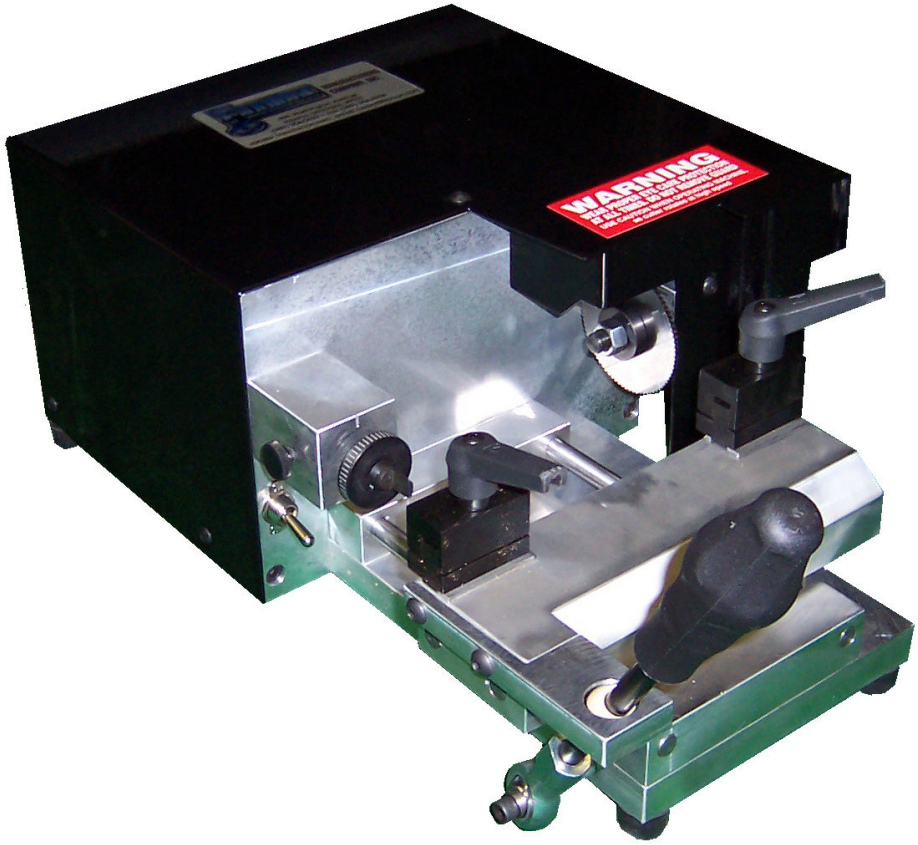
JD-12



Instruction & Parts Manual

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The Framon JD-12 is designed to quickly and easily duplicate most detention keys, both paracentric and mogul-style. The machine features an interchangeable guide, so the machine is basically a "two-in-one" machine, able to handle two distinctly different types of keys with ease. If you have ordered the "base" JD-12 machine it will be set up for paracentric keys utilizing a .088" wide cutter. We also have an "A1" version with a .066" wide cutter and a version for Mogul (JD-12M). Any of the kits can be added to an existing machine if you cut more than just one type of key. Also, we have recently changed the machine so that it can accommodate smaller keys on the opposite side of the vise such as Schlage, Assa, and many other commercial type keys. These can only be cut if you have the Mogul cutter & guide.

Before You Begin

The carriage of the JD-12 rides on hardened pins & linear bearings. The carriage is very smooth in movement & if carried, tilted, or moved at an angle, the carriage can easily slide into the cutting wheels. Both are made of carbide and such a collision could easily shatter them. Be extremely careful when moving the machine.

The machine has been tested & requires no adjustments. Please do not feel you need to calibrate the machine once you remove it from the shipping container. All Framon key machines are sealed at the factory with staples in the cardboard box & a wrap of tape.

In addition to the key machine, you should also find the following components in the box:

- 3/32" allen wrench
- 1/8" allen wrench
- 3/16" allen wrench
- 5/16" allen wrench
- DBC1088, DBC1066 or FC078PC (installed on the machine)
- Paracentric- or Mogul-style guide (installed on the machine)

Setting Up the JD-12

NOTE: These instructions will assume you have ordered the base JD-12 unit with DBC1088 cutter.

Plug the machine into a standard grounded outlet. Be sure the area around your machine allows for the required travel of the lever on the left side of the machine. If you need to duplicate a paracentric-style key, the machine should be ready to go out of the box. The DBC1088 cutter should already be installed (please note that when changing to and from the DBC1088 that the cutter label goes towards the spindle hub!). The paracentric guide should also be installed on the machine.

Changing the Cutter

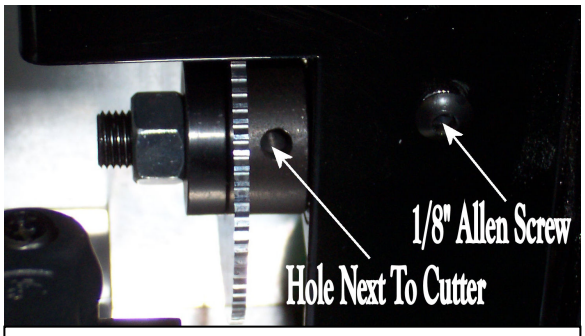
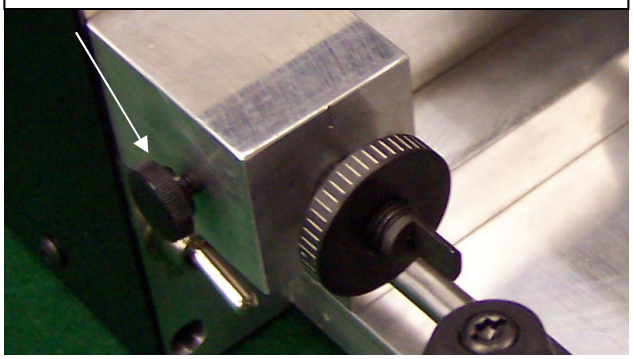


Figure 1: Cutter Changing Procedure

If you need to change from paracentric to mogul or vice-versa, the guide and cutter need to be changed. To change the cutter, remove the cutter guard from the front of the machine with the 1/8" Allen wrench (see figure 1). You will then need to remove the nut from the spindle. If you need to hold the spindle when removing the nut, there is a small hole in the spindle to the right of the cutter. Rotate the spindle until you can see the hole, and use a small screwdriver or Allen wrench to hold the spindle while you remove the nut with a wrench. Slide the washer off of the machine, and then remove the cutter. Install the proper cutting wheel, and then replace the washer and nut. Do not over tighten the nut!

Changing the Guide

Figure 2: Changing the paracentric guide



To remove the guide from the machine, unscrew the black plastic knob on the left of the guide housing. You will not need to completely remove it from the machine to take out the guide. Be careful while doing so, as there is a spring in the back of the guide (when the paracentric guide is in the machine) which will push it forward once the screw is disengaged.

To install the paracentric guide, make sure that the slot that is milled into the side of the guide is positioned in line with the thumb screw on the outside of the housing. Be sure to place the spring behind the guide. Next, press in on the guide until it bottoms out against the guide block. Hold the guide in this position while turning the plastic thumb screw gently in until it touches the guide. Once in this position, loosen the screw back out about ½ turn. You should be able to push in the guide until it bottoms out and still allow it to spring back out and stop, without coming out of the machine. The guide will normally be in the forward position so that it enters the cut before the cutting wheel does.

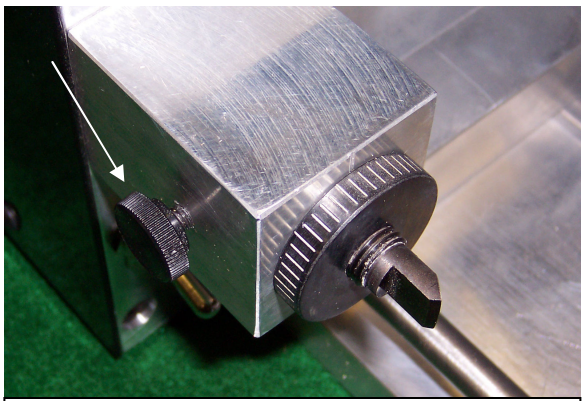


Figure 3: Changing the mogul guide

To install the mogul guide, make sure that the slot that is milled into the side of the guide is positioned in line with the thumb screw on the outside of the housing. Next, press in on the guide until it bottoms out against the guide block (the spring is not needed for the mogul guide). Hold the guide in this position while turning the plastic thumb screw in until it touches the guide. Tighten the screw, but do not over tighten it. The mogul guide will always remain bottomed out against the guide block when duplicating keys.

Cutting Keys on the JD-12

Paracentric Keys

To cut a *paracentric* key on the JD-12, follow this procedure:

Load a key into both vises. All known detention style keys utilize a bottom shoulder, so simply run the key into the vise until the bottom shoulder touches the vise. Tighten the vise handle to secure the key into place. Be sure the handle is pointing toward the user. If it is not, lift up on the handle & rotate it so it points toward the user. This will prevent the handle from coming into contact with the machine's main guard, preventing full carriage travel.

Be sure that the proper guide and cutter are on the machine. If they are not, follow the procedure above to install the proper components. Most paracentric keys use the flat guide and DBC1088 cutting wheel. A1 series keys will use the DBC1066 cutter and .066" guide.

Turn the machine on, and use your left hand to position the carriage at the first cut on the key. It does not matter whether you cut from tip to bow or bow to tip, but developing a routine will assure each key gets duplicated in the same manner without error.

Keep in mind that most paracentric keys have "clearing" cuts at the tip and bow of each key. This material needs to be removed so the key can go into the lock properly.

Allow the guide to enter each cut fully, and then push forward against the spring pressure of the guide until it bottoms out to make each cut. Depending on your key, you may need to widen out each cut if it is wider than .088". DO NOT put side pressure on the cutter! Back the cutting wheel out, move the guide to the side, and then push forward on the handle to make the next cut.

Repeat the above procedure for each cut on the key. Again, be sure to make all clearing cuts. Remove the duplicated key from the machine and remove any burrs with a file or wire brush.

Mogul Style Keys

To cut a *mogul style* key on the JD-12, follow this procedure:

Load a key into both vises. All known detention style keys utilize a bottom shoulder, so simply run the key into the vise until the bottom shoulder touches the vise. Tighten the vise handle to secure the key into place. Be sure the handle is pointing toward the user. If it is not, lift up on the handle & rotate it so it points toward the user. This will prevent the handle from coming into contact with the machine's main guard, preventing full carriage travel.

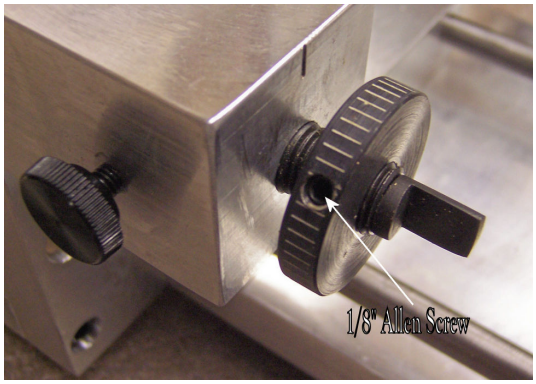
Be sure that the proper guide and cutter are on the machine. If they are not, follow the procedure above to install the proper components. The mogul keys use the guide with a "V" shape and the cutter should be an FC078PC.

Turn the machine on, and use your left hand to position the carriage just before the first cut on the bow of the key. Keep pressure on the carriage and move it from the bow of the key towards the tip. Once you reach the tip of the key, reverse direction & make a "clean up" cut along the entire blade of the key, working from the tip to the bow. You may find it helpful to put a small amount of pressure on the carriage with your free hand. Once the key has been cut, remove any burrs with a file or wire brush.

Adjustments to the JD-12

The JD-12 is designed so that you will rarely have to make any adjustments to the machine. If you ever do have to make adjustments to the machine, use the following procedures:

Depth Adjustment
To adjust the depth on the JD-12, make a cut on a scrap key and measure the depth with calipers. Compare this reading to the original key.
Paracentric Guide Adjustments



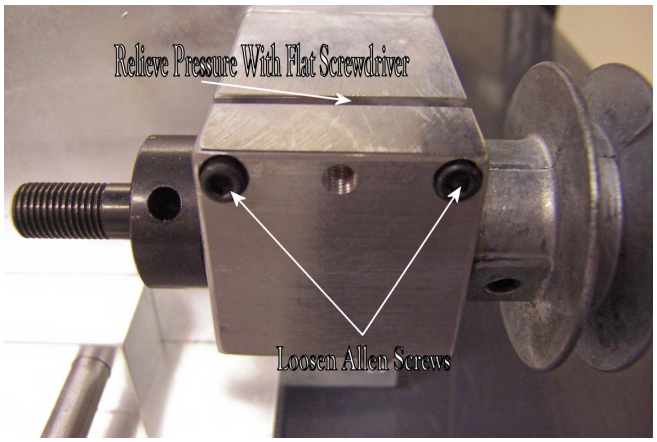
If you are adjusting the paracentric guide, be sure the guide is in the forward position (the thumb screw on the left should be loosened but not removed, so the guide can be pushed back & springs forward). Loosen (do not remove) the Allen screw that is inset in the graduated dial. The screw has a small plastic washer underneath it, which will create drag when trying to rotate the dial. This is normal.

If the machine is cutting too deep, turn the dial clockwise to make the machine cut shallower. If the machine is cutting too shallow, turn the dial counter-clockwise to make the machine cut deeper. Each graduation on the dial is equal to .001". Once you have the machine set properly, tighten the Allen screw in the dial.

Mogul Guide Adjustments
If you are adjusting the mogul guide, be sure the thumb screw on the left is loosened, so the guide can be pulled forward slightly. Loosen (do not remove) the Allen screw that is inset in the graduated dial. The screw has a small plastic washer underneath it, which will create drag when trying to rotate the dial. This is normal.

If the machine is cutting too deep, turn the dial clockwise to make the machine cut shallower. If the machine is cutting too shallow, turn the dial counter-clockwise to make the machine cut deeper. Each graduation on the dial is equal to .001". Once you have the machine set properly, tighten the Allen screw in the dial. Push the guide back so it bottoms out on the guide block, and tighten the thumb screw to secure it in place. Re-check the depth by making another cut on a key.

Spacing Adjustment



The spacing should rarely, if ever, need adjustment. To adjust the spacing on the JD-12, remove both the front cutter and main guards.

Next, loosen the two Allen screws in the front of the spindle housing. Insert a small screwdriver into the slot on the top of the housing to relieve the pressure on the spindle assembly. The spindle can now be moved left or right as needed. Once in the correct position (two identical cut keys can be used as a reference in the vises to let you know when the spacing is correct), be sure to re-tighten the screws on the front of the housing.

Maintenance

Very little maintenance is required on the JD-12. Keeping the machine clean of burrs and chips will keep your machine working smoothly for years. Replace the cutter as necessary. You will know when the cutter needs to be replaced when you start noticing burrs on the keys that are very difficult to remove (the burrs are being "melted" onto the key instead of flaking off of it) and by the noise the cutter makes while cutting a key. Detention keys are harder and thicker than standard keys and cutter changes will be needed more often.

The JD-12 uses sealed ball bearings in the motor and spindle, which require no maintenance whatsoever. Linear ball bearings are used on the carriage assembly, which also require no maintenance. A slight touch of lubricant on the lever handle assembly occasionally will keep it moving smoothly. Occasionally, remove the vise levers and apply a small amount of grease on the Allen screw.

Warranty

The JD-12, like all other Framon key machines, comes with a one-year, parts, labor and freight warranty. If you have any problem with your JD-12 within the first year, contact Framon Manufacturing at (989) 354-5623. We will issue a call tag for the machine, repair or replace the machine, and return it to you without any charge. Repairs are completed within 2 working days from the day we receive the machine. After the first year, you will be charged a flat labor fee, freight, plus any parts needed to complete the repair. Please keep in mind that cutting wheels are not covered by any warranty as we have no control over their use.

Replacement Parts Listing