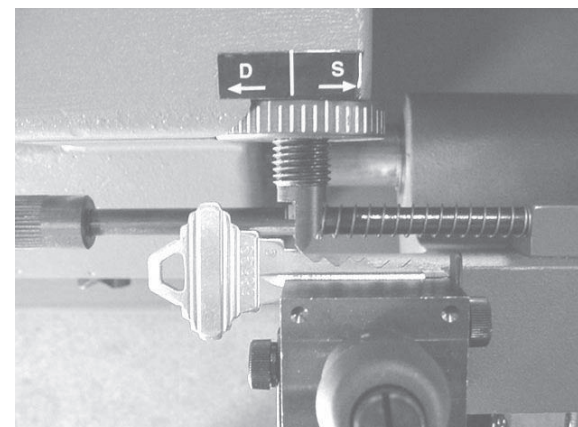


FIGURE 4

The first pass of a key should always be from left to right, or bow to tip. Grasp the lever handle and move the carriage through all cuts on the key, stopping at the tip of the key. Make a second pass from right to left, stopping after the first cut is completed. Due to the thickness of some blanks, an additional pass may be required, or a slower first pass.

This procedure should be followed to cut all keys. Please read on for cutting information for shoulderless keys and those with very deep cuts.

